

# 阿蘇に於ける第二回國際極地觀測期間中の 地磁氣觀測—地磁氣要素の時値

## 阿蘇火山研究所に於ける地磁氣觀測

阿蘇火山研究所に於いてはその設立以來、創設者故志田順博士によりて火山地帯に於ける地磁氣測量及び觀測が計畫されてゐた。觀測には Mascart の變化計を用ひるやうに準備されてゐたのであるが、偶々昭和七年(1932)より同八年にかけての第二回國際極地觀測に参加することになつて、當時あつた觀測器械を修理或は改造して阿蘇山の中腹に觀測室を設備して常時觀測を行ふことになつた。これらの器械の改造及び設備等は凡て志田博士監督の下に長谷川萬吉、佐々憲三兩氏を主として、安田幾之助、田村雄一、西村英一氏等の教室員が分擔して之れに當つた。現地に於ける觀測は専ら西村英一氏によつて行はれ、大島英也兩氏等が補佐した。猶ほ結果の整理に關しては太田征次郎氏に負ふところが尠からず、又南葉宗利氏は全期間を通じて現地に於いて種々の斡旋の勞をとつた。

この觀測は極地觀測期間後も引き続き繼續されたのであるが、經費の關係で昭和十三年以降は一時休止して目下火山研究所構内に新たに觀測室を整備し再び繼續するために準備中である。茲には極地觀測期間(昭和七年八月より昭和八年八月迄)の時値のみを報告する。

## 地磁氣觀測所の位置

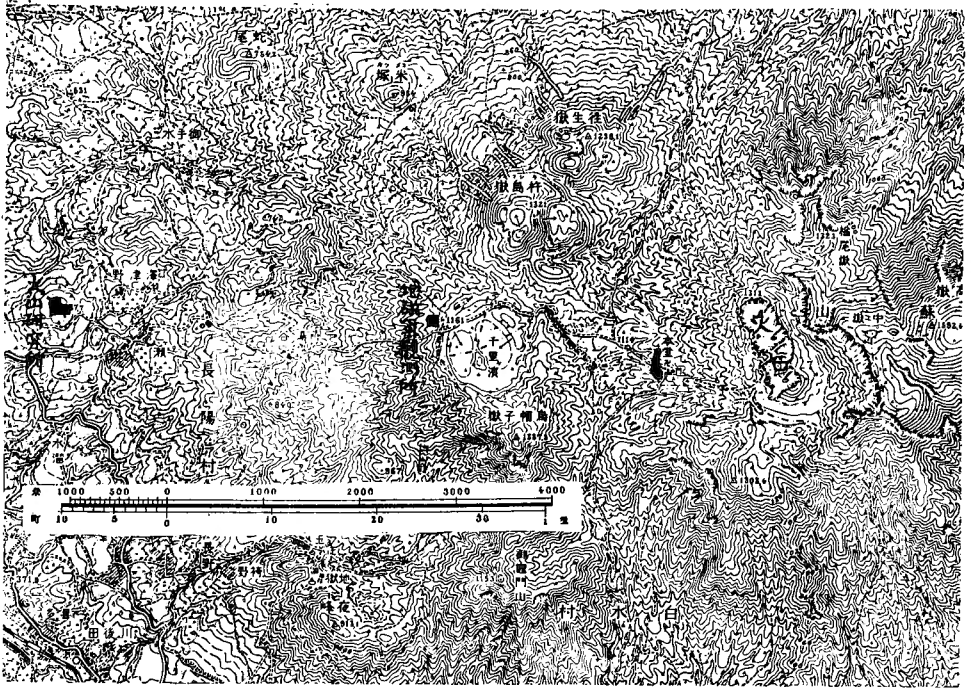
第一圖に示す如く阿蘇中岳と火山研究所との中間點海拔約1100米の所(千里ヶ濱附近)にあり、地理的及び磁氣的緯度、經度は夫々次の通りである。

$$\varphi = 32^{\circ}52' \text{ N } \quad \lambda = 131^{\circ}03' \text{ E}$$

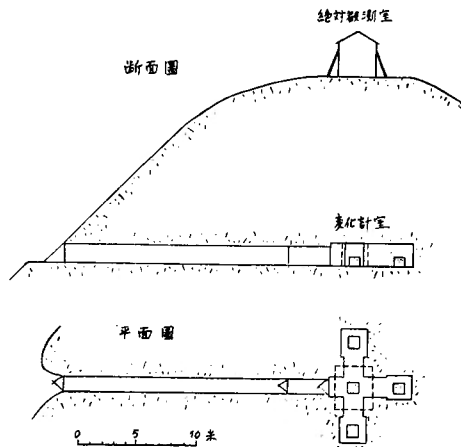
$$\Phi = 22^{\circ}.0 \text{ N } \quad \Lambda = 163^{\circ}.2 \text{ E.}$$

## 觀 測 設 備

絶對觀測室は尾根の頂にありて南北4米、東西3米の木造である。變化計室は第二圖に示す如く絶對觀測室の直下16米の地中にあつて尾根の側面より長さ25米の坑道によつて外



第一圖 地磁氣觀測所の位置



第二圖 觀測設備

部に通じてゐる。

### 觀 測 器 械

絶對觀測器械：田中館式を一部改造したもの。

偏角(D)變化計：磁針は直徑 1.6 耗，長さ40耗の K. S. 鋼，磁氣能率は約 45 C. G. S. で

ある。可動鏡及び磁針をかける鉤は共に熔融水晶から成り、水晶細線と熔融して固着せしめてある。

水平分力(H)變化計：構造は偏角變化計と同様であるが吊線は直徑約 45 $\mu$  の單線である。偏向磁石は使用せず。

鉛直分力(Z)變化計：田中館博士の改良した Watson 型のもの。

記録用時計仕掛：遲廻しでは24時間に、早廻しでは3時間に一廻轉する。平常は遲廻しとし毎月の國際日には早廻しとした。

### 變化計室内の溫度

昭和七年(1932)八月初めより翌年八月末迄の期間の變化計室内の溫度は第一表に示す通りであつて日變化は認められなかつた。

Table 1. Monthly mean temperature in the variometer room.

| Year       | 1932 |       |      |      |      | 1933 |      |      |      |      |      |      |      |
|------------|------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Month      | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May  | June | July | Aug. |
| Temp. (°C) | 15.1 | 14.5  | 13.8 | 13.7 | 13.5 | 13.4 | 13.2 | 13.1 | 13.1 | 13.2 | 13.3 | 13.6 | 14.0 |

### 地磁氣變化記錄の寸値及び基線値

D-變化計の寸値は可動鏡と記録紙との距離から計算され、0'.428/耗であつた。H-變化計及びZ-變化計の寸値は三變化計に夫々附着してゐる全く等しい Helmholtz コイルに共通の電流を送つて記録紙毎に感度の測定を行つて求めた。

觀測所は附近に障碍を與へるやうな電氣施設は全くないけれども、海拔1100米の高所にあるから強風及び冬期の極寒の爲め正確なる觀測結果を期待し難い場合があつたが、かかる場合を除いては出来る限り屢々絶対觀測を行つた。基線値はこれらの絶対觀測値と記録とを比較してその平均値を以つてした。

採用した基線値及び寸値は第二表に掲げた。

各分力の時値を第3表——第41表、磁氣特性數を第42表、數値特性數  $n$ ,  $n_H$ ,  $n_Z$  を夫々第43表、第44表、第45表に掲げた。茲に

$$n = \frac{R_H H + I_Z Z}{10000}, \quad n_H = \frac{R_H H}{10000}, \quad n_Z = \frac{R_Z Z}{10000}.$$

表中の時間は凡て  
グリニツチ時であ  
る。  
注意：絶對觀測に  
ついては前述のや  
うな障りがあるほ  
か、觀測器械に附  
屬の棒磁石、支持  
器に關する常數は  
大正二年(1913)に  
水路部決定のもの  
をその儘用ひた。  
かやうな點から見  
て觀測された絶對  
值そのものは決し  
て充分とは云ひ難  
いのであるが、當  
地のやうに火山岩  
の集積地帯に於い  
ては距離による地  
磁氣の値の變化が  
複雑であつて、一  
點に於ける絶對值

Table 2. Adopted base-line values and scale values.

| Declination              |                 | Horizontal intensity      |                 | Vertical intensity      |                 |
|--------------------------|-----------------|---------------------------|-----------------|-------------------------|-----------------|
| Duration                 | Base-line value | Duration                  | Base-line value | Duration                | Base-line value |
| 1932 Aug. 1 0~Oct. 21 18 | 4°04.5          | 1932 Aug. 1 0~Aug. 28 0   | 31888           | 1932 Aug. 1 0~Oct. 21 8 | 34041           |
| Oct. 21 19~Nov. 2 18     | 36.0            | Aug. 29 0~Oct. 21 23      | 31868           | Oct. 21 9~Jan. 14 2     | 34041           |
| Nov. 2 19~Nov. 3 11      | 43.0            | Oct. 22 0~Jan. 14 2       | 31868           | 1933 Jan. 14 3~Feb. 7 1 | 34038           |
| Nov. 4 2~Nov. 7 1        | 14.6            | 1933 Jan. 14 3~Feb. 13 13 | 31875           | Feb. 7 2~May 5 12       | 34039           |
| Nov. 7 2~Jan. 14 2       | 03.5            | Feb. 13 14~Feb. 23 22     | 31878           | May 6 6~Aug. 31 23      | 34045           |
| 1933 Jan. 14 3~Feb. 7 6  | 03.7            | Feb. 26 6~Mar. 21 23      | 31884           |                         |                 |
| Feb. 8 9~Feb. 10 19      | 03.9            | Mar. 22 0~Mar. 25 12      | 31901           |                         |                 |
| Feb. 10 20~Feb. 13 13    | 04.0            | Mar. 25 13~May 5 23       | 31905           |                         |                 |
| Feb. 13 14~Mar. 21 23    | 03.9            | May 6 0~Aug. 31 23        | 31904           |                         |                 |
| Mar. 22 0~May 5 12       | 03.6            |                           |                 |                         |                 |
| May 5 13~Aug. 31 23      | 04.2            |                           |                 |                         |                 |

を正確に決定すると云ふことの重要性は餘り大きいとは考へられない。この器械の國際標準器との比較を未だ行つてゐないのはその爲めである。従つて觀測の結果は一種の相對的の値を示すものと見なければならぬ。これに反して表に示される日變化については變化計室の温度の日變化も殆んどなく、充分信頼されてよいのである。











Table 7  
Declination (West) 3°00'0" + ..... December 1982.

| G.M.T. | 0     | 1     | 2      | 3      | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | Mean  | Max.   | Min. | Range |
|--------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|-------|
| 1      | 48.3  | 48.6  | 49.3   | 50.5   | 51.2  | 50.9  | 50.1  | 49.4  | 49.1  | 49.4  | 50.2  | 49.6  | 49.9  | 49.7  | 49.6  | 49.6  | 49.5  | 49.8  | 49.4  | 49.8  | 49.8  | 49.5  | 49.6  | 48.8  | 49.65 | 51.3  | 48.3   | 3.0  |       |
| 2      | 48.0  | 47.9  | (48.2) | 48.8   | 50.4  | 50.9  | 50.6  | 49.9  | 49.2  | 49.4  | 49.3  | 49.5  | 49.5  | 49.6  | 49.4  | 49.4  | 49.5  | 49.8  | 49.2  | 48.8  | 49.1  | 48.9  | 49.4  | 49.8  | 49.8  | 49.31 | 51.0   | 47.7 | 3.3   |
| 3      | 48.6  | 48.8  | 49.7   | 50.5   | 50.9  | 51.4  | 50.6  | 49.9  | 49.2  | 49.6  | 49.7  | 49.5  | 49.9  | 49.4  | 49.5  | 49.5  | 49.8  | 49.4  | 49.4  | 49.4  | 49.3  | 49.7  | 50.1  | 49.9  | 49.6  | 49.76 | 51.5   | 48.5 | 3.0   |
| 4      | 48.9  | 48.7  | 49.2   | 50.5   | 50.7  | 50.4  | 50.1  | 49.2  | 48.9  | 49.3  | 49.6  | 49.5  | 49.5  | 49.3  | 49.6  | 49.7  | 49.5  | 49.0  | 49.4  | 49.1  | 49.3  | 49.6  | 50.0  | 49.7  | 49.58 | 51.0  | 48.6   | 2.4  |       |
| 5 c    | 48.9  | 48.0  | 47.9   | 48.8   | 49.2  | 50.1  | 50.1  | 49.6  | 48.9  | 49.2  | 49.5  | 49.7  | 49.7  | 49.8  | 49.6  | 49.5  | 49.5  | 49.4  | 49.3  | 49.5  | 49.6  | 49.7  | 50.3  | 50.1  | 49.39 | 50.5  | 47.7   | 2.8  |       |
| 6      | 49.6  | 48.4  | 48.5   | 50.4   | 51.0  | 50.6  | 50.0  | 49.2  | 48.9  | 49.0  | 49.8  | 49.7  | 49.4  | 49.4  | 49.5  | 49.5  | 49.4  | 49.5  | 49.5  | 49.5  | 49.7  | 49.7  | 49.8  | 50.0  | 49.8  | 49.57 | 51.1   | 48.2 | 2.9   |
| 7 c    | 49.0  | 49.0  | 49.2   | 49.9   | 50.2  | 50.4  | 50.1  | 49.7  | 49.3  | 49.2  | 49.3  | 49.2  | 49.2  | 49.3  | 49.3  | 49.2  | 49.3  | 49.3  | 49.3  | 49.6  | 49.6  | 49.7  | 49.8  | 49.7  | 49.8  | 49.50 | 50.4   | 48.6 | 1.8   |
| 8 d    | 49.5  | 48.7  | 48.8   | 49.2   | 50.0  | 50.9  | 50.5  | 50.2  | 49.2  | 48.9  | 49.3  | 49.7  | 50.0  | 49.6  | 49.4  | 49.4  | 49.2  | 49.1  | 49.1  | 49.1  | 49.1  | 49.5  | 49.7  | 50.7  | 51.7  | 49.64 | 52.2   | 48.7 | 3.5   |
| 9      | 51.6  | 51.2  | 50.2   | 49.7   | 49.6  | 49.6  | 49.4  | 49.1  | 48.1  | 47.4  | 48.8  | 48.8  | 48.8  | 48.8  | 48.8  | 48.8  | 48.8  | 48.8  | 48.8  | 48.8  | 49.3  | 49.8  | 50.2  | 50.7  | 50.4  | 49.51 | (50.8) | 47.0 | 3.8   |
| 10     | 49.8  | 49.6  | 49.4   | 50.1   | 50.1  | 50.0  | 50.0  | 49.7  | 49.4  | 49.5  | 49.8  | 49.8  | 49.7  | 49.7  | 49.8  | 49.5  | 49.5  | 49.5  | 49.7  | 50.0  | 50.0  | 49.5  | 49.4  | 50.1  | 50.1  | 49.71 | 50.4   | 48.6 | 1.8   |
| 11     | 49.4  | 48.9  | 48.7   | 49.3   | 49.6  | 49.3  | 50.0  | 49.8  | 49.6  | 49.6  | 49.8  | 49.6  | 49.6  | 49.7  | 49.6  | 49.5  | 49.5  | 49.6  | 49.5  | 49.5  | 49.7  | 49.8  | 50.5  | 49.6  | 49.59 | 50.6  | 48.5   | 2.1  |       |
| 12 c   | 48.4  | 47.6  | 47.9   | 49.1   | 49.6  | 49.8  | 49.9  | 49.5  | 49.5  | 49.2  | 49.2  | 49.6  | 49.7  | 49.7  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.7  | 49.7  | 49.8  | 49.7  | 49.38 | 50.0   | 47.5 | 2.5   |
| 13     | 49.2  | 48.9  | 49.3   | 49.6   | 49.6  | 49.8  | 49.8  | 49.9  | 49.2  | 49.2  | 49.5  | 49.6  | 49.8  | 48.5  | 49.3  | 49.2  | 48.7  | 49.7  | 49.7  | 48.8  | 49.2  | 49.4  | 50.3  | 50.9  | 50.4  | 49.49 | 51.0   | 48.4 | 2.6   |
| 14 d   | 49.2  | 48.5  | 49.2   | 49.4   | 49.8  | 49.8  | 49.4  | 49.2  | 48.5  | 48.8  | 48.7  | 49.4  | 47.7  | 48.8  | 48.4  | 49.2  | 49.7  | 47.9  | 46.4  | 48.6  | 49.5  | 52.1  | 51.8  | 53.0  | 49.29 | 53.2  | 46.1   | 7.1  |       |
| 15 d   | 52.8  | 52.8  | 51.9   | 52.5   | 52.2  | 51.4  | 50.4  | 49.4  | 49.2  | 48.9  | 49.5  | 49.7  | 49.6  | 49.7  | 49.4  | 48.4  | 49.1  | 49.8  | 48.2  | 49.7  | 48.5  | 49.2  | 51.9  | 52.7  | 50.27 | 53.4  | 48.0   | 5.4  |       |
| 16 d   | 51.6  | 52.4  | 51.8   | 51.7   | 51.8  | 50.9  | 50.5  | 49.2  | 49.1  | 49.4  | 49.7  | 48.7  | 49.2  | 49.4  | 49.4  | 49.7  | 49.5  | 49.5  | 49.2  | 48.9  | 49.4  | 49.5  | 50.4  | 50.9  | 49.5  | 50.07 | —      | —    | —     |
| 17 d   | 49.2  | 49.5  | 49.9   | 50.2   | 50.4  | 50.1  | 49.8  | 49.4  | 48.9  | 48.9  | 49.6  | 49.4  | 49.3  | 49.4  | 49.4  | 49.7  | 49.2  | 49.2  | 50.0  | 51.0  | 49.7  | 49.9  | 50.1  | 50.3  | 49.69 | 52.1  | 48.2   | 3.9  |       |
| 18     | 49.8  | 49.2  | 49.6   | 50.4   | 50.2  | 50.0  | 50.1  | 49.7  | 49.1  | 49.6  | 50.1  | 49.2  | 49.2  | 49.3  | 49.0  | 49.9  | 50.0  | 49.8  | 50.1  | 50.0  | 50.2  | 50.0  | 50.3  | 50.7  | 49.81 | 50.9  | 48.4   | 2.5  |       |
| 19     | 50.0  | 49.6  | 49.8   | 49.7   | 50.1  | 49.9  | 50.0  | 49.6  | 49.9  | 49.1  | 49.2  | 49.5  | 49.6  | 49.6  | 49.6  | 48.7  | 49.5  | 49.4  | 49.7  | 49.6  | 50.0  | 50.4  | 50.1  | 50.1  | 50.4  | 49.72 | 50.9   | 48.7 | 2.2   |
| 20     | 50.0  | 48.9  | 48.6   | 49.0   | 49.6  | 49.7  | 49.3  | 49.5  | 49.0  | 49.4  | 49.0  | 49.7  | 49.9  | 49.9  | 49.7  | 49.6  | 49.5  | 49.6  | 49.7  | 49.7  | 49.7  | 49.7  | 50.0  | 49.9  | 49.52 | 50.1  | 48.3   | 1.8  |       |
| 21 c   | 49.2  | 48.1  | 48.7   | 49.5   | 49.8  | 49.9  | 49.9  | 49.2  | 48.9  | 49.2  | 49.5  | 49.5  | 49.6  | 49.7  | 49.7  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.7  | 49.8  | 49.8  | 49.7  | 49.48 | 50.1  | 48.1   | 2.0  |       |
| 22     | 49.4  | 49.0  | 49.4   | 49.2   | 49.2  | 49.6  | 49.9  | 49.4  | 49.1  | 49.2  | 49.4  | 49.5  | 49.5  | 49.6  | 49.7  | 49.5  | 49.6  | 49.4  | 49.4  | 49.4  | 49.4  | 50.1  | 50.0  | 49.9  | 49.8  | 49.51 | 50.2   | 48.9 | 1.8   |
| 23 c   | 48.9  | 48.2  | 48.5   | 49.2   | 49.7  | 50.4  | 50.5  | 49.8  | 49.1  | 49.2  | 49.8  | 49.8  | 49.8  | 49.8  | 49.6  | 49.6  | 49.6  | 49.7  | 49.6  | 49.6  | 49.6  | 49.9  | 50.1  | 50.4  | 50.1  | 49.57 | 50.5   | 48.2 | 2.8   |
| 24     | 48.9  | 48.0  | 48.5   | 49.2   | 49.7  | 49.9  | 50.0  | 49.6  | 48.9  | 48.9  | 49.1  | 49.6  | 49.3  | 49.5  | 49.5  | 49.4  | 49.4  | 49.6  | 49.6  | 49.6  | 49.8  | 49.7  | 49.8  | 50.1  | 50.0  | 49.42 | 50.1   | 48.1 | 2.0   |
| 25     | 49.2  | 48.5  | 48.9   | 50.1   | 50.5  | 50.4  | 50.0  | 49.1  | 48.2  | 48.4  | 48.6  | 49.4  | 49.3  | 49.3  | 49.2  | 49.6  | 49.5  | 49.6  | 49.5  | 49.5  | 49.9  | 49.9  | 50.1  | 50.0  | 50.0  | 49.45 | 50.5   | 48.2 | 2.8   |
| 26     | 49.4  | 49.7  | 50.1   | 50.4   | 50.0  | 49.9  | 49.5  | 49.3  | 49.2  | 49.5  | 49.6  | 49.6  | 49.6  | 49.7  | 49.2  | 49.4  | 49.5  | 49.6  | 49.5  | 49.5  | 48.5  | 49.7  | 50.0  | 49.9  | 49.60 | 50.6  | 48.4   | 2.2  |       |
| 27     | 49.4  | 49.1  | 50.8   | 51.9   | 50.6  | 50.3  | 50.2  | 50.0  | 49.2  | 49.6  | 49.8  | 49.3  | 49.8  | 49.8  | 49.8  | 49.5  | 49.8  | 49.6  | 49.6  | 49.4  | 49.6  | 49.7  | 50.0  | 49.9  | 49.8  | 49.90 | 52.1   | 49.1 | 3.0   |
| 28     | 49.1  | 48.7  | 49.0   | 49.8   | 50.4  | 50.8  | 50.4  | 50.1  | 49.4  | 49.4  | 49.6  | 49.7  | 49.6  | 49.6  | 49.6  | 48.7  | 49.8  | 49.8  | 49.1  | 48.7  | 49.2  | 49.7  | 50.0  | 50.0  | 50.3  | 49.62 | 50.9   | 48.6 | 2.3   |
| 29     | 49.6  | 48.6  | 48.7   | 49.6   | 49.8  | 49.3  | 49.6  | 49.7  | 49.2  | 49.2  | 49.7  | 49.6  | 49.7  | 49.8  | 49.8  | 49.6  | 49.6  | 49.7  | 49.9  | 49.2  | 48.8  | 49.7  | 49.8  | 49.8  | —     | —     | 50.0   | 48.5 | 1.5   |
| 30     | —     | —     | —      | —      | —     | —     | —     | —     | —     | —     | —     | —     | 49.5  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.2  | 48.8  | 49.5  | 49.2  | 49.6  | 50.4  | —     | —     | 50.6   | 48.7 | 1.9   |
| 31     | 49.6  | 49.8  | 50.0   | (50.9) | 50.4  | 50.8  | 50.2  | 49.7  | 48.8  | 49.2  | 49.2  | 49.6  | 49.7  | 49.8  | 49.6  | 49.6  | 49.5  | 49.4  | 49.7  | 49.8  | 49.6  | 49.5  | 49.2  | 49.5  | 49.5  | 49.67 | —      | —    | —     |
| mean.  | 49.48 | 49.08 | 49.81  | 49.95  | 50.21 | 50.26 | 50.03 | 49.58 | 49.06 | 49.16 | 49.43 | 49.52 | 49.48 | 49.53 | 49.41 | 49.46 | 49.48 | 49.38 | 49.81 | 49.56 | 49.61 | 49.89 | 50.18 | 50.16 | 49.60 | —     | —      | —    | —     |
| // c   | 48.88 | 48.18 | 48.44  | 49.20  | 49.70 | 50.12 | 50.10 | 49.56 | 49.08 | 49.18 | 49.34 | 49.56 | 49.60 | 49.64 | 49.56 | 49.50 | 49.52 | 49.50 | 49.80 | 49.60 | 49.72 | 49.80 | 50.02 | 49.80 | 49.46 | —     | —      | —    | —     |
| // d   | 50.46 | 50.38 | 50.32  | 50.60  | 50.84 | 50.62 | 50.12 | 49.48 | 48.98 | 48.98 | 49.36 | 49.86 | 49.16 | 49.88 | 49.24 | 49.24 | 49.34 | 48.94 | 48.52 | 49.56 | 49.84 | 49.56 | 51.06 | 51.44 | 49.79 | —     | —      | —    | —     |

Table 8

Declination (West) 3°00'0+.....'

January 1938.

| G.M.T. | 0     | 1     | 2      | 3     | 4     | 5     | 6     | 7      | 8     | 9     | 10    | 11    | 12    | 13     | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Mean  | Mix   | Min. | Range |     |
|--------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-----|
| Day    |       |       |        |       |       |       |       |        |       |       |       |       |       |        |       |       |       |       |       |       |       |       |       |       |       |       |      |       |     |
| 1 d    | 49.8  | 49.8  | 50.5   | 51.3  | 51.2  | 50.5  | 49.8  | 48.3   | 49.3  | 49.2  | 48.8  | 49.3  | 49.7  | 49.5   | 49.2  | 48.9  | 49.7  | 50.4  | 49.5  | 49.5  | 50.7  | 49.1  | 49.4  | 50.2  | 49.75 | 51.5  | 48.4 | 3.1   |     |
| 2      | 49.5  | 48.5  | 49.7   | 50.7  | 50.5  | 51.0  | 50.2  | (49.6) | 49.4  | 49.4  | 49.3  | 49.6  | 49.3  | 49.4   | 49.7  | 49.8  | 49.9  | 49.9  | 49.8  | 50.1  | 49.6  | 50.3  | 50.3  | 50.2  | 49.82 | 51.8  | 48.3 | 3.0   |     |
| 3      | 49.4  | 48.3  | 49.8   | 51.3  | 51.3  | 50.4  | 50.3  | 48.9   | 49.4  | 49.1  | 48.9  | 49.3  | 49.3  | 49.3   | 49.4  | 49.6  | 49.7  | 49.8  | 49.8  | 49.8  | 49.9  | 49.9  | 49.9  | 49.6  | 49.74 | 51.4  | 48.7 | 2.7   |     |
| 4 c    | 48.7  | 48.4  | 48.3   | 48.8  | 50.1  | 50.8  | 50.7  | 50.2   | 49.7  | 49.3  | 49.3  | 49.4  | 49.5  | 49.5   | 49.6  | 49.5  | 49.7  | 49.6  | 49.8  | 49.8  | 49.8  | 49.9  | 50.0  | 50.1  | 49.7  | 49.62 | 50.4 | 48.1  | 2.8 |
| 5 c    | 49.0  | 48.4  | (48.9) | 49.7  | 50.5  | 50.8  | 50.7  | 50.0   | 49.5  | 49.1  | 49.2  | 49.2  | 49.4  | 49.4   | 49.4  | 49.6  | 49.6  | 49.6  | 49.7  | 49.7  | 49.8  | 49.9  | 50.0  | 50.1  | 49.9  | 49.65 | 50.9 | 48.4  | 2.5 |
| 6      | 49.2  | 47.7  | 48.7   | 50.4  | 51.7  | 51.5  | 51.1  | 50.9   | 49.0  | 49.1  | 49.5  | 50.0  | 49.8  | 49.1   | 47.9  | 49.1  | 49.6  | 50.1  | 50.1  | 50.5  | 50.7  | 50.2  | 50.4  | 50.0  | 49.85 | 51.8  | 47.5 | 4.8   |     |
| 7      | 49.2  | 48.7  | 49.2   | 50.1  | 50.7  | 51.2  | 51.0  | 50.2   | 49.2  | 49.3  | 49.5  | 49.6  | 49.6  | 49.7   | 49.5  | 49.6  | 49.6  | 49.6  | 49.4  | 48.3  | 49.8  | 50.0  | 50.2  | 50.4  | 49.8  | 49.74 | 51.5 | 48.3  | 3.2 |
| 8      | 48.7  | 48.5  | 48.7   | 49.6  | 50.7  | 50.8  | 49.8  | 49.8   | 49.5  | 49.6  | 49.6  | 49.6  | 48.9  | 49.2   | 49.6  | 49.6  | 49.7  | 49.8  | 50.2  | 50.0  | 50.0  | 50.1  | 50.1  | 49.8  | 49.64 | 50.9  | 48.4 | 2.5   |     |
| 9      | 48.5  | 48.1  | 48.3   | 49.2  | 49.8  | 50.0  | 49.8  | 49.4   | 49.2  | 49.2  | 49.4  | 49.4  | 49.6  | 49.2   | 49.3  | 49.6  | 49.8  | 49.6  | 49.6  | 49.6  | 49.4  | 49.9  | 50.1  | 50.2  | 49.46 | 50.2  | 48.0 | 3.2   |     |
| 10 c   | 49.1  | 48.3  | 48.9   | 50.4  | 50.9  | 51.4  | 51.0  | 49.8   | 48.7  | 49.1  | 49.5  | 49.6  | 49.7  | 49.7   | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.5  | 49.6  | 49.6  | 48.9  | 49.63 | 51.5  | 48.3 | 3.2   |     |
| 11 c   | 47.8  | 47.7  | 48.7   | 49.8  | 50.5  | 50.7  | 50.6  | 49.7   | 48.8  | 49.0  | 49.3  | 49.4  | 49.7  | 49.7   | 49.6  | 49.6  | 49.6  | 49.5  | 49.5  | 49.5  | 49.5  | 49.6  | 49.8  | 49.4  | 49.46 | 50.8  | 47.5 | 3.3   |     |
| 12     | 48.2  | 48.2  | 48.8   | 50.1  | 50.3  | 50.1  | 50.0  | 49.3   | 48.8  | 48.8  | 49.0  | 49.4  | 49.4  | 49.4   | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.7  | 49.9  | 49.7  | 49.2  | 49.40 | 50.4 | 47.8  | 2.6 |
| 13     | 47.8  | 48.2  | 48.9   | 49.6  | 49.7  | 49.7  | 49.7  | 49.7   | 49.7  | 49.7  | 49.6  | 49.5  | 49.4  | 49.2   | 50.1  | 50.4  | 49.5  | 49.5  | 49.3  | 49.2  | 48.1  | 48.5  | 49.8  | 49.8  | 49.44 | 50.4  | 47.8 | 2.6   |     |
| 14     | 48.6  | 49.4  | 50.4   | 51.1  | 50.9  | 50.7  | 49.7  | 48.5   | 48.4  | 48.6  | 49.5  | 50.8  | 50.3  | 49.6   | 48.8  | 48.4  | 48.4  | 48.5  | 48.9  | 48.7  | 48.9  | 49.0  | 48.9  | 49.0  | 49.81 | 51.1  | 48.8 | 2.8   |     |
| 15     | 48.0  | 49.1  | (49.6) | 50.1  | 49.9  | 50.0  | 50.2  | 50.2   | 50.0  | 50.0  | 49.8  | 49.7  | 49.6  | 49.6   | 49.6  | 49.5  | 49.5  | 49.7  | 49.6  | 49.7  | 50.0  | 50.0  | 50.0  | 49.5  | 49.80 | 51.0  | 48.4 | 2.6   |     |
| 16     | 48.4  | 48.2  | 49.3   | 50.6  | 50.8  | 50.2  | 49.2  | 46.8   | 48.3  | 48.7  | 49.4  | 50.2  | 50.0  | 49.8   | 50.0  | 49.6  | 49.7  | 49.8  | 49.7  | 49.8  | 49.8  | 49.7  | 49.6  | 49.5  | 49.1  | 49.43 | 51.0 | 48.1  | 2.9 |
| 17     | 48.5  | 47.7  | 48.8   | 52.1  | 52.3  | 52.8  | 51.1  | 49.6   | 48.7  | 48.2  | 49.1  | 49.4  | 49.4  | 48.6   | 49.6  | 49.7  | 49.8  | 49.8  | 49.6  | 49.6  | 49.6  | 49.5  | 49.4  | 49.3  | 48.3  | 49.60 | 52.7 | 47.1  | 5.6 |
| 18     | 47.1  | 48.1  | 50.0   | 51.9  | 51.2  | 50.0  | 48.9  | 48.5   | 48.4  | 49.0  | 48.4  | 49.4  | 49.4  | 49.7   | 49.7  | 49.7  | 49.7  | 49.6  | 49.5  | 49.6  | 49.9  | 49.7  | 49.7  | 48.7  | 49.41 | 52.0  | 47.1 | 4.9   |     |
| 19 d   | 47.4  | 47.2  | 48.4   | 50.0  | 51.2  | 50.6  | 49.4  | 48.2   | 48.3  | 48.7  | 49.1  | 49.2  | 49.2  | 49.4   | 49.8  | 49.9  | 50.8  | 48.1  | 48.2  | 49.7  | 51.0  | 50.0  | 49.8  | 50.5  | 49.38 | 51.4  | 47.0 | 4.4   |     |
| 20     | 50.0  | 49.3  | 49.5   | 50.2  | 50.1  | 49.9  | 49.8  | 48.5   | 48.5  | 48.6  | 48.8  | 49.2  | 49.2  | 49.5   | 49.6  | 49.6  | 49.7  | 49.8  | 49.6  | 49.6  | 49.8  | 49.9  | 49.9  | 49.2  | 49.49 | 50.2  | 48.4 | 1.8   |     |
| 21 c   | 48.3  | 47.8  | 48.9   | 50.3  | 51.5  | 50.9  | 50.2  | 49.1   | 48.7  | 48.7  | 48.9  | 49.2  | 49.1  | 49.4   | 49.1  | 49.2  | 49.4  | 49.4  | 49.5  | 49.4  | 49.6  | 49.8  | 49.7  | 49.7  | 49.41 | 51.6  | 47.7 | 3.9   |     |
| 22 d   | 48.1  | 47.6  | 48.4   | 50.1  | 52.1  | 52.1  | 50.9  | 49.8   | 48.9  | 48.9  | 49.1  | 49.4  | 49.4  | 49.4   | 49.4  | 49.2  | 48.8  | 47.6  | 48.2  | 49.3  | 50.0  | 49.3  | 49.8  | 50.3  | 49.9  | 49.40 | 52.6 | 47.5  | 5.0 |
| 23     | 48.7  | 48.6  | 49.7   | 51.0  | 51.8  | 52.0  | 51.2  | 49.9   | 48.8  | 49.6  | 49.6  | 50.1  | 49.8  | 49.4   | 49.5  | 49.1  | 49.1  | 49.8  | 49.7  | 49.1  | 49.1  | 49.6  | 49.9  | 50.1  | 49.72 | 52.3  | 48.2 | 4.1   |     |
| 24     | 49.3  | 49.2  | 49.4   | 50.6  | 50.6  | 51.1  | 50.9  | 49.8   | 49.4  | 49.1  | 49.7  | 50.1  | 49.2  | 49.3   | 49.7  | 49.6  | 49.8  | 49.1  | 49.3  | 49.9  | 49.1  | 49.3  | 49.6  | 48.9  | 49.55 | 51.9  | 47.9 | 4.0   |     |
| 25     | 48.3  | 47.9  | (48.5) | 49.2  | 49.5  | 50.0  | 50.1  | (49.8) | 49.3  | 49.4  | 49.9  | 49.7  | 49.4  | 49.7   | 48.4  | 47.9  | 49.3  | 49.4  | 49.3  | 49.1  | 49.3  | 50.1  | 50.0  | 50.3  | 49.28 | 50.5  | 47.7 | 2.8   |     |
| 26     | 48.3  | 48.9  | 48.9   | 50.4  | 49.8  | 50.0  | 50.5  | 50.5   | 49.5  | 49.4  | 49.3  | 49.8  | 49.5  | (49.5) | 48.6  | 48.5  | 48.5  | 49.1  | 49.0  | 49.1  | 49.8  | 50.1  | 50.0  | 50.1  | 49.50 | 50.9  | 48.1 | 2.8   |     |
| 27 d   | 50.0  | 50.4  | 50.1   | 49.3  | 50.6  | 49.7  | 50.3  | 50.2   | 49.8  | 49.7  | 50.2  | 49.4  | 50.2  | 49.7   | 49.7  | 48.9  | 49.1  | 49.4  | 48.9  | 48.9  | 49.1  | 49.1  | 49.6  | 50.3  | 50.1  | 49.78 | 51.0 | 47.8  | 3.2 |
| 28 d   | 49.3  | 49.5  | 49.7   | 51.0  | 49.8  | 49.4  | 49.3  | 49.5   | 49.5  | 50.0  | 49.1  | 50.1  | 49.9  | 50.2   | 50.0  | 49.9  | 50.6  | 48.8  | 49.7  | 49.1  | 49.1  | 49.6  | 49.9  | 48.7  | 49.68 | 51.5  | 48.5 | 3.0   |     |
| 29     | 48.5  | 48.8  | 49.4   | 50.3  | 50.8  | 50.6  | 50.1  | 49.6   | 49.4  | 49.5  | 49.6  | 50.2  | 50.1  | 49.9   | 49.7  | 49.6  | 49.4  | 49.4  | 49.4  | 49.7  | 49.9  | 49.9  | 50.2  | 49.6  | 49.3  | 49.71 | 51.0 | 48.4  | 2.6 |
| 30     | 48.4  | 48.3  | 49.0   | 49.4  | 49.6  | 49.5  | 50.2  | 50.0   | 49.9  | 50.2  | 49.8  | 49.9  | 49.9  | 49.9   | 50.1  | 50.3  | 49.5  | 49.8  | 49.7  | 49.6  | 49.5  | 49.5  | 50.0  | 48.9  | 49.60 | 50.3  | 48.0 | 2.3   |     |
| 31     | 48.7  | 48.8  | 49.3   | 50.4  | 51.6  | 51.7  | 50.9  | 49.7   | 48.6  | 49.5  | 49.8  | 49.7  | 49.7  | 49.8   | 49.4  | 49.5  | 49.5  | 49.8  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 48.7  | 49.71 | 52.2  | 47.1 | 5.1   |     |
| mean   | 48.70 | 48.52 | 49.18  | 50.27 | 50.71 | 50.63 | 50.24 | 49.50  | 49.12 | 49.22 | 49.35 | 49.63 | 49.54 | 49.52  | 49.45 | 49.40 | 49.47 | 49.46 | 49.46 | 49.55 | 49.69 | 49.76 | 49.89 | 49.58 | 49.58 | —     | —    | —     | —   |
| ♣ c    | 48.58 | 48.12 | 48.74  | 49.80 | 50.70 | 50.92 | 50.64 | 49.76  | 49.08 | 49.04 | 49.26 | 49.36 | 49.48 | 49.56  | 49.46 | 49.52 | 49.56 | 49.60 | 49.62 | 49.58 | 49.68 | 49.80 | 49.86 | 49.52 | 49.55 | —     | —    | —     | —   |
| ♣ d    | 48.82 | 48.80 | 49.42  | 50.22 | 50.98 | 50.46 | 49.94 | 49.20  | 49.16 | 49.30 | 49.26 | 49.48 | 49.68 | 49.64  | 49.58 | 49.28 | 49.56 | 48.98 | 49.32 | 49.44 | 49.84 | 49.62 | 49.94 | 49.88 | 49.58 | —     | —    | —     | —   |
|        | 49.20 | 48.94 | —      | —     | —     | —     | —     | —      | —     | —     | —     | —     | —     | —      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     |     |

Declination (West) 3°00'0 + .....'

| G.M.T. |   | 0      | 1      | 2     | 3      | 4      | 5     | 6      | 7     | 8     | 9      | 10    | 11     | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19     | 20     | 21     | 22     | 23    | Mean  | Max.  | Min. | Range |     |   |
|--------|---|--------|--------|-------|--------|--------|-------|--------|-------|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|-------|------|-------|-----|---|
| Day    |   | 47.1   | 46.9   | 47.9  | 49.4   | 49.9   | 49.9  | 49.8   | 49.3  | 49.4  | 49.4   | 49.6  | 49.7   | 49.9  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7   | 49.6   | 49.6   | 49.8   | 48.1  | 49.27 | 50.0  | 46.4 | 3.6   |     |   |
| 1      |   | 47.1   | 46.9   | 47.9  | 49.4   | 49.9   | 49.9  | 49.8   | 49.3  | 49.4  | 49.4   | 49.6  | 49.7   | 49.9  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.6   | 49.6   | 49.8   | 48.1   | 49.27 | 50.0  | 46.4  | 3.6  |       |     |   |
| 2      |   | 46.4   | 47.7   | 49.4  | 51.6   | 53.0   | 53.2  | 52.6   | 51.3  | 50.6  | 50.6   | 50.6  | 50.6   | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.6   | 49.2   | 49.6   | 49.8   | 48.8  | 49.87 | 53.6  | 46.4 | 7.2   |     |   |
| 3      |   | 47.8   | 47.3   | 47.8  | 48.8   | 49.7   | 49.9  | 49.7   | 49.5  | 49.4  | 49.4   | 49.5  | 49.3   | 49.8  | 49.7  | 49.6  | 49.8  | 49.8  | 49.6  | 49.6  | 49.6   | 49.6   | 49.7   | 49.7   | 50.0  | 49.36 | 50.0  | 47.2 | 2.8   |     |   |
| 4      |   | 48.0   | 48.3   | 48.6  | 49.1   | 49.7   | 50.2  | (50.6) | 50.6  | 50.2  | 49.5   | 49.7  | 49.7   | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |
| 5      |   | —      | —      | —     | —      | —      | —     | —      | —     | —     | —      | —     | —      | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |
| 6      | c | —      | —      | —     | —      | —      | —     | 50.2   | 49.9  | 50.0  | 49.8   | 49.8  | 49.7   | 49.7  | 49.7  | 49.5  | 49.5  | 49.4  | 49.4  | 49.4  | 49.5   | 49.6   | 49.7   | 49.7   | 49.8  | 48.8  | —     | —    | —     | —   | — |
| 7      |   | 48.0   | 48.0   | 48.2  | 48.8   | 49.5   | 49.9  | 49.6   | —     | —     | —      | —     | —      | 49.9  | 49.8  | 49.6  | 49.5  | 49.6  | 49.5  | 49.6  | 49.6   | 49.7   | 50.3   | 50.1   | 49.9  | —     | —     | —    | —     | —   | — |
| 8      |   | —      | —      | —     | —      | —      | —     | —      | 50.4  | 50.3  | 49.9   | 50.2  | 50.2   | 49.9  | 49.9  | 49.9  | 49.7  | 49.8  | 49.6  | 49.6  | 49.5   | 49.4   | 49.5   | 50.0   | 50.0  | 49.5  | 49.92 | 50.9 | 48.9  | 2.0 |   |
| 9      |   | 49.6   | 49.5   | 50.2  | 50.6   | 50.8   | 50.8  | 50.1   | 49.7  | 49.5  | 49.8   | 49.9  | 49.9   | 49.8  | 49.7  | 49.8  | 49.7  | 49.5  | 49.5  | 49.6  | 49.6   | 49.6   | 49.7   | 50.0   | 50.0  | 49.0  | 49.87 | 51.8 | 48.0  | 3.8 |   |
| 10     |   | 48.9   | 49.3   | 50.4  | 51.8   | 51.3   | 50.8  | —      | —     | —     | —      | —     | —      | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |
| 11     | c | 48.1   | 48.8   | 49.5  | 51.7   | 52.2   | 51.2  | 50.0   | 49.7  | 49.1  | 49.2   | 49.4  | 49.5   | 49.7  | 49.8  | 49.7  | 49.6  | 49.6  | 49.8  | 49.6  | 49.4   | 49.5   | 49.6   | 49.8   | 49.5  | 48.1  | 49.69 | 52.4 | 46.9  | 5.4 |   |
| 12     |   | 46.9   | 47.7   | —     | —      | —      | —     | —      | —     | —     | —      | —     | 49.4   | 49.6  | 49.6  | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |
| 13     | c | 47.9   | 48.6   | 50.2  | (51.5) | (52.0) | 51.6  | 50.5   | 49.4  | 48.8  | 49.0   | 49.4  | 49.7   | 50.0  | 50.5  | 50.5  | 50.4  | 50.4  | 50.5  | 50.4  | (50.4) | (50.4) | (50.6) | (50.8) | 48.5  | —     | —     | —    | —     | —   |   |
| 14     |   | (48.5) | (48.7) | —     | —      | —      | —     | 50.8   | 49.5  | 48.4  | 48.7   | 49.1  | 49.6   | 49.7  | 48.9  | 49.5  | 49.9  | 49.6  | 49.8  | 49.7  | 50.3   | 51.1   | 50.0   | 49.6   | 48.8  | —     | —     | —    | —     | —   |   |
| 15     |   | 48.1   | 48.5   | 49.5  | 50.0   | 50.0   | 49.9  | 49.9   | 49.2  | 48.8  | 49.3   | 49.7  | 49.8   | 49.6  | 49.1  | 49.6  | 49.6  | 49.7  | 49.7  | 49.8  | 49.6   | 49.7   | 49.7   | 49.8   | 49.4  | 48.7  | 49.42 | 50.5 | 48.1  | 2.4 |   |
| 16     | c | 48.3   | 48.6   | 49.1  | 50.4   | 50.6   | 50.1  | 49.3   | 49.1  | 49.5  | 49.9   | 49.6  | 49.7   | 49.7  | 49.7  | 49.8  | 49.6  | 49.6  | 49.6  | 49.8  | 49.7   | 49.8   | 49.7   | 49.6   | 49.5  | 48.8  | 49.58 | 50.7 | 48.2  | 2.6 |   |
| 17     | c | 48.9   | 49.0   | 49.9  | 51.3   | 51.8   | 51.5  | 50.8   | 49.9  | 49.2  | (49.1) | 49.6  | (49.6) | 49.6  | 49.6  | 49.7  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6   | 49.6   | 49.6   | 49.6   | 49.6  | 48.7  | 49.79 | 51.8 | 48.8  | 3.0 |   |
| 18     |   | 48.3   | 48.7   | 49.5  | 49.9   | 50.9   | 50.8  | 50.3   | 50.0  | 49.4  | 49.4   | 49.5  | 49.6   | 49.6  | 49.6  | 49.6  | 49.6  | 49.5  | 49.5  | 49.5  | 49.3   | 49.6   | 49.4   | 49.6   | 49.8  | 49.5  | 49.62 | 51.2 | 48.3  | 2.9 |   |
| 19     | d | 49.3   | 49.6   | 50.7  | 52.0   | 51.7   | 51.7  | 50.8   | 49.6  | 49.2  | 49.1   | 49.0  | 49.8   | 49.8  | 49.7  | 49.8  | 49.6  | 49.6  | 49.6  | 49.6  | 49.8   | 52.5   | 49.6   | 50.0   | 50.2  | 50.1  | 50.11 | 53.5 | 48.8  | 4.7 |   |
| 20     |   | 53.5   | 52.6   | 52.0  | 51.1   | 51.2   | 51.2  | 49.6   | 49.9  | 49.9  | 50.4   | 49.6  | 50.4   | 50.4  | 48.0  | 50.0  | 49.8  | 49.6  | 49.3  | 49.0  | 49.0   | 49.5   | 49.2   | 49.6   | 49.8  | 49.8  | 50.22 | 53.5 | 47.9  | 5.5 |   |
| 21     | d | 50.8   | 49.9   | 50.0  | 51.2   | 53.2   | 51.7  | 49.9   | 49.6  | 49.6  | 49.9   | 49.9  | 49.6   | 50.5  | 49.6  | 49.7  | 49.0  | 49.5  | 48.5  | 48.5  | 49.9   | 49.1   | 49.2   | 49.2   | 50.5  | 51.9  | 50.05 | 53.5 | 47.6  | 5.9 |   |
| 22     | d | 51.2   | 53.5   | 52.3  | 52.2   | 50.8   | 50.5  | 50.3   | 49.5  | 48.7  | 47.8   | 49.9  | 50.8   | 49.5  | 49.3  | 49.1  | 49.5  | 49.8  | 49.3  | 50.2  | 49.9   | 49.0   | 49.5   | 49.5   | 50.1  | 50.07 | 52.5  | 52.5 | 47.8  | 5.7 |   |
| 23     | d | 50.6   | 49.7   | 50.1  | 51.1   | 50.8   | 50.9  | 50.0   | 49.3  | 48.4  | 49.4   | 50.0  | 49.7   | 49.7  | 49.6  | 49.7  | 48.7  | 49.3  | 49.7  | 49.5  | 49.3   | 50.6   | 49.5   | 50.0   | 50.0  | 49.77 | 52.3  | 52.3 | 47.7  | 4.6 |   |
| 24     | d | 51.1   | 49.5   | 51.1  | 50.8   | 50.8   | 50.6  | 49.9   | 49.9  | 49.1  | 50.4   | 49.1  | 50.8   | 48.4  | 50.2  | 49.9  | 49.9  | 49.3  | 50.3  | 49.8  | 48.0   | 48.0   | 49.1   | 49.5   | 52.6  | 49.8  | 49.97 | 53.4 | 47.4  | 6.0 |   |
| 25     |   | 50.0   | 50.2   | 50.9  | 51.4   | 51.3   | 50.6  | 50.0   | 49.5  | 49.3  | 49.3   | 49.6  | 49.3   | 50.8  | 50.0  | 50.0  | 49.8  | 49.8  | 49.8  | 49.8  | 49.8   | 50.2   | 49.6   | 49.3   | 60.2  | 50.0  | 50.02 | 51.6 | 48.9  | 2.7 |   |
| 26     |   | 50.6   | 50.8   | —     | —      | —      | —     | 49.6   | 49.6  | 49.1  | 49.8   | 49.4  | 49.1   | 49.8  | 50.1  | 50.0  | 50.0  | 49.6  | 49.9  | 49.6  | 49.4   | 49.3   | 50.4   | 51.8   | 49.2  | —     | —     | —    | —     | —   |   |
| 27     |   | 49.2   | 49.8   | 51.1  | 52.1   | 52.2   | 51.3  | 50.6   | 49.1  | 48.7  | 49.8   | 49.9  | 49.6   | 49.6  | 50.0  | 49.9  | 49.7  | 49.6  | 49.5  | 49.4  | 49.1   | 49.1   | 49.1   | 49.6   | 50.0  | 49.8  | 49.92 | 52.9 | 48.7  | 4.2 |   |
| 28     |   | 49.6   | 49.8   | 50.5  | 52.0   | 52.8   | 52.1  | 50.8   | 50.0  | 49.4  | 49.1   | 49.6  | 49.8   | 49.8  | 49.8  | 49.8  | 49.8  | 49.8  | 49.6  | 49.4  | 49.4   | 49.5   | 49.3   | 49.5   | 49.1  | 48.1  | 49.94 | 52.9 | 47.3  | 5.6 |   |
| 29     |   | —      | —      | —     | —      | —      | —     | —      | —     | —     | —      | —     | —      | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |
| 30     |   | —      | —      | —     | —      | —      | —     | —      | —     | —     | —      | —     | —      | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |
| 31     |   | —      | —      | —     | —      | —      | —     | —      | —     | —     | —      | —     | —      | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |
| mean   |   | 49.81  | 49.42  | 50.10 | 50.99  | 51.32  | 50.98 | 50.26  | 49.71 | 49.82 | 49.49  | 49.69 | 49.79  | 49.80 | 49.65 | 49.64 | 49.58 | 49.49 | 49.43 | 49.45 | 49.66  | 49.51  | 49.62  | 49.36  | 49.39 | 49.81 | —     | —    | —     | —   |   |
| ∑ c    |   | 48.15  | 48.52  | 49.67 | 51.22  | 51.65  | 51.10 | 50.15  | 49.52 | 49.15 | 49.30  | 49.50 | 49.62  | 49.75 | 49.90 | 49.92 | 49.80 | 49.85 | 49.87 | 49.77 | 49.82  | 49.82  | 49.87  | 49.72  | 48.87 | 49.78 | —     | —    | —     | —   | — |
| ∑ d    |   | 50.60  | 50.44  | 50.84 | 51.46  | 51.46  | 51.08 | 50.18  | 49.58 | 49.00 | 49.32  | 49.58 | 50.04  | 49.66 | 49.94 | 49.23 | 49.28 | 49.28 | 49.44 | 49.46 | 49.92  | 49.48  | 49.54  | 50.64  | 50.26 | 49.99 | —     | —    | —     | —   | — |
|        |   | 51.28  | 51.10  | —     | —      | —      | —     | —      | —     | —     | —      | —     | —      | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —    | —     | —   |   |

Table 10

Declination (West)  $3^{\circ}00'0'' + \dots\dots\dots'$ 

March 1938.

| G.M.T.<br>1 Day | 0     | 1     | 2      | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Mean   | Max.  | Mth. | Range |     |
|-----------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------|-------|-----|
| 1               | 47.2  | 47.0  | 47.4   | 48.7  | 49.9  | 51.1  | 51.7  | 51.0  | 50.6  | 49.9  | 49.7  | 49.6  | 49.9  | 49.9  | 50.0  | 49.8  | 50.0  | 49.7  | 49.8  | 49.6  | 49.6  | 49.9  | 49.9  | 49.9  | 48.2   | 49.81 | 47.0 | 6.2   |     |
| 2               | 47.9  | 47.4  | 48.2   | 48.5  | 50.0  | 51.5  | 52.8  | 51.7  | 51.0  | 50.8  | 49.4  | 48.6  | 48.9  | 50.0  | 49.8  | 50.1  | 49.5  | 49.0  | 48.8  | 48.1  | 49.0  | 49.4  | 49.3  | 49.9  | 48.8   | 49.79 | 47.4 | 4.8   |     |
| 3               | 48.2  | 48.2  | 48.5   | 49.8  | 50.0  | 51.5  | 52.8  | 51.7  | 51.0  | 50.8  | 49.4  | 48.6  | 48.9  | 50.0  | 49.8  | 50.1  | 49.5  | 49.0  | 48.8  | 48.1  | 49.0  | 49.4  | 49.3  | 49.9  | 48.8   | 49.72 | 48.1 | 4.2   |     |
| 4               | 49.7  | 49.1  | (48.9) | 50.8  | 51.8  | 51.9  | 51.6  | 51.0  | 50.0  | 49.9  | 50.1  | 49.9  | 49.9  | 49.9  | 49.8  | 49.8  | 49.7  | 49.6  | 49.6  | 49.6  | 49.8  | 49.4  | 49.3  | 49.9  | 50.0   | 50.02 | 48.5 | 3.7   |     |
| 5 c             | 48.5  | 47.8  | 48.0   | 49.8  | 51.8  | 52.4  | 52.3  | 51.1  | 49.5  | 49.8  | 49.6  | 49.8  | 49.7  | 49.8  | 49.7  | 49.8  | 49.7  | 49.6  | 49.6  | 49.6  | 49.8  | 49.4  | 49.3  | 49.0  | 47.4   | 49.68 | 46.8 | 5.6   |     |
| 6 c             | 46.8  | 47.4  | (48.5) | 50.5  | 52.2  | 52.9  | 52.2  | 51.1  | 49.9  | 49.6  | 49.7  | 49.8  | 49.8  | 49.8  | 49.8  | 49.8  | 50.0  | 50.1  | 50.0  | 49.8  | 49.6  | 49.6  | 49.7  | 48.7  | 49.86  | 52.9  | 46.8 | 6.1   |     |
| 7 c             | 47.5  | 47.8  | 49.4   | 51.1  | 51.7  | 51.4  | 51.4  | 50.6  | 49.9  | 49.8  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.6  | 49.5  | 49.8  | 49.8  | 49.6  | 49.6  | 49.8  | 48.6  | 49.84  | 51.7  | 46.9 | 4.8   |     |
| 8               | 47.1  | 46.2  | 46.6   | 48.7  | 50.8  | 51.7  | 51.7  | 51.1  | 50.2  | 49.5  | 49.8  | 49.8  | 49.8  | 49.8  | 49.6  | 49.3  | 49.0  | 49.1  | 49.1  | 49.1  | 49.3  | 49.2  | 49.3  | 49.4  | 49.2   | 49.89 | 51.8 | 46.0  | 5.8 |
| 9 c             | 48.4  | 48.3  | 48.6   | 50.0  | 52.1  | 52.6  | 52.9  | 52.0  | 50.4  | 49.7  | 49.9  | 50.0  | 49.9  | 49.7  | 49.6  | 49.5  | 49.5  | 49.8  | 49.8  | 49.8  | 49.8  | 49.4  | 49.6  | 49.9  | (48.9) | 49.95 | 52.9 | 48.2  | 4.7 |
| 10              | 47.8  | 47.5  | 47.8   | 50.0  | 52.1  | 52.6  | 51.8  | 50.8  | 49.5  | 49.2  | 49.6  | 49.8  | 49.8  | 49.8  | 49.7  | 49.8  | 49.7  | 49.6  | 49.6  | 49.6  | 49.8  | 49.8  | 50.1  | 49.9  | 48.8   | 49.72 | 52.9 | 46.3  | 6.1 |
| 11              | 47.0  | 47.4  | 48.9   | 51.2  | 51.4  | 51.6  | 51.2  | 50.8  | 49.8  | 49.6  | 49.7  | 49.8  | 49.8  | 49.8  | 49.7  | 49.8  | 49.8  | 49.5  | 49.0  | 49.4  | 49.6  | 49.8  | 49.8  | 49.9  | 48.4   | 49.64 | 47.1 | 46.5  | 5.2 |
| 12              | 47.8  | 46.6  | (47.2) | 49.8  | 51.2  | 51.4  | 51.1  | 50.2  | 49.6  | 49.1  | 49.5  | 50.0  | 50.0  | 50.1  | 49.9  | 49.7  | 49.9  | 49.6  | 49.5  | 49.5  | 49.2  | 49.8  | 49.9  | 50.0  | 48.7   | 49.58 | 51.5 | 46.5  | 5.0 |
| 13              | 47.8  | 47.3  | (48.5) | 49.4  | 50.4  | 51.2  | 50.8  | 49.9  | 49.1  | 49.0  | 49.7  | 49.8  | 49.8  | 49.8  | 49.6  | 49.3  | 49.6  | 49.0  | 49.0  | 49.5  | 49.6  | 49.8  | 49.6  | 48.7  | 47.5   | 49.85 | 51.2 | 46.8  | 4.9 |
| 14              | 46.3  | 46.1  | 47.7   | 50.0  | 52.0  | 53.4  | 52.3  | 51.4  | 49.5  | 49.5  | 50.0  | 50.1  | 49.7  | 49.8  | 50.0  | 50.1  | 49.6  | 49.7  | 49.6  | 49.6  | 49.8  | 49.6  | 49.6  | 49.8  | 48.8   | 49.77 | 53.5 | 46.0  | 7.5 |
| 15              | 47.8  | 46.8  | 48.0   | 49.8  | 51.8  | 52.9  | 52.7  | 51.6  | 49.9  | 49.8  | 49.5  | 49.6  | 49.4  | 49.8  | 49.9  | 49.8  | 49.7  | 49.6  | 49.6  | 49.5  | 49.4  | 49.4  | 49.6  | 49.9  | 48.4   | 49.78 | 53.1 | 46.7  | 6.4 |
| 16 c            | 47.1  | 46.9  | 47.9   | 49.6  | 51.1  | 51.8  | 51.9  | 50.8  | 49.8  | 49.6  | 49.7  | 49.8  | 49.9  | 49.8  | 49.8  | 49.7  | 49.9  | 49.7  | 49.9  | 49.7  | 49.8  | 49.6  | 49.9  | 50.2  | 49.1   | 49.70 | 52.1 | 46.9  | 5.2 |
| 17              | 47.6  | 46.4  | 46.7   | 49.2  | 51.3  | 52.8  | 52.0  | 51.0  | 49.6  | 49.0  | 49.5  | 49.8  | 49.9  | 49.9  | 49.4  | 49.5  | 49.1  | 49.4  | 49.8  | 49.3  | 49.3  | 49.4  | 49.7  | 49.5  | 48.6   | 49.45 | 52.8 | 46.8  | 6.0 |
| 18 d            | 47.1  | 46.0  | 47.4   | 50.2  | 52.4  | 53.8  | 52.9  | 51.3  | 49.7  | 49.5  | 50.2  | 50.2  | 49.6  | 49.3  | 49.6  | 49.3  | 47.4  | 49.4  | 48.9  | 48.9  | 48.9  | 48.9  | 48.9  | 48.5  | 49.2   | 49.50 | 53.5 | 46.0  | 7.5 |
| 19 d            | 49.1  | 47.0  | 48.1   | 50.2  | 51.4  | 52.1  | 52.4  | 51.8  | 50.0  | 49.8  | 50.0  | 50.0  | 49.8  | 49.8  | 50.0  | 49.5  | 49.9  | 49.1  | 48.7  | 48.8  | 49.8  | 49.5  | 50.6  | 50.5  | 50.0   | 49.88 | 52.6 | 47.0  | 5.6 |
| 20 d            | 49.3  | 48.7  | 49.6   | 52.3  | 52.8  | 52.8  | 52.2  | 50.5  | 49.6  | 50.0  | 49.9  | 49.1  | 49.9  | 49.9  | 49.8  | 49.7  | 49.5  | 49.2  | 49.2  | 48.1  | 48.4  | 50.1  | 50.2  | 49.0  | 48.9   | 49.98 | 53.1 | 48.0  | 5.1 |
| 21              | 47.5  | 46.8  | 47.8   | 49.9  | 51.1  | 52.7  | 51.8  | 51.2  | 50.4  | 49.6  | 46.3  | 48.9  | 49.9  | 50.0  | 50.0  | 49.9  | 49.9  | 49.2  | 49.8  | 49.3  | 49.6  | 49.4  | 49.4  | 49.8  | 49.5   | 49.55 | 52.8 | 46.1  | 6.7 |
| 22              | 48.8  | 49.1  | (49.7) | 50.6  | 51.7  | 52.9  | 53.6  | 51.9  | 50.6  | 50.8  | 49.8  | 49.8  | 49.1  | 49.3  | 49.4  | 48.8  | 49.7  | 49.5  | 49.5  | 49.8  | 49.6  | 49.6  | 50.0  | 50.0  | 48.4   | 50.08 | 53.6 | 46.9  | 6.7 |
| 23 d            | 46.9  | 46.8  | 47.9   | 49.9  | 52.8  | 52.7  | 51.8  | 50.8  | 50.3  | 49.5  | 49.9  | 49.0  | 49.9  | 49.8  | 49.6  | 49.2  | 48.6  | 49.2  | 48.8  | 48.8  | 49.0  | 49.2  | 50.2  | 50.3  | (50.3) | 49.64 | 52.8 | 46.6  | 6.2 |
| 24 d            | 47.7  | 47.5  | 48.6   | 51.0  | 52.8  | 52.9  | 53.0  | 50.5  | 49.9  | 50.2  | 50.3  | 48.9  | 49.7  | 48.9  | 49.8  | 49.9  | 49.5  | 48.0  | 48.6  | 49.8  | 49.8  | 49.8  | 50.2  | 50.0  | 49.81  | 53.5  | 47.4 | 6.1   |     |
| 25              | 50.1  | 49.3  | 49.8   | 50.7  | 52.0  | 53.8  | 52.9  | 52.9  | 52.9  | 51.8  | 49.8  | 49.8  | 49.8  | 49.9  | 49.9  | 49.9  | 49.5  | 49.8  | 49.6  | 49.6  | 49.6  | 50.1  | 49.8  | 50.0  | 49.0   | 50.80 | 53.8 | 47.6  | 5.8 |
| 26              | 47.5  | 46.9  | (48.2) | 50.7  | 51.9  | 52.4  | 52.2  | 51.4  | 50.5  | 49.2  | 50.4  | 50.0  | 49.8  | 49.9  | 49.8  | 49.8  | 49.5  | 49.1  | 49.3  | 48.9  | 49.0  | 49.0  | 49.3  | 49.3  | 48.1   | 49.72 | 52.6 | 46.2  | 6.4 |
| 27              | 46.2  | 45.4  | 46.2   | 48.7  | 50.4  | 51.6  | 52.6  | 52.4  | 51.8  | 50.2  | 49.9  | 50.5  | 50.7  | 48.7  | 48.8  | 49.2  | 49.2  | 48.8  | 48.2  | 49.1  | 48.8  | 49.4  | 49.9  | 48.6  | 49.87  | 52.8  | 46.8 | 7.5   |     |
| 28              | 47.5  | 46.8  | 47.2   | 49.5  | 51.9  | 52.6  | 52.3  | 50.8  | 49.5  | 48.9  | 49.5  | 49.4  | 49.6  | 49.3  | 49.3  | 48.5  | 49.3  | 49.6  | 49.5  | 49.5  | 49.5  | 49.6  | 50.1  | 49.0  | 49.0   | 49.52 | 52.7 | 46.7  | 6.0 |
| 29              | 47.5  | 46.7  | 48.0   | 50.8  | 53.5  | 54.4  | 53.6  | 51.8  | 50.6  | 50.1  | 49.8  | 50.0  | 50.2  | 50.1  | 49.9  | 49.5  | 49.2  | 49.0  | 49.2  | 49.2  | 49.9  | 49.8  | 49.8  | 48.9  | 48.5   | 49.98 | 54.4 | 46.4  | 8.0 |
| 30              | 46.7  | 46.6  | 48.1   | 50.6  | 52.5  | 53.3  | 52.8  | 51.8  | 51.8  | 51.0  | 49.8  | 49.6  | 49.9  | 49.9  | 49.5  | 49.4  | 48.7  | 48.8  | 49.2  | 49.6  | 49.8  | 49.5  | 49.8  | 49.8  | 48.6   | 49.80 | 53.3 | 46.3  | 7.0 |
| 31              | 47.0  | 46.8  | 47.4   | 49.6  | 51.8  | 52.2  | 52.7  | 51.9  | 51.1  | 50.1  | 50.5  | 50.5  | 49.8  | 49.7  | 49.7  | 49.8  | 49.2  | 49.0  | 49.0  | 49.0  | 49.5  | 49.2  | 49.5  | 49.5  | 48.9   | 49.70 | 52.8 | 46.8  | 6.5 |
| mean            | 47.71 | 47.21 | 48.11  | 50.13 | 51.76 | 52.48 | 52.18 | 51.17 | 50.09 | 49.56 | 49.71 | 49.75 | 49.81 | 49.65 | 49.66 | 49.51 | 49.87 | 49.27 | 49.24 | 49.41 | 49.46 | 49.68 | 49.63 | 48.84 | 49.72  | —     | —    | —     | —   |
| // c            | 47.66 | 47.64 | 48.18  | 49.86 | 51.66 | 52.28 | 52.14 | 51.12 | 49.90 | 49.50 | 49.70 | 49.80 | 49.78 | 49.74 | 49.70 | 49.74 | 49.72 | 49.60 | 49.42 | 49.50 | 49.52 | 49.60 | 49.72 | 48.66 | 49.75  | —     | —    | —     | —   |
| // d            | 48.02 | 47.20 | 48.82  | 50.72 | 52.24 | 52.76 | 52.46 | 50.88 | 49.90 | 49.80 | 50.10 | 49.44 | 49.68 | 49.86 | 49.64 | 49.56 | 48.76 | 48.90 | 48.64 | 49.08 | 49.30 | 49.34 | 49.70 | 48.30 | 49.75  | —     | —    | —     | —   |
|                 | 48.74 | 47.86 | —      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —      | —     | —    | —     | —   |

April 1933.

Declination (West) 3°00'0+.....

Table 11

| G.M.T. | 0     | 1     | 2      | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15     | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Mean  | Max.  | Min. | Range |     |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-----|
| Day 1  | 47.0  | 45.6  | 45.9   | 48.5  | 51.1  | 52.0  | 52.3  | 51.6  | 50.9  | 50.0  | 49.8  | 50.1  | 49.8  | 49.5  | 49.5  | 49.8   | 49.3  | 49.2  | 49.0  | 49.1  | 49.4  | 49.9  | 49.2  | 48.3  | 49.45 | 52.4  | 45.8 | 7.1   |     |
| 2      | 47.2  | 46.8  | 47.7   | 49.8  | 52.0  | 52.9  | 53.3  | 52.8  | 50.9  | 50.6  | 49.6  | 49.7  | 49.6  | 49.7  | 49.6  | 49.5   | 49.4  | 49.4  | 49.2  | 49.1  | 49.6  | 49.9  | 49.7  | 48.4  | 49.81 | 53.4  | 46.2 | 7.2   |     |
| 3      | 48.0  | 47.5  | 48.3   | 49.8  | 51.4  | 52.1  | 51.4  | 50.6  | 50.7  | 49.7  | 49.7  | 50.5  | 50.7  | 47.6  | 49.1  | 49.3   | 49.0  | 48.9  | 48.6  | 48.4  | 48.4  | 49.1  | 48.7  | 48.2  | 49.45 | 52.2  | 47.4 | 4.8   |     |
| 4      | 47.6  | 47.8  | 48.9   | 51.4  | 51.8  | 51.8  | 51.4  | 50.7  | 50.2  | 49.9  | 50.2  | 50.1  | 50.2  | 50.2  | 50.2  | 49.8   | 49.3  | 48.8  | 48.4  | 48.7  | 48.7  | 49.1  | 48.8  | 47.9  | 49.65 | 51.8  | 47.5 | 4.8   |     |
| 5      | 47.6  | 47.8  | (49.3) | 51.4  | 52.6  | 52.7  | 53.0  | 51.9  | 51.1  | 49.5  | 50.3  | 50.4  | 50.5  | 50.5  | 49.8  | 49.9   | 49.4  | 49.1  | 49.2  | 49.3  | 49.6  | 50.8  | 49.9  | 48.2  | 50.14 | 53.0  | 46.9 | 6.1   |     |
| 6      | 46.9  | 46.9  | 48.6   | 50.6  | 52.8  | 53.5  | 53.3  | 51.8  | 50.1  | 49.7  | 50.1  | 50.6  | 50.4  | 50.4  | 49.7  | 49.5   | 49.2  | 48.4  | 48.8  | 49.4  | 49.9  | 50.4  | 49.3  | 48.3  | 49.90 | 53.9  | 46.7 | 7.2   |     |
| 7      | 48.3  | 48.9  | 50.5   | 51.6  | 52.4  | 52.8  | 52.5  | 51.5  | 50.5  | 50.0  | 49.8  | 50.1  | 50.1  | 50.1  | 49.9  | 49.3   | 48.4  | 48.9  | 49.6  | 49.6  | 49.2  | 49.2  | 49.2  | 47.8  | 50.01 | 52.8  | 46.8 | 6.5   |     |
| 8      | 46.9  | 46.4  | 48.0   | 49.7  | 51.2  | 52.0  | 51.8  | 50.7  | 49.7  | 49.4  | 47.8  | 49.4  | 49.9  | 49.9  | 49.7  | 49.7   | 49.3  | 49.4  | 49.5  | 49.5  | 49.8  | 49.8  | 49.8  | 47.8  | 49.46 | 52.2  | 45.8 | 6.4   |     |
| 9      | 46.6  | 46.6  | 48.0   | 49.7  | 51.9  | 52.8  | 53.1  | 51.9  | 50.0  | 49.6  | 49.6  | 49.4  | 49.4  | 49.4  | 49.8  | 49.7   | 49.4  | 49.6  | 49.6  | 49.6  | 49.7  | 49.9  | 49.9  | 47.7  | 49.70 | 53.2  | 46.3 | 6.9   |     |
| 10     | 46.8  | 46.1  | 48.1   | 50.8  | 52.1  | 52.7  | 52.7  | 51.5  | 50.2  | 49.3  | 49.7  | 49.7  | 49.7  | 49.7  | 49.7  | 49.6   | 49.5  | 49.2  | 49.4  | 49.4  | 49.5  | 49.8  | 49.4  | 48.0  | 49.70 | 52.9  | 46.0 | 6.8   |     |
| 11 c   | 46.8  | 46.2  | (47.7) | 50.5  | 52.3  | 52.5  | 51.8  | 50.6  | 49.8  | 49.2  | 49.5  | 49.8  | 49.8  | 49.8  | 49.8  | 49.8   | 49.7  | 49.6  | 49.6  | 49.5  | 49.3  | 49.6  | 49.7  | 47.9  | 49.59 | 52.6  | 46.2 | 6.4   |     |
| 12 c   | 46.8  | 46.9  | 49.1   | 51.5  | 53.1  | 53.6  | 52.9  | 51.5  | 50.0  | 49.3  | 49.7  | 49.7  | 49.8  | 49.7  | 49.7  | (49.7) | 49.5  | 49.2  | 48.2  | 48.2  | 48.9  | 49.1  | 48.1  | 47.5  | 49.15 | 53.5  | 46.5 | 7.0   |     |
| 13 c   | 46.6  | 46.2  | 46.9   | 50.0  | 51.9  | 52.3  | 51.8  | 50.8  | 49.8  | 49.1  | 49.4  | 49.8  | 49.7  | 49.7  | 49.7  | 49.7   | 49.5  | 49.3  | 48.8  | 48.8  | 49.7  | 49.3  | 49.8  | 48.7  | 48.8  | 49.92 | 52.8 | 47.4  | 5.4 |
| 14     | 46.5  | 46.9  | 48.9   | 50.8  | 51.8  | 53.1  | 53.1  | 51.7  | 50.3  | 49.0  | 49.5  | 49.7  | 50.3  | 49.2  | 49.9  | 49.3   | 49.0  | 48.0  | 47.9  | 48.7  | 48.4  | 48.4  | 48.9  | 48.5  | 49.68 | 53.5  | 47.0 | 6.5   |     |
| 15 d   | 47.9  | 49.0  | 50.3   | 52.1  | 53.1  | 53.7  | 52.7  | 51.5  | 49.9  | 49.7  | 50.3  | 50.0  | 50.1  | 49.9  | 49.2  | 49.0   | 49.5  | 48.7  | 49.0  | 49.4  | 48.4  | 47.9  | 47.8  | 47.4  | 49.85 | 53.8  | 46.9 | 6.9   |     |
| 16 d   | 48.2  | 50.1  | 50.2   | 51.4  | 52.3  | 51.7  | 51.2  | 51.3  | 49.6  | 49.9  | 50.0  | 49.7  | 49.8  | 47.8  | 50.2  | 49.5   | 48.3  | 47.9  | 48.6  | 49.1  | 48.9  | 49.0  | 48.9  | 47.8  | 49.68 | 52.5  | 47.3 | 5.2   |     |
| 17 d   | 48.5  | 49.3  | 50.8   | 51.5  | 51.6  | 52.7  | 51.2  | 51.2  | 50.5  | 49.6  | 49.9  | 50.2  | 49.5  | 49.8  | 49.1  | 49.4   | 49.5  | 49.1  | 49.1  | 49.4  | 49.1  | 49.4  | 50.0  | 49.2  | 50.00 | 52.7  | 48.8 | 4.4   |     |
| 18     | 48.0  | 49.2  | 50.1   | 51.5  | 52.0  | 52.1  | 52.1  | 51.6  | 50.8  | 50.1  | 50.0  | 49.4  | 49.3  | 49.3  | 49.3  | 49.8   | 49.9  | 49.8  | 49.1  | 48.8  | 49.7  | 49.3  | 49.8  | 48.7  | 48.8  | 49.92 | 52.8 | 47.4  | 5.4 |
| 19 d   | 47.6  | 48.8  | 50.6   | 51.5  | 52.1  | 52.7  | 52.9  | 51.8  | 50.8  | 49.1  | 49.7  | 49.7  | 49.2  | 49.9  | 49.9  | 49.3   | 49.0  | 48.0  | 47.9  | 48.7  | 48.4  | 48.9  | 48.9  | 48.5  | 49.68 | 53.5  | 47.0 | 6.5   |     |
| 20     | 47.6  | 48.4  | 50.3   | 51.9  | 52.3  | 52.3  | 52.2  | 51.2  | 50.6  | 50.1  | 48.5  | 48.9  | 49.4  | 50.0  | 50.0  | 49.7   | 49.5  | 49.1  | 49.4  | 48.4  | 49.1  | 48.1  | 48.8  | 47.6  | 49.4  | 49.72 | 52.4 | 47.8  | 5.1 |
| 21     | 48.1  | 48.5  | 49.7   | 51.0  | 52.4  | 52.2  | 52.9  | 51.6  | 51.8  | 49.5  | 51.0  | 50.0  | 50.8  | 50.3  | 49.7  | 48.5   | 49.4  | 49.4  | 49.2  | 48.8  | 49.2  | 49.7  | 48.8  | 47.0  | 50.00 | 52.9  | 46.1 | 6.8   |     |
| 22     | 46.8  | 46.8  | 48.5   | 48.2  | 51.7  | 52.6  | 52.6  | 51.7  | 50.6  | 50.1  | 50.1  | 50.6  | 50.1  | 49.1  | 49.1  | 49.3   | 49.1  | 49.8  | 49.2  | 49.1  | 50.0  | 49.4  | 49.5  | 48.8  | 49.66 | 52.9  | 45.8 | 7.1   |     |
| 23     | 48.0  | 47.6  | 49.0   | 50.5  | 51.6  | 51.9  | 51.6  | 51.2  | 50.7  | 49.6  | 49.6  | 49.9  | 49.9  | 49.9  | 49.7  | 49.5   | 49.5  | 48.6  | 49.0  | 49.1  | 49.6  | 49.5  | 49.4  | 48.6  | 47.7  | 49.64 | 52.0 | 46.8  | 5.2 |
| 24     | 46.9  | 47.4  | 49.3   | 51.6  | 53.1  | 53.8  | 53.1  | 51.9  | 51.1  | 50.4  | 49.3  | 50.2  | 49.9  | 49.9  | 49.9  | 49.0   | 49.6  | 49.4  | 49.4  | 48.6  | 48.6  | 48.5  | 48.3  | 47.8  | 47.4  | 49.77 | 54.0 | 46.5  | 7.2 |
| 25     | 47.6  | 48.3  | 49.9   | 51.5  | 52.1  | 52.3  | 52.3  | 52.3  | 51.8  | 50.9  | 50.9  | 50.9  | 50.4  | 50.1  | 49.7  | 49.9   | 49.5  | 49.2  | 48.6  | 48.6  | 48.6  | 48.5  | 48.3  | 47.5  | 49.77 | 54.0  | 46.8 | 7.2   |     |
| 26     | 47.2  | 48.2  | 49.5   | 51.0  | 52.1  | 52.1  | 51.4  | 50.6  | 50.1  | 49.9  | 49.0  | 49.9  | 50.1  | 50.0  | 49.9  | 49.7   | 49.6  | 49.8  | 49.1  | 49.7  | 49.2  | 49.0  | 49.3  | 47.6  | 49.77 | 54.0  | 47.2 | 4.7   |     |
| 27     | 47.7  | 48.7  | 49.7   | 50.6  | 52.3  | 52.4  | 52.0  | 51.1  | 50.4  | 50.1  | 49.8  | 49.7  | 50.0  | 49.9  | 50.0  | 50.0   | 49.4  | 49.5  | 49.4  | 49.4  | 49.8  | 49.1  | 48.5  | 47.4  | 49.81 | 51.9  | 47.2 | 4.7   |     |
| 28 c   | 47.3  | 48.2  | 49.5   | 50.7  | 51.3  | 51.9  | 51.4  | 50.8  | 50.0  | 49.6  | 49.9  | 49.9  | 50.0  | 49.9  | 49.9  | 49.8   | 49.4  | 49.5  | 49.5  | 49.4  | 49.8  | 49.1  | 49.1  | 48.5  | 47.9  | 49.67 | 51.9 | 47.2  | 4.7 |
| 29 c   | 47.7  | 49.1  | 50.7   | 52.6  | 53.3  | 53.5  | 52.7  | 51.5  | 50.3  | 49.7  | 49.7  | 50.0  | 49.9  | 49.9  | 50.0  | 50.0   | 49.9  | 49.5  | 48.8  | 48.0  | 47.9  | 47.3  | 47.8  | 47.1  | 44.6  | 49.65 | 53.8 | 44.8  | 9.5 |
| 30 d   | 47.7  | 49.1  | 50.7   | 52.6  | 53.3  | 53.5  | 52.7  | 51.5  | 50.3  | 49.7  | 49.7  | 50.0  | 49.9  | 49.9  | 50.0  | 50.0   | 49.9  | 49.5  | 48.8  | 48.0  | 47.9  | 47.3  | 47.8  | 47.1  | 44.6  | 49.65 | 53.8 | 44.8  | 9.5 |
| 31     | —     | —     | —      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     | —   |
| mean   | 47.34 | 47.69 | 49.16  | 50.80 | 52.09 | 52.55 | 52.28 | 51.36 | 50.42 | 49.64 | 49.76 | 49.91 | 49.80 | 49.71 | 49.78 | 49.57  | 49.22 | 49.04 | 48.94 | 49.06 | 49.03 | 49.27 | 48.80 | 47.92 | 49.71 | 52.4  | 47.3 | 7.1   |     |
| h c    | 47.02 | 47.30 | 48.90  | 50.90 | 52.00 | 52.37 | 51.98 | 51.00 | 50.10 | 49.55 | 49.72 | 49.77 | 49.90 | 49.82 | 49.85 | 49.80  | 49.60 | 49.50 | 49.32 | 49.07 | 49.35 | 49.30 | 48.72 | 47.67 | 49.69 | 52.9  | 45.8 | 7.1   |     |
| h d    | 47.66 | 48.86 | 50.24  | 51.68 | 52.50 | 52.82 | 52.36 | 51.52 | 50.18 | 49.68 | 49.90 | 49.76 | 49.88 | 49.42 | 49.86 | 49.56  | 48.98 | 48.64 | 48.54 | 48.76 | 48.18 | 48.58 | 48.24 | 47.86 | 49.71 | 53.8  | 44.8 | 9.5   |     |

Table 12

Declination (West) 3°0'0" + .....

May 1988.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | Mean | Max.  | Min.  | Range |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| Day    | 46.7 | 49.7 | 51.4 | 53.0 | 54.5 | 56.1 | 57.7 | 59.3 | 60.9 | 62.5 | 64.1 | 65.7 | 67.3 | 68.9 | 70.5 | 72.1 | 73.7 | 75.3 | 76.9 | 78.5 | 80.1 | 81.7 | 83.3 | 84.9 | 86.5 | 88.1 | 89.7 | 91.3 | 92.9 | 94.5 | 96.1 | 97.7 | 99.3 | 100.9 | 102.5 | 104.1 | 105.7 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      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|       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |
| 1      | 46.7 | 49.7 | 51.4 | 53.0 | 54.5 | 56.1 | 57.7 | 59.3 | 60.9 | 62.5 | 64.1 | 65.7 | 67.3 | 68.9 | 70.5 | 72.1 | 73.7 | 75.3 | 76.9 | 78.5 | 80.1 | 81.7 | 83.3 | 84.9 | 86.5 | 88.1 | 89.7 | 91.3 | 92.9 | 94.5 | 96.1 | 97.7 | 99.3 | 100.9 | 102.5 | 104.1 | 105.7 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |
| 2      | 48.1 | 50.8 | 51.3 | 52.3 | 52.7 | 52.5 | 52.2 | 52.0 | 51.4 | 50.9 | 50.4 | 49.9 | 49.2 | 48.7 | 48.1 | 47.6 | 47.1 | 46.6 | 46.2 | 45.8 | 45.5 | 45.2 | 45.0 | 44.8 | 44.7 | 44.7 | 44.8 | 45.0 | 45.3 | 45.7 | 46.1 | 46.5 | 46.9 | 47.3  | 47.7  | 48.1  | 48.5  | 48.9 | 49.3 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |
| 3      | 48.1 | 48.6 | 50.9 | 51.6 | 51.9 | 52.5 | 52.1 | 51.4 | 50.9 | 50.3 | 49.7 | 49.1 | 48.5 | 48.0 | 47.5 | 47.1 | 46.7 | 46.4 | 46.2 | 46.1 | 46.1 | 46.2 | 46.4 | 46.7 | 47.1 | 47.5 | 47.9 | 48.3 | 48.7 | 49.1 | 49.5 | 49.9 | 50.3 | 50.7  | 51.1  | 51.5  | 51.9  | 52.3 | 52.7 | 53.1 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |
| 4      | 46.7 | 47.7 | 49.1 | 49.9 | 50.8 | 50.8 | 50.1 | 49.5 | 48.9 | 49.1 | 49.3 | 49.3 | 49.4 | 49.4 | 49.4 | 49.2 | 48.6 | 48.6 | 48.6 | 48.4 | 48.3 | 48.2 | 48.1 | 48.0 | 47.9 | 47.8 | 47.7 | 47.6 | 47.5 | 47.4 | 47.3 | 47.2 | 47.1 | 47.0  | 46.9  | 46.8  | 46.7  | 46.6 | 46.5 | 46.4 | 46.3 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      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|       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |
| 5      | 48.1 | 49.4 | 50.1 | 50.5 | 50.6 | 51.6 | 50.0 | 49.6 | 49.9 | 49.9 | 49.9 | 50.8 | 50.0 | 50.0 | 50.0 | 50.0 | 49.9 | 49.9 | 49.9 | 49.9 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8  | 49.8  | 49.8  | 49.8  | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 | 49.8 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |
| 6      | 46.6 | 50.0 | 50.8 | 50.5 | 51.5 | 52.3 | 52.9 | 51.8 | 51.0 | 50.8 | 49.7 | 49.2 | 48.7 | 48.2 | 47.7 | 47.2 | 46.7 | 46.3 | 46.0 | 45.8 | 45.7 | 45.7 | 45.8 | 45.9 | 46.1 | 46.4 | 46.7 | 47.1 | 47.5 | 47.9 | 48.3 | 48.7 | 49.1 | 49.5  | 49.9  | 50.3  | 50.7  | 51.1 | 51.5 | 51.9 | 52.3 | 52.7 | 53.1 | 53.5 | 53.9 | 54.3 | 54.7 | 55.1 | 55.5 | 55.9 | 56.3 | 56.7 | 57.1 | 57.5 | 57.9 | 58.3 | 58.7 | 59.1 | 59.5 | 59.9 | 60.3 | 60.7 | 61.1 | 61.5 | 61.9 | 62.3 | 62.7 | 63.1 | 63.5 | 63.9 | 64.3 | 64.7 | 65.1 | 65.5 | 65.9 | 66.3 | 66.7 | 67.1 | 67.5 | 67.9 | 68.3 | 68.7 | 69.1 | 69.5 | 69.9 | 70.3 | 70.7 | 71.1 | 71.5 | 71.9 | 72.3 | 72.7 | 73.1 | 73.5 | 73.9 | 74.3 | 74.7 | 75.1 | 75.5 | 75.9 | 76.3 | 76.7 | 77.1 | 77.5 | 77.9 | 78.3 | 78.7 | 79.1 | 79.5 | 79.9 | 80.3 | 80.7 | 81.1 | 81.5 | 81.9 | 82.3 | 82.7 | 83.1 | 83.5 | 83.9 | 84.3 | 84.7 | 85.1 | 85.5 | 85.9 | 86.3 | 86.7 | 87.1 | 87.5 | 87.9 | 88.3 | 88.7 | 89.1 | 89.5 | 89.9 | 90.3 | 90.7 | 91.1 | 91.5 | 91.9 | 92.3 | 92.7 | 93.1 | 93.5 | 93.9 | 94.3 | 94.7 | 95.1 | 95.5 | 95.9 | 96.3 | 96.7 | 97.1 | 97.5 | 97.9 | 98.3 | 98.7 | 99.1 | 99.5 | 99.9 | 100.3 | 100.7 | 101.1 | 101.5 | 101.9 | 102.3 | 102.7 | 103.1 | 103.5 | 103.9 | 104.3 | 104.7 | 105.1 | 105.5 | 105.9 | 106.3 | 106.7 | 107.1 | 107.5 | 107.9 | 108.3 | 108.7 | 109.1 | 109.5 | 109.9 | 110.3 | 110.7 | 111.1 | 111.5 | 111.9 | 112.3 | 112.7 | 113.1 | 113.5 | 113.9 | 114.3 | 114.7 | 115.1 | 115.5 | 115.9 | 116.3 | 116.7 | 117.1 | 117.5 | 117.9 | 118.3 | 118.7 | 119.1 | 119.5 | 119.9 | 120.3 | 120.7 | 121.1 | 121.5 | 121.9 | 122.3 | 122.7 | 123.1 | 123.5 | 123.9 | 124.3 | 124.7 | 125.1 | 125.5 | 125.9 | 126.3 | 126.7 | 127.1 | 127.5 | 127.9 | 128.3 | 128.7 | 129.1 | 129.5 | 129.9 | 130.3 | 130.7 | 131.1 | 131.5 | 131.9 | 132.3 | 132.7 | 133.1 | 133.5 | 133.9 | 134.3 | 134.7 | 135.1 | 135.5 | 135.9 | 136.3 | 136.7 | 137.1 | 137.5 | 137.9 | 138.3 | 138.7 | 139.1 | 139.5 | 139.9 | 140.3 | 140.7 | 141.1 | 141.5 | 141.9 | 142.3 | 142.7 | 143.1 | 143.5 | 143.9 | 144.3 | 144.7 | 145.1 | 145.5 | 145.9 | 146.3 | 146.7 | 147.1 | 147.5 | 147.9 | 148.3 | 148.7 | 149.1 | 149.5 | 149.9 | 150.3 | 150.7 | 151.1 | 151.5 | 151.9 | 152.3 | 152.7 | 153.1 | 153.5 | 153.9 | 154.3 | 154.7 | 155.1 | 155.5 | 155.9 | 156.3 | 156.7 | 157.1 | 157.5 | 157.9 | 158.3 | 158.7 | 159.1 | 159.5 | 159.9 | 160.3 | 160.7 | 161.1 | 161.5 | 161.9 | 162.3 | 162.7 | 163.1 | 163.5 | 163.9 | 164.3 | 164.7 | 165.1 | 165.5 | 165.9 | 166.3 | 166.7 | 167.1 | 167.5 | 167.9 | 168.3 | 168.7 | 169.1 | 169.5 | 169.9 | 170.3 | 170.7 | 171.1 | 171.5 | 171.9 | 172.3 | 172.7 | 173.1 | 173.5 | 173.9 | 174.3 | 174.7 | 175.1 | 175.5 | 175.9 | 176.3 | 176.7 | 177.1 | 177.5 | 177.9 | 178.3 | 178.7 | 179.1 | 179.5 | 179.9 | 180.3 | 180.7 | 181.1 | 181.5 | 181.9 | 182.3 | 182.7 | 183.1 | 183.5 | 183.9 | 184.3 | 184.7 | 185.1 | 185.5 | 185.9 | 186.3 | 186.7 | 187.1 | 187.5 | 187.9 | 188.3 | 188.7 | 189.1 | 189.5 | 189.9 | 190.3 | 190.7 | 191.1 | 191.5 | 191.9 | 192.3 | 192.7 | 193.1 | 193.5 | 193.9 | 194.3 | 194.7 | 195.1 | 195.5 | 195.9 | 196.3 | 196.7 | 197.1 | 197.5 | 197.9 | 198.3 | 198.7 | 199.1 | 199.5 | 199.9 | 200.3 | 200.7 | 201.1 | 201.5 | 201.9 | 202.3 | 202.7 | 203.1 | 203.5 | 203.9 | 204.3 | 204.7 | 205.1 | 205.5 | 205.9 | 206.3 | 206.7 | 207.1 | 207.5 | 207.9 | 208.3 | 208.7 | 209.1 | 209.5 | 209.9 | 210.3 | 210.7 | 211.1 | 211.5 | 211.9 | 212.3 | 212.7 | 213.1 | 213.5 | 213.9 | 214.3 | 214.7 | 215.1 | 215.5 | 215.9 | 216.3 | 216.7 | 217.1 | 217.5 | 217.9 | 218.3 | 218.7 | 219.1 | 219.5 | 219.9 | 220.3 | 220.7 | 221.1 | 221.5 | 221.9 | 222.3 | 222.7 | 223.1 | 223.5 | 223.9 | 224.3 | 224.7 | 225.1 | 225.5 | 225.9 | 226.3 | 226.7 | 227.1 | 227.5 | 227.9 | 228.3 | 228.7 | 229.1 | 229.5 | 229.9 | 230.3 | 230.7 | 231.1 | 231.5 | 231.9 | 232.3 | 232.7 | 233.1 | 233.5 | 233.9 | 234.3 | 234.7 | 235.1 | 235.5 | 235.9 | 236.3 | 236.7 | 237.1 | 237.5 | 237.9 | 238.3 | 238.7 | 239.1 | 239.5 | 239.9 | 240.3 | 240.7 | 241.1 | 241.5 | 241.9 | 242.3 | 242.7 | 243.1 | 243.5 | 243.9 | 244.3 | 244.7 | 245.1 | 245.5 | 245.9 | 246.3 | 246.7 | 247.1 | 247.5 | 247.9 | 248.3 | 248.7 | 249.1 | 249.5 | 249.9 | 250.3 | 250.7 | 251.1 | 251.5 | 251.9 | 252.3 | 252.7 | 253.1 | 253.5 | 253.9 | 254.3 | 254.7 | 255.1 | 255.5 | 255.9 | 256.3 | 256.7 | 257.1 | 257.5 | 257.9 | 258.3 | 258.7 | 259.1 | 259.5 | 259.9 | 260.3 | 260.7 | 261.1 | 261.5 | 261.9 | 262.3 | 262.7 | 263.1 | 263.5 | 263.9 | 264.3 | 264.7 | 265.1 | 265.5 | 265.9 | 266.3 | 266.7 | 267.1 | 267.5 | 267.9 | 268.3 | 268.7 | 269.1 | 269.5 | 269.9 | 270.3 | 270.7 | 271.1 | 271.5 | 271.9 | 272.3 | 272.7 | 273.1 | 273.5 | 273.9 | 274.3 | 274.7 | 275.1 | 275.5 | 275.9 | 276.3 | 276.7 | 277.1 | 277.5 | 277.9 | 278.3 | 278.7 | 279.1 | 279.5 | 279.9 | 280.3 | 280.7 | 281.1 | 281.5 | 281.9 | 282.3 | 282.7 | 283.1 | 283.5 | 283.9 | 284.3 | 284.7 | 285.1 | 285.5 | 285.9 | 286.3 | 286.7 | 287.1 | 287.5 | 287.9 | 288.3 | 288.7 | 289.1 | 289.5 | 289.9 | 290.3 | 290.7 | 291.1 | 291.5 | 291.9 | 292.3 | 292.7 | 293.1 | 293.5 | 293.9 | 294.3 | 294.7 | 295.1 | 295.5 | 295.9 | 296.3 | 296.7 | 297.1 | 297.5 | 297.9 | 298.3 | 298.7 | 299.1 | 299.5 | 299.9 | 300.3 | 300.7 | 301.1 | 301.5 | 301.9 | 302.3 | 302.7 | 303.1 | 303.5 | 303.9 | 304.3 | 304.7 | 305.1 | 305.5 | 305.9 | 306.3 | 306.7 | 307.1 | 307.5 | 307.9 | 308.3 | 308.7 | 309.1 | 309.5 | 309.9 | 310.3 | 310.7 | 311.1 | 311.5 | 311.9 | 312.3 | 312.7 | 313.1 | 313.5 | 313.9 | 314.3 | 314.7 | 315.1 | 315.5 | 315.9 | 316.3 | 316.7 | 317.1 | 317.5 | 317.9 | 318.3 | 318.7 | 319.1 | 319.5 | 319.9 | 320.3 | 320.7 | 321.1 | 321.5 | 321.9 | 322.3 | 322.7 | 323.1 | 323.5 | 323.9 | 324.3 | 324.7 | 325.1 | 325.5 | 325.9 | 326.3 | 326.7 | 327.1 | 327.5 | 327.9 | 328.3 | 328.7 | 329.1 | 329.5 | 329.9 | 330.3 | 330.7 | 331.1 | 331.5 | 331.9 | 332.3 | 332.7 | 333.1 | 333.5 | 333.9 | 334.3 | 334.7 | 335.1 | 335.5 | 335.9 | 336.3 | 336.7 | 337.1 | 337.5 | 337.9 | 338.3 | 338.7 | 339.1 | 339.5 | 339.9 | 340.3 | 340.7 | 341.1 | 341.5 | 341.9 | 342.3 | 342.7 | 343.1 | 343.5 | 343.9 | 344.3 | 344.7 | 345.1 | 345.5 | 345.9 | 346.3 | 346.7 | 347.1 | 347.5 | 347.9 | 348.3 | 348.7 | 349.1 | 349.5 | 349.9 | 350.3 | 350.7 | 351.1 | 351.5 | 351.9 | 352.3 | 352.7 | 353.1 | 353.5 | 353.9 | 354.3 | 354.7 | 355.1 | 355.5 | 355.9 | 356.3 | 356.7 | 357.1 | 357.5 | 357.9 | 358.3 | 358.7 | 359.1 | 359.5 | 359.9 | 360.3 | 360.7 | 361.1 | 361.5 | 361.9 | 362.3 | 362.7 | 363.1 | 363.5 | 363.9 | 364.3 | 364.7 | 365.1 | 365.5 | 365.9 | 366.3 | 366.7 | 367.1 | 367.5 | 367.9 | 368.3 | 368.7 | 369.1 | 369.5 | 369.9 | 370.3 | 370.7 | 371.1 | 371.5 | 371.9 | 372.3 | 372.7 | 373.1 | 373.5 | 373.9 | 374.3 | 374.7 | 375.1 | 375.5 | 375.9 | 376.3 | 376.7 | 377.1 | 377.5 | 377.9 | 378.3 | 378.7 | 379.1 | 379.5 | 379.9 | 380.3 | 380.7 | 381.1 | 381.5 | 381.9 | 382.3 | 382.7 | 383.1 | 383.5 | 383.9 | 384.3 | 384.7 | 385.1 | 385.5 | 385.9 | 386.3 | 386.7 | 387.1 | 387.5 | 387.9 | 388.3 | 388.7 | 389.1 | 389.5 | 389.9 | 390.3 | 390.7 | 391.1 | 391.5 | 391.9 | 392.3 | 392.7 | 393.1 | 393.5 | 393.9 | 394.3 | 394.7 | 395.1 | 395.5 | 395.9 | 396.3 | 396.7 | 397.1 | 397.5 | 397.9 | 398.3 | 398.7 | 399.1 | 399.5 | 399.9 | 400.3 | 400.7 | 401.1 | 401.5 | 401.9 | 402.3 | 402.7 | 403.1 | 403.5 | 403.9 | 404.3 | 404.7 | 405.1 | 405.5 | 405.9 | 406.3 | 406.7 | 407.1 | 407.5 | 407.9 | 408.3 | 408.7 | 409.1 | 409.5 | 409.9 | 410.3 | 410.7 | 411.1 | 411.5 | 411.9 | 412.3 | 412.7 | 413.1 | 413.5 | 413.9 | 414.3 | 414.7 | 415.1 | 415.5 | 415.9 | 416.3 | 416.7 | 417.1 | 417.5 | 417.9 | 418.3 | 418.7 | 419.1 | 419.5 | 419.9 | 420.3 | 420.7 | 421.1 | 421.5 | 421.9 | 422.3 | 422.7 | 423.1 | 423.5 | 423.9 | 424.3 | 424.7 | 425.1 | 425.5 | 425.9 | 426.3 | 426.7 | 427.1 | 427.5 | 427.9 | 428.3 | 428.7 | 429.1 | 429.5 | 429.9 | 430.3 | 430.7 | 431.1 | 431 |

June 1933.

Declination (West) 3°00'0" + .....

Table 18

| G.M.T. | 0      | 1      | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18     | 19     | 20     | 21     | 22     | 23     | Mean  | Max. | Min. | Range |   |   |   |
|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|------|------|-------|---|---|---|
| 1 d    | 47.6   | 48.4   | 49.2  | 51.9  | 53.2  | 52.6  | 52.2  | 50.9  | 49.5  | 49.3  | 49.3  | 49.7  | 49.4  | 48.4  | 49.2  | 49.2  | 49.2  | 48.7  | 48.8   | 48.9   | 49.9   | 48.8   | 47.6   | 46.3   | 49.51 | 53.2 | 46.2 | 7.0   |   |   |   |
| 2      | 46.7   | 47.4   | 49.0  | 50.5  | 51.8  | 51.5  | 51.2  | 51.2  | 50.9  | 50.1  | 49.7  | 49.3  | 48.8  | 49.3  | 49.2  | 49.4  | 49.3  | 49.2  | 49.3   | 48.8   | 48.0   | 47.1   | 46.2   | 45.3   | 49.15 | 52.0 | 45.3 | 6.7   |   |   |   |
| 3      | 45.8   | 47.2   | 49.2  | 50.7  | 50.9  | 51.5  | 51.4  | 50.9  | 50.9  | 49.1  | 49.7  | 50.4  | 49.7  | 50.2  | 50.1  | 50.2  | 49.8  | 50.0  | 49.6   | 49.7   | 49.7   | 48.2   | 47.3   | 47.8   | 49.58 | 51.5 | 45.8 | 5.7   |   |   |   |
| 4      | 49.1   | 50.3   | 51.2  | 51.2  | 51.4  | 50.9  | 50.9  | 50.8  | 50.1  | 50.0  | 49.9  | 50.2  | 49.7  | 50.2  | 50.2  | 50.1  | 49.9  | 49.8  | 49.7   | 49.5   | 49.2   | 48.1   | 47.5   | 47.8   | 49.86 | 51.4 | 47.5 | 3.9   |   |   |   |
| 5 c    | 48.4   | 50.1   | 51.2  | 51.2  | 51.4  | 51.1  | 50.2  | 49.9  | 49.7  | 49.2  | 49.7  | 50.4  | 50.2  | 50.1  | 50.3  | 50.0  | 49.9  | 50.1  | (50.1) | (50.3) | (60.3) | (49.6) | (48.6) | (48.5) | 50.02 | —    | —    | —     | — |   |   |
| 6 c    | (49.0) | (50.4) | 52.1  | 52.7  | 52.7  | 52.6  | 51.8  | 50.6  | 49.7  | 49.6  | 49.7  | 50.1  | 50.1  | 50.1  | 50.1  | 50.1  | 50.0  | 49.7  | 49.7   | 49.5   | 49.2   | 48.6   | 47.9   | 48.0   | 50.17 | 52.9 | 47.7 | 5.2   | — |   |   |
| 7      | 49.4   | 48.4   | 50.4  | 51.6  | 51.9  | 51.6  | 50.3  | 50.0  | 49.7  | 49.7  | 50.2  | 49.9  | 50.1  | 49.6  | 49.7  | 49.2  | 49.2  | 49.1  | 48.8   | 48.5   | 47.0   | 45.9   | 46.2   | 47.3   | 49.32 | 52.2 | 45.7 | 6.5   | — |   |   |
| 8      | 48.8   | —      | —     | —     | —     | —     | —     | —     | 50.3  | 50.5  | 50.8  | 49.7  | 49.4  | 49.7  | 49.2  | 49.2  | 48.5  | 48.3  | 48.0   | 47.6   | 47.2   | 46.0   | 45.1   | 45.8   | —     | —    | —    | —     | — | — |   |
| 9      | 48.6   | 51.4   | 52.6  | 52.6  | 53.5  | 53.0  | 52.1  | 52.1  | 51.4  | 50.3  | 50.5  | 50.1  | 50.4  | 50.5  | 50.5  | 50.0  | 50.1  | 49.7  | 49.2   | 49.2   | 48.8   | 47.9   | 46.8   | 47.1   | 50.37 | 53.7 | 46.7 | 7.0   | — | — |   |
| 10     | 48.0   | 50.5   | 52.3  | 53.0  | 53.2  | 52.4  | 51.8  | 51.4  | 50.5  | 50.1  | 50.4  | 50.4  | 50.5  | 50.2  | 50.1  | 49.9  | 49.2  | 49.0  | 49.2   | 49.2   | 49.1   | 48.1   | 47.1   | 47.0   | 50.11 | 53.2 | 46.9 | 6.3   | — | — |   |
| 11     | 47.3   | 49.2   | 50.1  | 51.8  | 52.6  | 52.1  | 51.2  | 50.5  | 50.2  | 49.8  | 49.7  | 50.0  | 49.8  | 49.7  | 49.9  | 49.9  | 49.7  | 49.7  | 49.4   | 49.0   | 48.9   | 48.0   | 46.5   | 45.5   | 49.38 | 52.6 | 45.5 | 7.1   | — | — |   |
| 12     | 46.2   | 47.5   | 49.8  | 51.4  | 51.7  | 51.9  | 51.4  | 51.3  | 50.6  | 49.4  | 49.3  | 49.3  | 49.0  | 49.2  | 49.5  | 49.6  | 49.8  | 49.2  | 49.0   | 49.0   | 48.8   | 47.2   | 46.1   | 46.3   | 49.25 | 51.9 | 45.4 | 6.5   | — | — |   |
| 13 d   | 46.1   | 47.1   | 48.8  | 49.9  | 53.1  | 52.7  | 52.6  | 51.9  | 51.6  | 50.0  | 50.1  | 50.2  | 49.2  | 48.6  | 47.9  | 48.1  | 47.6  | 46.7  | 47.0   | 47.3   | 47.5   | 46.5   | 45.5   | 47.1   | 48.52 | 53.8 | 45.4 | 7.9   | — | — |   |
| 14 d   | 47.4   | 48.0   | 49.6  | 49.3  | 50.8  | 50.6  | 50.6  | 51.4  | 51.1  | —     | —     | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —      | —      | —     | —    | —    | —     | — | — | — |
| 15     | —      | —      | 49.0  | 50.9  | 51.4  | 51.8  | 52.0  | 52.5  | 51.1  | 50.1  | 49.6  | 49.4  | 49.3  | 49.3  | 49.3  | 49.1  | 49.2  | 49.1  | 48.8   | 48.4   | 48.4   | 47.5   | 46.9   | 46.2   | —     | 52.5 | 46.0 | 6.5   | — | — |   |
| 16 c   | 46.4   | 47.5   | 49.1  | 50.8  | 51.8  | 52.6  | 52.5  | 52.1  | 51.1  | 49.9  | 49.7  | 49.7  | 49.8  | 49.6  | 49.8  | 49.0  | 48.8  | 48.8  | 48.4   | 48.6   | 48.5   | 47.3   | 46.8   | 45.7   | 49.28 | 52.6 | 45.4 | 7.2   | — | — |   |
| 17     | 45.9   | 47.9   | 49.7  | 52.3  | 53.5  | 54.1  | 53.5  | 51.9  | 50.7  | 50.1  | 50.1  | 50.3  | 50.2  | 50.0  | 50.3  | 50.5  | 50.4  | 49.9  | 49.7   | 49.7   | 49.6   | 48.0   | 46.4   | 46.4   | 50.02 | 54.1 | 45.9 | 8.2   | — | — |   |
| 18 c   | 46.8   | 48.4   | 50.1  | 51.5  | 52.2  | 52.5  | 52.1  | 51.4  | 51.1  | 50.2  | 50.5  | 50.5  | 50.6  | 50.5  | 50.5  | 50.2  | 50.0  | 49.7  | 49.6   | 49.4   | 49.6   | 48.8   | 46.4   | 46.0   | 49.94 | 52.5 | 46.0 | 6.5   | — | — |   |
| 19     | 47.1   | 51.5   | 51.1  | 52.4  | 53.3  | 54.1  | 53.5  | 52.1  | 51.3  | 50.6  | 50.6  | 50.9  | 50.2  | 49.8  | 49.9  | 49.7  | 49.3  | 48.4  | 47.8   | 47.9   | 47.6   | 46.7   | 46.2   | 47.0   | 49.96 | 54.1 | 46.0 | 8.1   | — | — |   |
| 20 d   | 47.5   | 49.0   | 50.2  | 52.6  | 53.2  | 54.0  | 54.4  | 53.6  | 52.6  | 51.9  | 51.9  | 51.8  | 51.0  | 50.8  | 50.0  | 49.6  | 49.1  | 49.4  | 48.9   | 48.2   | 47.8   | 46.7   | 44.6   | 45.3   | 50.17 | 54.3 | 44.6 | 10.2  | — | — |   |
| 21     | 47.5   | 48.8   | 51.4  | 52.8  | 53.8  | 53.4  | 52.6  | 51.4  | 49.7  | 49.9  | 50.1  | 50.1  | 49.7  | 50.2  | 50.3  | 50.2  | 49.7  | 48.9  | 49.0   | 49.0   | 48.4   | 46.6   | 45.0   | 44.3   | 49.70 | 53.5 | 44.5 | 9.0   | — | — |   |
| 22     | 46.5   | 46.9   | 48.8  | 51.0  | 52.4  | 52.9  | 52.6  | 52.3  | 50.7  | 50.0  | 49.6  | 50.0  | 50.0  | 50.3  | 50.4  | 50.0  | 49.9  | 49.6  | 49.6   | 49.4   | 49.2   | 47.4   | 45.6   | 44.6   | 49.58 | 53.0 | 44.5 | 8.5   | — | — |   |
| 23     | 44.9   | 47.0   | 49.1  | 51.8  | 53.2  | 53.5  | 52.6  | 51.3  | 50.4  | 49.7  | 49.8  | 49.8  | 49.7  | 49.9  | 50.0  | 50.1  | 50.1  | 49.4  | 49.6   | 49.0   | 48.9   | 48.4   | 46.6   | 45.8   | 49.59 | 53.5 | 44.9 | 8.6   | — | — |   |
| 24 c   | 46.8   | 46.2   | 47.7  | 50.1  | 52.1  | 52.8  | 53.0  | 52.1  | 50.9  | 50.2  | 49.7  | 49.8  | 49.8  | 49.7  | 49.6  | 49.4  | 49.7  | 49.5  | 49.2   | 49.2   | 48.8   | 47.6   | 46.7   | 46.3   | 49.41 | 53.1 | 45.8 | 7.9   | — | — |   |
| 25     | 46.7   | 47.9   | 49.4  | 51.4  | 53.0  | 53.5  | 53.8  | 52.7  | 51.4  | 50.3  | 49.9  | 50.8  | 50.5  | 50.6  | 50.5  | 50.3  | 49.9  | 49.6  | 49.3   | 49.7   | 49.4   | 49.3   | 47.0   | 48.0   | 50.18 | 53.5 | 46.7 | 6.8   | — | — |   |
| 26     | 48.3   | 50.2   | 52.7  | 53.8  | 53.6  | 52.9  | 52.7  | 51.9  | 50.8  | 50.0  | 49.4  | 49.3  | 49.9  | 49.9  | 50.2  | 50.2  | 50.0  | 49.6  | 49.9   | 49.7   | 49.7   | 49.1   | 47.3   | 46.9   | 50.40 | 54.0 | 47.9 | 6.3   | — | — |   |
| 27     | 48.5   | 49.2   | 50.9  | 51.6  | 52.8  | 53.6  | 53.2  | 53.1  | 51.7  | 49.7  | 49.6  | 50.4  | 50.8  | 50.6  | 50.4  | 49.6  | 49.7  | 49.4  | 49.2   | 48.9   | 48.9   | 47.5   | 46.3   | 46.2   | 50.05 | 53.8 | 45.7 | 6.8   | — | — |   |
| 28 d   | 46.2   | 49.7   | 51.1  | 51.5  | 52.6  | 52.7  | 52.7  | 51.3  | 50.6  | 50.6  | 50.8  | 50.8  | 50.5  | 50.3  | 48.8  | 49.8  | 50.2  | 48.8  | 48.6   | 48.0   | 48.4   | 48.5   | 47.1   | 46.2   | 49.78 | 53.2 | 46.0 | 7.2   | — | — |   |
| 29     | 47.2   | 48.8   | 50.2  | 51.3  | 52.4  | 49.2  | 50.5  | 50.6  | 49.7  | 49.7  | 49.7  | 49.6  | 49.3  | 49.2  | 49.3  | 48.8  | 49.7  | 48.9  | 48.8   | 48.9   | 48.4   | 47.9   | 51.5   | 46.2   | 49.41 | 52.6 | 45.9 | 6.7   | — | — |   |
| 30     | 47.1   | 48.3   | 49.4  | 50.2  | 51.0  | 51.8  | 51.5  | 51.3  | 50.9  | 50.5  | 49.7  | 50.0  | 49.5  | 49.2  | 48.9  | 48.9  | 49.1  | 49.2  | 48.8   | 49.2   | 48.8   | 48.0   | 47.3   | 46.3   | 49.37 | 51.8 | 45.8 | 6.0   | — | — |   |
| 31     | —      | —      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —      | —      | —      | —      | —      | —      | —     | —    | —    | —     | — | — | — |
| mean   | 47.17  | 48.71  | 50.25 | 51.59 | 52.49 | 52.60 | 52.14 | 51.49 | 50.68 | 50.02 | 49.96 | 50.12 | 49.98 | 49.84 | 49.32 | 49.71 | 49.59 | 49.24 | 49.14  | 49.01  | 48.74  | 47.61  | 46.82  | 46.56  | 49.72 | —    | —    | —     | — | — | — |
| ∑ c    | 47.98  | 48.52  | 50.04 | 51.16 | 52.04 | 52.32 | 51.92 | 51.22 | 50.50 | 49.82 | 49.86 | 50.10 | 50.10 | 50.00 | 49.96 | 49.74 | 49.68 | 49.56 | 49.40  | 49.40  | 49.28  | 48.88  | 47.18  | 46.84  | 49.77 | —    | —    | —     | — | — | — |
| ∑ d    | 46.85  | 48.55  | 49.82 | 51.47 | 53.02 | 53.00 | 52.97 | 51.92 | 51.07 | 50.45 | 50.40 | 50.50 | 50.02 | 49.40 | 48.97 | 49.17 | 49.02 | 48.40 | 48.40  | 48.15  | 48.15  | 47.37  | 46.20  | 46.72  | 49.57 | —    | —    | —     | — | — | — |

Table 14

Declination (West) 8°00'0"+.....

July 1933.

| G.M.T. | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Mean  | Max.  | Min. | Range |     |   |   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-----|---|---|
| Day    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      |       |     |   |   |
| 1      | 46.5  | 47.1  | 48.4  | 49.6  | 51.2  | 51.8  | 51.7  | 51.4  | 50.6  | 49.9  | 49.4  | 49.6  | 49.6  | 49.9  | 49.6  | 49.4  | 48.9  | 48.9  | 48.7  | 48.8  | 48.5  | 48.4  | 47.4  | 46.9  | 49.26 | 51.8  | 46.2 | 5.6   | —   | — |   |
| 2      | 47.5  | 48.2  | 48.7  | 48.9  | 50.1  | 51.4  | 52.1  | 51.8  | 51.5  | 49.9  | 49.8  | 49.6  | 49.6  | 49.8  | 49.6  | 49.4  | 49.6  | 49.6  | 48.4  | 48.7  | 48.7  | 48.4  | 47.5  | 46.6  | —     | 51.6  | 46.4 | 5.2   | —   | — |   |
| 3      | —     | 48.3  | 50.5  | 50.9  | 51.5  | 51.8  | 51.4  | 51.0  | 50.2  | 50.1  | 49.9  | 50.1  | 50.1  | 50.0  | 49.2  | 49.3  | 48.9  | 48.7  | 48.6  | 48.4  | 48.5  | 47.2  | 45.9  | 46.2  | 49.03 | 51.1  | 45.8 | 5.5   | —   | — |   |
| 4      | 47.1  | 48.2  | 49.2  | 50.2  | 51.0  | 51.0  | 50.9  | 50.6  | 49.8  | 49.4  | 49.6  | 49.6  | 49.9  | 49.7  | 49.3  | 49.2  | 48.8  | 48.9  | 48.6  | 48.4  | 48.5  | 47.3  | 45.4  | 46.0  | 49.20 | 52.0  | 44.7 | 7.8   | —   | — |   |
| 5      | 46.7  | 48.0  | 50.1  | 51.1  | 51.8  | 51.4  | 51.4  | 51.0  | 50.6  | 50.3  | 50.1  | 49.6  | 49.9  | 49.7  | 49.3  | 49.2  | 48.8  | 48.9  | 48.6  | 48.4  | 48.5  | 47.3  | 45.4  | 46.0  | —     | —     | 44.7 | 8.2   | —   | — |   |
| 6      | 45.7  | 48.3  | 49.8  | 51.8  | 53.1  | 53.1  | 52.1  | 51.4  | 50.9  | 50.5  | 50.5  | 50.1  | 50.1  | 49.7  | 49.3  | 49.3  | 49.3  | 49.3  | 48.9  | 48.8  | 49.1  | 48.0  | 46.7  | 46.3  | 49.66 | 53.5  | 45.7 | 7.8   | —   | — |   |
| 7      | 46.7  | 47.5  | 50.5  | 51.4  | 53.0  | 52.9  | 52.2  | 51.1  | 49.7  | 49.2  | 49.5  | 49.4  | 49.6  | 49.4  | 49.6  | 49.2  | 49.2  | 48.8  | 48.6  | 48.0  | 48.1  | 47.8  | 47.0  | 46.3  | 49.36 | 53.8  | 46.0 | 7.8   | —   | — |   |
| 8      | 46.5  | 47.7  | 49.4  | 51.0  | 52.4  | 52.7  | 52.5  | 52.2  | 51.2  | 50.2  | 49.7  | 49.8  | 49.6  | 49.6  | 49.2  | 49.2  | 48.7  | 48.7  | 48.6  | 48.5  | 48.3  | 46.2  | 44.0  | 42.9  | 49.15 | 52.9  | 42.4 | 10.5  | —   | — |   |
| 9 d    | 45.8  | 47.5  | 50.8  | 51.8  | 53.1  | 53.8  | 52.8  | 51.7  | 51.0  | 50.1  | 48.5  | 49.7  | 49.0  | 47.6  | 49.1  | 49.7  | 49.6  | 49.4  | 49.2  | 48.8  | 48.3  | 47.3  | 46.8  | 49.52 | 53.4  | 44.6  | 8.9  | —     | —   | — |   |
| 10     | 46.2  | 46.6  | 48.8  | 51.4  | 52.6  | 54.2  | 54.0  | 53.6  | 51.9  | 51.0  | 50.1  | 49.8  | 49.6  | 49.7  | 49.7  | 49.7  | 49.4  | 48.9  | 48.8  | 48.6  | 49.4  | 48.4  | 47.9  | 47.5  | 49.91 | 54.4  | 46.2 | 8.2   | —   | — |   |
| 11     | 47.5  | 47.0  | 48.8  | 50.1  | 51.5  | 51.8  | 51.8  | 52.0  | 51.2  | 50.5  | 50.0  | 50.3  | 49.6  | 49.7  | 49.3  | 49.1  | 48.5  | 49.1  | 49.3  | 49.1  | 48.9  | 47.9  | 46.6  | 45.0  | 49.36 | 52.0  | 44.6 | 7.4   | —   | — |   |
| 12     | 44.9  | 47.2  | 49.7  | 52.4  | 53.4  | 53.6  | 53.5  | 52.0  | 50.3  | 49.7  | 49.5  | 49.6  | 49.3  | 49.8  | 49.4  | 49.8  | 49.9  | 49.5  | 49.4  | 49.6  | 49.7  | 48.5  | 47.0  | 46.2  | 49.72 | 53.8  | 44.9 | 8.9   | —   | — |   |
| 13 c   | 46.7  | 47.1  | 48.8  | 50.3  | 52.0  | 52.4  | 52.8  | 51.4  | 50.1  | 49.3  | 49.2  | 49.7  | 49.6  | 49.3  | 49.4  | 49.6  | 49.2  | 49.3  | 48.8  | 48.8  | 48.9  | 48.1  | 46.9  | 46.5  | 49.51 | 52.4  | 46.3 | 6.1   | —   | — |   |
| 14 c   | 46.8  | 47.7  | 49.4  | 50.7  | 52.4  | 53.2  | 53.1  | 51.9  | 50.9  | 49.7  | 49.2  | 49.2  | 49.6  | 49.6  | 49.6  | 49.6  | 49.8  | 49.3  | 49.2  | 49.1  | 49.2  | 48.5  | 46.7  | 45.8  | 49.58 | 53.8  | 45.4 | 7.9   | —   | — |   |
| 15 c   | 45.8  | 46.4  | 48.5  | 50.4  | 51.1  | 51.5  | 51.8  | 51.0  | 50.0  | 49.5  | 49.3  | 49.6  | 49.6  | 49.9  | 49.5  | 49.5  | 49.2  | 49.2  | 49.0  | 49.2  | 49.2  | 47.9  | 46.6  | 45.8  | 49.15 | 51.6  | 45.4 | 6.4   | —   | — |   |
| 16     | 45.4  | 46.7  | 49.0  | 50.8  | 51.8  | 52.5  | 52.2  | 51.4  | 50.4  | 50.1  | 50.1  | 50.1  | 49.9  | 49.8  | 50.0  | 50.0  | 49.4  | 49.0  | 48.4  | 48.5  | 48.4  | 48.7  | 47.5  | 47.0  | 49.46 | 52.6  | 45.4 | 7.2   | —   | — |   |
| 17 d   | 47.1  | 47.5  | 49.2  | 51.2  | 51.8  | 51.5  | 50.6  | 49.7  | 49.7  | 49.6  | 50.3  | 50.9  | 49.6  | 49.8  | 50.0  | 49.4  | 49.2  | 49.2  | 48.8  | 48.7  | 47.9  | 46.3  | 45.0  | 46.4  | 49.14 | 51.8  | 44.9 | 6.9   | —   | — |   |
| 18     | 46.7  | 49.0  | 52.0  | 53.2  | 53.5  | 51.8  | 51.1  | 50.7  | 50.1  | 49.7  | 50.1  | 49.6  | 49.6  | 49.7  | 49.6  | 50.1  | 50.0  | 49.9  | 49.5  | 49.2  | 48.5  | 47.1  | 50.1  | 46.4  | 49.88 | 53.7  | 45.9 | 7.8   | —   | — |   |
| 19     | 47.5  | 48.7  | 50.6  | 52.0  | 52.6  | 52.4  | 51.6  | 50.4  | 49.3  | 49.4  | 49.9  | 50.0  | 49.6  | 49.6  | 49.6  | 49.6  | 49.8  | 49.3  | 49.3  | 49.2  | 49.2  | 48.9  | 47.9  | 47.1  | 47.2  | 49.65 | 52.6 | 46.9  | 5.7 | — | — |
| 20     | 47.6  | 48.5  | 50.5  | 51.8  | 52.6  | 52.6  | 51.8  | 51.2  | 49.6  | 49.5  | 49.1  | 49.6  | 49.6  | 49.6  | 49.6  | 50.0  | 49.7  | 49.4  | 49.4  | 49.2  | 49.3  | 48.8  | 47.5  | 46.5  | 49.70 | 52.7  | 46.3 | 6.4   | —   | — |   |
| 21 c   | 47.1  | 48.4  | 49.7  | 52.0  | 52.6  | 52.8  | 52.8  | 51.0  | 50.1  | 49.5  | 49.6  | 49.9  | 49.3  | 49.7  | 49.8  | 49.7  | 49.7  | 49.6  | 49.2  | 49.1  | 48.7  | 48.8  | 47.6  | 45.4  | 49.65 | 52.8  | 44.9 | 7.9   | —   | — |   |
| 22     | 45.4  | 46.3  | 48.7  | 50.6  | 51.4  | 51.8  | 51.5  | 50.9  | 49.9  | 49.8  | 49.7  | 49.7  | 49.9  | 49.7  | 49.7  | 49.6  | 49.4  | 49.2  | 49.1  | 49.0  | 48.4  | 47.5  | 45.5  | 46.4  | 49.18 | 51.8  | 45.3 | 6.5   | —   | — |   |
| 23 d   | 48.0  | 50.1  | 52.6  | 53.8  | 53.5  | 52.6  | 51.5  | 50.5  | 49.4  | 48.9  | 49.3  | 49.6  | 49.8  | 49.7  | 47.2  | 50.1  | 49.3  | 47.7  | 48.5  | 48.4  | 47.2  | 46.7  | 44.9  | 46.7  | 49.37 | 53.8  | 44.1 | 9.7   | —   | — |   |
| 24 d   | 46.5  | 48.9  | 50.8  | 52.9  | 54.1  | 53.5  | 52.2  | 52.1  | 49.2  | 49.2  | 50.4  | 49.6  | 49.3  | 49.4  | 50.0  | 49.2  | 50.0  | 49.2  | 49.7  | 49.4  | 48.8  | 47.4  | 47.1  | 47.0  | 49.84 | 54.2  | 45.4 | 8.4   | —   | — |   |
| 25     | 47.0  | 47.7  | 49.7  | 51.4  | 52.1  | 51.9  | 51.6  | 50.9  | 50.5  | 49.2  | 49.8  | 50.0  | 50.3  | 49.3  | 49.8  | 50.9  | 50.3  | 50.0  | 49.3  | 49.1  | 48.8  | 47.9  | 47.0  | 47.6  | 49.67 | 52.1  | 46.7 | 5.8   | —   | — |   |
| 26     | 47.9  | 48.8  | 50.1  | 51.1  | 51.4  | 51.4  | 51.0  | 50.0  | 49.5  | 49.3  | 49.4  | 50.0  | 50.1  | 49.7  | 49.3  | 49.5  | 49.2  | 49.6  | 49.2  | 48.8  | 48.9  | 47.3  | 45.9  | 46.1  | 49.31 | 51.6  | 45.4 | 6.2   | —   | — |   |
| 27 d   | 48.2  | 49.2  | 50.6  | 52.3  | 53.1  | 53.6  | 52.3  | 50.9  | 50.1  | 47.7  | 47.9  | 48.4  | 49.2  | 49.6  | —     | —     | —     | —     | 49.3  | 48.8  | 49.3  | 48.0  | 46.3  | 47.0  | —     | 53.8  | 45.8 | 8.0   | —   | — |   |
| 28     | 47.0  | 48.1  | 51.4  | 53.3  | 54.0  | 54.1  | 53.5  | 51.6  | 50.3  | 49.6  | 49.2  | 49.7  | 50.0  | 49.9  | 49.7  | 49.6  | 49.5  | 49.5  | 49.4  | 49.6  | 49.2  | 48.9  | 47.6  | 47.0  | 50.10 | 54.4  | 46.9 | 7.5   | —   | — |   |
| 29     | 47.2  | 48.0  | 49.8  | 52.1  | 53.2  | 53.2  | 52.7  | 51.6  | 50.4  | 49.6  | 49.6  | 49.6  | 49.8  | 49.2  | 49.9  | 50.1  | 49.7  | 49.4  | 49.4  | 49.2  | 49.0  | 48.7  | 47.3  | 46.6  | 49.80 | 53.8  | 45.9 | 7.4   | —   | — |   |
| 30 c   | 46.7  | 47.8  | 49.6  | 50.6  | 51.8  | 52.2  | 52.2  | 51.4  | 50.1  | 49.1  | 48.9  | 49.4  | 49.5  | 49.4  | 49.6  | 49.9  | 49.8  | 49.6  | 49.6  | 49.4  | 49.4  | 48.9  | 47.2  | 46.6  | 49.53 | 52.5  | 46.2 | 6.3   | —   | — |   |
| 31     | 46.5  | 47.0  | 48.3  | 49.9  | 51.4  | 52.3  | 52.1  | 51.0  | 49.7  | 49.4  | 49.6  | 49.6  | 49.3  | 49.9  | 49.6  | 49.5  | 49.6  | 49.5  | 49.3  | 49.4  | 49.2  | 48.5  | 46.7  | 45.2  | 49.30 | 52.5  | 45.2 | 7.3   | —   | — |   |
| mean   | 46.61 | 47.88 | 49.82 | 51.37 | 52.34 | 52.46 | 52.04 | 51.27 | 50.28 | 49.72 | 49.64 | 49.77 | 49.69 | 49.56 | 49.51 | 49.63 | 49.38 | 49.21 | 49.08 | 48.94 | 48.75 | 47.94 | 46.79 | 46.22 | 47.55 | —     | —    | —     | —   | — |   |
| " c    | 46.62 | 47.48 | 49.20 | 50.80 | 51.98 | 52.42 | 52.34 | 51.34 | 50.24 | 49.42 | 49.24 | 49.56 | 49.52 | 49.58 | 49.58 | 49.66 | 49.48 | 49.34 | 49.16 | 49.12 | 49.08 | 48.44 | 47.00 | 46.82 | 46.82 | 49.49 | —    | —     | —   | — |   |
| " d    | 46.47 | 48.50 | 50.85 | 52.42 | 53.12 | 52.72 | 51.72 | 51.00 | 49.82 | 49.55 | 49.62 | 49.95 | 49.42 | 49.12 | 49.07 | 49.82 | 49.32 | 49.07 | 49.05 | 48.82 | 48.17 | 47.17 | 46.07 | 46.35 | 49.47 | —     | —    | —     | —   | — |   |



Declination (West) 3°00' + .....

Table 15

| G.M.T. | 0     | 1     | 2     | 3     | 4      | 5      | 6      | 7      | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Mean  | Max. | Min. | Range |   |   |
|--------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|---|---|
| Day    |       |       |       |       |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      |      |       |   |   |
| 1 c    | 45.4  | 46.0  | 47.9  | 49.6  | 51.1   | 52.2   | 51.9   | 51.4   | 50.2  | 49.2  | 49.0  | 49.6  | 49.5  | 49.6  | 49.6  | 49.5  | 49.3  | 49.1  | 48.9  | 48.9  | 49.1  | 48.8  | 47.2  | 46.7  | 49.15 | 52.3 | 45.4 | 6.9   |   |   |
| 2      | 46.4  | 47.4  | 49.5  | 51.1  | 51.9   | 51.8   | 51.3   | 50.6   | 49.9  | 49.3  | 49.3  | 49.6  | 49.6  | 49.9  | 49.7  | 49.6  | 49.2  | 49.1  | 49.1  | 48.8  | 48.8  | 48.1  | 47.3  | 47.1  | 49.35 | 52.1 | 46.3 | 5.8   |   |   |
| 3      | 46.9  | 47.6  | 49.8  | 51.7  | 52.4   | 52.9   | 52.1   | 51.0   | 49.6  | 49.2  | 49.2  | 49.6  | 49.7  | 49.6  | 49.7  | 49.6  | 49.6  | 49.2  | 49.0  | 49.0  | 48.8  | 47.6  | 46.8  | 46.7  | 49.45 | 53.0 | 46.3 | 6.7   |   |   |
| 4      | 46.8  | 48.4  | 50.3  | 51.0  | 51.1   | 51.4   | 51.0   | 50.4   | 49.8  | 49.6  | 49.8  | 49.7  | 49.7  | 49.6  | 49.3  | 49.4  | 49.3  | 49.1  | 49.0  | 48.8  | 48.8  | 47.6  | 45.9  | 45.8  | 49.28 | 51.4 | 45.2 | 6.2   |   |   |
| 5 d    | 46.2  | 48.3  | 49.8  | 51.4  | 52.7   | 53.3   | 53.7   | 51.8   | 51.4  | 51.0  | 50.9  | 50.9  | 51.4  | 48.1  | 49.2  | 49.6  | 48.8  | 48.6  | 49.7  | 50.5  | 47.5  | 46.7  | 46.9  | 47.7  | 49.84 | 53.9 | 45.4 | 8.5   |   |   |
| 6 d    | 49.7  | 52.0  | 53.6  | 55.8  | 54.8   | 54.1   | 53.1   | 50.9   | 50.2  | 49.8  | 50.1  | 49.6  | 49.6  | 49.4  | 50.2  | 49.8  | 50.0  | 49.6  | 49.8  | 49.2  | 49.2  | 47.8  | 46.3  | 45.9  | 50.46 | 56.1 | 45.8 | 10.3  |   |   |
| 7      | 47.0  | 49.2  | 51.4  | 52.7  | 53.9   | 53.8   | 52.0   | 50.7   | 49.6  | 49.2  | 49.5  | 50.0  | 49.6  | 49.6  | 50.1  | 50.1  | 49.6  | 49.6  | 49.6  | 49.6  | 49.3  | 49.2  | 47.0  | 46.2  | 49.89 | 53.9 | 46.2 | 7.7   |   |   |
| 8      | 47.0  | 48.4  | 51.4  | 52.6  | 54.1   | 54.4   | 53.2   | 51.5   | 50.7  | 50.0  | 49.7  | 49.8  | 50.1  | 49.6  | 49.7  | 49.9  | 49.8  | 49.6  | 49.0  | 49.4  | 49.2  | 48.4  | 47.0  | 46.8  | 50.06 | 54.4 | 46.7 | 7.7   |   |   |
| 9 c    | 47.5  | 48.8  | 51.1  | 53.3  | 53.9   | 53.7   | (52.3) | 50.9   | 49.8  | 49.6  | 49.4  | 49.2  | 49.8  | 49.5  | 49.6  | 50.0  | 49.6  | 49.5  | 48.8  | 48.4  | 48.4  | 47.8  | 47.1  | 46.6  | 48.72 | 53.1 | 46.7 | —     |   |   |
| 10 c   | 44.8  | 46.0  | 49.2  | 52.0  | (53.6) | (54.8) | (54.8) | (53.8) | 53.2  | 49.3  | 49.7  | 49.7  | 49.8  | 49.7  | 49.2  | 49.7  | 49.3  | 49.3  | 49.1  | 49.0  | 49.2  | 48.8  | 48.1  | 44.6  | 49.70 | —    | —    | —     | — |   |
| 11 c   | 46.8  | 47.9  | 49.7  | 51.5  | 52.6   | 54.0   | 53.9   | 52.6   | 51.3  | 50.1  | 50.1  | 50.0  | 49.7  | 49.7  | 49.6  | 49.3  | 49.2  | 49.0  | 49.0  | 49.0  | 48.9  | 48.4  | 47.1  | 45.5  | 49.78 | 54.1 | 44.9 | 9.2   |   |   |
| 12     | 45.4  | 46.7  | 49.3  | 50.6  | 52.2   | 52.6   | 52.2   | 51.4   | 50.1  | 49.6  | 49.6  | 50.0  | 50.0  | 49.8  | 49.6  | 49.6  | 49.2  | 49.2  | 49.0  | 48.8  | 48.8  | 47.9  | 46.4  | 46.2  | 49.34 | 53.2 | 45.0 | 8.2   |   |   |
| 13 d   | 46.6  | 48.5  | 50.6  | 51.8  | 53.5   | 53.8   | 53.0   | 51.7   | 50.4  | 49.4  | 49.6  | 51.0  | 50.9  | 50.5  | 49.8  | 49.0  | 49.0  | 48.4  | 49.6  | 48.5  | 49.0  | 48.4  | 48.4  | 50.1  | 50.06 | 54.1 | 46.6 | 7.5   |   |   |
| 14     | 48.0  | 49.6  | 52.0  | 53.3  | 53.1   | 52.6   | 52.2   | 51.3   | 50.5  | 50.0  | 49.7  | 50.0  | 48.7  | 49.7  | 48.6  | 49.3  | 49.6  | 49.3  | 49.3  | 49.2  | 48.6  | 48.4  | 47.6  | 46.7  | 49.89 | 53.3 | 46.6 | 6.7   |   |   |
| 15     | 47.2  | 48.3  | 50.8  | 52.3  | 53.1   | 53.5   | 53.0   | 51.4   | 49.8  | 49.0  | 49.4  | 49.6  | 50.1  | 49.9  | 49.7  | 49.7  | 49.6  | 49.6  | 49.7  | 50.5  | 49.4  | 48.5  | 47.5  | 47.6  | 49.97 | —    | —    | —     | — |   |
| 16     | 48.6  | 49.2  | 50.5  | 52.1  | 53.0   | 53.2   | 51.8   | 50.8   | 48.8  | 49.4  | 49.9  | 49.6  | 50.1  | 49.9  | 49.3  | 49.7  | 49.6  | 49.5  | 49.8  | 49.3  | 49.3  | 48.4  | 47.1  | 46.4  | 49.81 | —    | —    | —     | — |   |
| 17     | 46.7  | 48.5  | 49.6  | 51.2  | 52.3   | 53.2   | 51.8   | 51.0   | 49.7  | 48.8  | 49.3  | 50.0  | 49.3  | 49.9  | 49.3  | 50.0  | 50.1  | 50.1  | 49.0  | 49.0  | 49.3  | 48.8  | 47.6  | 46.1  | 49.48 | —    | —    | —     | — |   |
| 18 d   | —     | —     | —     | —     | —      | —      | —      | —      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —    | —     | — | — |
| 19     | 50.9  | 53.1  | 54.3  | 53.5  | 52.7   | 52.6   | 51.6   | 50.1   | 49.6  | 50.1  | 50.5  | 49.7  | 48.8  | 50.2  | 49.4  | 50.1  | 49.7  | 49.4  | 49.2  | 49.2  | 48.6  | 47.5  | 46.7  | 46.3  | 50.16 | 54.3 | 46.2 | 8.1   |   |   |
| 20     | 47.3  | 49.7  | 51.4  | 53.0  | 53.7   | 52.7   | 51.7   | 50.5   | 49.6  | 49.2  | 49.7  | 49.6  | 50.1  | 48.7  | 50.1  | 50.0  | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —    | —     | — | — |
| 21 d   | 47.8  | 49.6  | 51.4  | 52.3  | 53.6   | 52.7   | 51.5   | 49.6   | 48.9  | 48.7  | 49.2  | 47.1  | 49.6  | 50.2  | 50.0  | 49.6  | 49.6  | 49.6  | 48.9  | 49.4  | 50.1  | 48.8  | 47.9  | 48.2  | 49.76 | 53.6 | 46.2 | 7.4   |   |   |
| 22     | 49.6  | 51.4  | 52.5  | 52.9  | 52.6   | 52.1   | 50.9   | 49.7   | 49.6  | 49.5  | 49.3  | 49.6  | 49.8  | 50.0  | 50.1  | 50.1  | 50.1  | 49.7  | 49.3  | 49.2  | 48.5  | 47.9  | 46.8  | 46.2  | 49.58 | 55.2 | 46.1 | 9.1   |   |   |
| 23     | 46.2  | —     | —     | —     | —      | —      | —      | —      | 50.5  | 49.2  | 50.2  | 50.5  | 50.4  | 50.5  | 49.3  | 48.7  | 49.6  | 49.6  | 49.2  | 50.1  | 48.8  | 48.4  | 47.9  | 47.4  | —     | —    | —    | —     | — | — |
| 24     | 48.4  | 50.5  | 52.6  | 54.0  | 54.3   | 53.9   | 52.2   | 50.5   | 49.5  | 48.8  | 50.1  | 49.8  | 49.2  | 50.1  | 50.1  | 49.6  | 49.7  | 49.7  | 48.9  | 49.0  | 49.6  | 49.3  | 48.6  | 47.9  | 50.27 | 54.7 | 47.9 | 6.8   |   |   |
| 25     | 48.8  | 50.6  | 52.2  | 53.4  | 54.2   | 54.3   | 52.3   | 51.0   | 49.4  | 49.6  | 49.7  | 49.8  | 49.9  | 49.7  | 49.6  | 49.0  | 49.9  | 49.8  | 49.7  | 49.6  | 49.2  | 47.8  | 46.5  | 46.3  | 50.14 | 54.4 | 46.3 | 8.1   |   |   |
| 26     | 46.9  | 49.6  | 52.6  | 54.7  | 55.1   | 54.4   | 52.7   | 51.0   | 49.2  | 48.9  | 49.6  | 49.9  | 49.4  | 48.6  | 49.5  | 49.5  | 49.4  | 49.6  | 49.2  | 49.2  | 48.8  | 47.5  | 46.4  | 44.6  | 49.50 | 55.2 | 44.6 | 10.6  |   |   |
| 27     | 45.8  | 48.2  | 51.4  | 53.1  | 53.8   | 53.2   | 51.8   | 50.1   | 49.2  | 48.8  | 49.2  | 49.7  | 49.2  | 49.8  | 49.8  | 48.3  | 49.7  | 49.7  | 49.7  | 49.4  | 49.2  | 47.8  | 46.4  | 45.5  | 49.53 | 53.9 | 45.4 | 8.6   |   |   |
| 28     | 45.3  | 47.1  | 49.5  | 51.3  | 51.6   | 52.3   | 51.6   | 50.9   | 49.7  | 49.4  | 50.1  | 50.8  | 50.0  | 50.0  | 49.7  | 49.4  | 49.2  | 48.9  | 48.8  | 48.8  | 48.8  | 49.1  | 47.5  | 46.8  | 49.40 | 53.0 | 45.3 | 7.7   |   |   |
| 29     | 47.5  | 49.3  | 50.3  | 51.4  | 51.2   | 52.7   | 51.9   | 50.7   | 50.0  | 49.6  | 50.0  | 50.1  | 50.2  | 50.1  | 50.1  | 49.8  | 49.6  | 49.4  | 49.2  | 49.1  | 48.9  | 48.3  | 47.9  | 46.2  | 49.81 | 52.9 | 47.5 | 5.4   |   |   |
| 30     | 48.7  | 49.9  | 51.1  | 51.6  | 51.8   | 52.1   | 51.7   | 50.5   | 49.7  | 49.6  | 49.2  | 49.7  | 49.9  | 49.9  | 49.7  | 49.4  | 49.2  | 49.0  | 48.8  | 48.6  | 48.5  | 48.4  | 47.9  | 47.5  | 49.67 | 52.2 | 47.5 | 4.7   |   |   |
| 31 c   | 47.9  | 49.2  | 50.9  | 52.1  | 52.3   | 51.9   | 50.6   | 49.7   | 49.3  | 49.5  | 50.0  | 50.1  | 50.0  | 50.0  | 49.7  | 49.7  | 49.5  | 49.2  | 48.9  | 48.8  | 48.8  | 48.0  | 47.9  | 49.7  | 49.74 | 52.5 | 47.4 | 5.1   |   |   |
| mean   | 47.51 | 48.90 | 50.89 | 52.30 | 52.95  | 53.11  | 52.22  | 50.95  | 49.97 | 49.46 | 49.68 | 49.77 | 49.77 | 49.72 | 49.66 | 49.61 | 49.53 | 49.56 | 49.21 | 49.66 | 48.92 | 48.14 | 47.11 | 46.77 | 49.77 | —    | —    | —     | — |   |
| σ c    | 46.48 | 47.58 | 49.76 | 51.70 | 52.70  | 53.32  | 52.70  | 51.62  | 50.76 | 49.54 | 49.64 | 49.72 | 49.66 | 49.70 | 49.54 | 49.62 | 49.38 | 49.22 | 48.94 | 48.82 | 48.88 | 48.36 | 47.56 | 46.64 | 49.66 | —    | —    | —     | — |   |
| σ d    | 47.57 | 49.60 | 51.35 | 52.82 | 53.64  | 53.47  | 52.82  | 51.00  | 50.22 | 49.72 | 49.95 | 49.65 | 50.52 | 49.55 | 49.80 | 49.50 | 49.35 | 49.05 | 49.50 | 49.40 | 48.95 | 47.92 | 47.87 | 47.97 | 50.03 | —    | —    | —     | — |   |

Horizontal Intensity

Table 16

| G. M. T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| Day      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |    |
| 1        | 67   | 57   | —    | —    | —    | 79   | 88   | 79   | 75   | 65   | 70   | 75   | 74   | 78   | 71   | 78   | 70   | 68   | 71   | 78   | 75   | 75   | 67   | 60   | 70.8 | 88   | 51   | 32    |    |
| 2d       | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |
| 3d       | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |
| 4        | —    | —    | —    | —    | 70   | 72   | 48   | 47   | 48   | 63   | 68   | 69   | 71   | 71   | 72   | 71   | 74   | 70   | 70   | 65   | 62   | 58   | (57) | (55) | (55) | —    | —    | —     | —  |
| 5        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |
| 6        | 61   | 70   | 82   | 86   | 88   | 87   | 86   | 82   | 78   | 78   | 70   | 71   | 73   | 71   | 71   | 88   | 77   | 74   | 74   | 74   | 77   | 75   | 67   | 67   | 75.7 | 89   | 61   | 28    |    |
| 7        | 67   | (69) | 70   | 69   | 80   | 78   | 78   | 82   | 80   | 78   | 78   | 79   | 82   | 79   | 75   | 73   | 70   | 78   | 76   | 76   | 76   | 79   | 76   | 70   | 68   | 75.0 | 82   | 62    | 20 |
| 8        | 62   | 63   | 63   | 63   | 79   | 86   | 86   | 86   | 83   | 74   | 74   | 75   | 73   | 74   | 73   | 78   | 75   | 76   | 78   | 81   | 81   | 80   | 80   | 73   | 73   | 78.3 | 88   | 62    | 26 |
| 9        | (73) | 77   | 81   | 90   | 88   | 80   | 77   | 72   | 52   | 42   | 53   | 55   | 58   | 61   | 66   | 67   | 67   | 67   | 71   | 78   | 73   | 72   | 69   | 65   | 68.7 | 91   | 41   | 50    |    |
| 10c      | 67   | 74   | 80   | 86   | 83   | 79   | 82   | 80   | 80   | 78   | 80   | 83   | 81   | 81   | 82   | 81   | 84   | 85   | 84   | 82   | 87   | 87   | 81   | 77   | 81.2 | 88   | 67   | 21    |    |
| 11       | 82   | 93   | 96   | 97   | 96   | 92   | 92   | 92   | 90   | 88   | 86   | 88   | 89   | 88   | 92   | 89   | 89   | 89   | 94   | 96   | 97   | 97   | 87   | 83   | 90.2 | 98   | 66   | 32    |    |
| 12       | (65) | 69   | 70   | 68   | 78   | 87   | 94   | 96   | 91   | 96   | 94   | 103  | 97   | 98   | 91   | 87   | 78   | 78   | 82   | 82   | 86   | 82   | 78   | (76) | 84.3 | 104  | 62   | 42    |    |
| 13       | 78   | 78   | 85   | 81   | 91   | 101  | 104  | 95   | 49   | 73   | 82   | 83   | 81   | 80   | 83   | 78   | 75   | 74   | 81   | 81   | 82   | 75   | 76   | 70   | 66   | 80.0 | 105  | 48    | 57 |
| 14       | 66   | 68   | 75   | 85   | 92   | 97   | 94   | 86   | 88   | 81   | 76   | 82   | 86   | 82   | 87   | 88   | 85   | 84   | 84   | 84   | 84   | 82   | 78   | 75   | 72   | 82.4 | 102  | 65    | 36 |
| 15       | 75   | 82   | 83   | 103  | 106  | 102  | 93   | 90   | 90   | 88   | 87   | 86   | 81   | 79   | 76   | 78   | 76   | 78   | 81   | 79   | 79   | 79   | 75   | 69   | 65   | 83.2 | 109  | 63    | 46 |
| 16c      | 65   | 73   | 80   | 81   | 89   | 90   | 89   | 90   | 89   | 85   | 85   | 84   | 84   | 81   | 83   | 83   | 84   | 84   | 84   | 85   | 85   | 88   | 85   | 78   | 73   | 82.3 | 90   | 65    | 25 |
| 17c      | 74   | 85   | 91   | 100  | 100  | 105  | 110  | 107  | 102  | 93   | 92   | 107  | 95   | 93   | 107  | 91   | 91   | 92   | 90   | 90   | 84   | 86   | 85   | 78   | 74   | 92.3 | 112  | 71    | 41 |
| 18c      | 78   | 87   | 97   | 103  | 105  | 102  | 109  | 107  | 100  | 89   | 83   | 85   | 85   | 88   | 87   | 87   | 87   | 88   | 90   | 89   | 89   | 89   | 81   | 75   | 91.1 | 111  | 73   | 38    |    |
| 19c      | 78   | 90   | 109  | 111  | 112  | 102  | 105  | 105  | 102  | 95   | 97   | 95   | 95   | 96   | 91   | 88   | 85   | 87   | 86   | 89   | 88   | 88   | 81   | 70   | 93.6 | 112  | 64   | 48    |    |
| 20       | 64   | 61   | 66   | 81   | 89   | 99   | 104  | 75   | 96   | 90   | 90   | 90   | 90   | 90   | 96   | 75   | 99   | 96   | 103  | 103  | 100  | 104  | 102  | 103  | 90.5 | 106  | 61   | 44    |    |
| 21       | 91   | 102  | 97   | 98   | 104  | 95   | 79   | 69   | 81   | 85   | 83   | 77   | 75   | 78   | 70   | 78   | 75   | 76   | 89   | 91   | 88   | 88   | 81   | 66   | 83.5 | 107  | 55   | 52    |    |
| 22       | 56   | 57   | 68   | 78   | 83   | 89   | 98   | 107  | 105  | 95   | 93   | 87   | 87   | 85   | 86   | 79   | 84   | 78   | 83   | 81   | 81   | 75   | 71   | 68   | 82.2 | 103  | 56   | 53    |    |
| 23       | 63   | 61   | 68   | 77   | 88   | 91   | 78   | 88   | 89   | 84   | 74   | 70   | 74   | 79   | 78   | 83   | 71   | 75   | 76   | 78   | 79   | 80   | 79   | 78   | 77.8 | 92   | 60   | 32    |    |
| 24       | 70   | 63   | 69   | 77   | 88   | 93   | (92) | 90   | (89) | (87) | (85) | (84) | (83) | (83) | 82   | 83   | 81   | 83   | (82) | 82   | 80   | 81   | 76   | 67   | 81.2 | 95   | 57   | 33    |    |
| 25       | 63   | 57   | 62   | 68   | 72   | 81   | 93   | 93   | 87   | 84   | 84   | 87   | 87   | 88   | 81   | 83   | 90   | 92   | 92   | 93   | 94   | 90   | 85   | 73   | 82.5 | 95   | 57   | 33    |    |
| 26       | 76   | 83   | 89   | 95   | 98   | 101  | 104  | 100  | 94   | 89   | 88   | 89   | 88   | 90   | 85   | 83   | 82   | 81   | 84   | 87   | 88   | 88   | 82   | 78   | 88.4 | 104  | 76   | 29    |    |
| 27d      | 75   | 79   | 83   | 91   | 98   | 95   | 108  | 95   | 61   | 89   | 42   | 58   | 63   | 69   | 69   | 72   | 54   | 58   | 70   | 69   | 77   | 75   | 78   | 67   | 72.3 | 104  | 25   | 75    |    |
| 28d      | 60   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |
| 29d      | 57   | 58   | 64   | 69   | 66   | 62   | 75   | 62   | 62   | 37   | 43   | 35   | 48   | 79   | 50   | 57   | 58   | 68   | 72   | 75   | 73   | 70   | 57   | 49   | 60.2 | 66   | 19   | 47    |    |
| 30       | 46   | 38   | 35   | 39   | 68   | 78   | 73   | 75   | 56   | 72   | 62   | 69   | 85   | 72   | 63   | 63   | 81   | 76   | 65   | 71   | 69   | 67   | 64   | 54   | 64.2 | 77   | 18   | 64    |    |
| 31       | 48   | 52   | 63   | 61   | (69) | (70) | 76   | 76   | 76   | 68   | 71   | 71   | 71   | 76   | 74   | 69   | 78   | 79   | 85   | 68   | 80   | 68   | 63   | 58   | 69.4 | —    | —    | —     | —  |
| mean     | 67.7 | 71.0 | 75.9 | 82.2 | 88.3 | 89.8 | 90.5 | 87.2 | 82.1 | 78.0 | 77.8 | 79.5 | 80.0 | 81.4 | 79.5 | 78.3 | 78.8 | 79.4 | 81.8 | 82.0 | 82.4 | 80.9 | 74.9 | 69.5 | 80.0 | —    | —    | —     | —  |
| 7c       | 74.2 | 83.2 | 91.4 | 96.2 | 97.8 | 98.4 | 99.0 | 97.8 | 94.5 | 88.0 | 87.4 | 90.8 | 88.0 | 87.8 | 90.0 | 86.0 | 86.2 | 87.2 | 86.8 | 86.8 | 86.6 | 86.8 | 78.8 | 73.8 | 88.8 | —    | —    | —     | —  |
| 7d       | 66.0 | 68.5 | 73.5 | 80.0 | 82.0 | 78.5 | 89.0 | 78.5 | 61.5 | 38.0 | 42.5 | 46.5 | 55.5 | 74.0 | 59.5 | 64.5 | 56.0 | 63.0 | 71.0 | 72.0 | 75.0 | 72.5 | 65.0 | 78.0 | 66.3 | —    | —    | —     | —  |
|          | 53.0 | 38.0 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |

Table 17

## Horizontal Intensity

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September 1932.

| G.M.T. | Horizontal Intensity |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Mean | Max. | Min. | Range |      |      |      |      |    |     |    |  |
|--------|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|----|-----|----|--|
|        | 0                    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   |      |      |      |       | 18   | 19   | 20   | 21   | 22 | 23  |    |  |
| DW     |                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |      |    |     |    |  |
| 1      | 38                   | 34   | 42   | 50   | 56   | 57   | 52   | 60   | 61   | 60   | 63   | 64   | 63   | 62   | 74   | 52   | 57   | 60   | 60   | 58   | 58   | 56    | 50   | 40   | 40   | 55.1 | 75 | 30  | 45 |  |
| 2      | 32                   | 28   | 37   | 45   | 41   | 57   | 61   | 68   | 66   | 63   | 63   | 65   | 62   | 63   | 63   | 68   | 64   | 66   | 60   | 62   | 60   | 61    | 58   | 54   | 45   | 53.9 | 66 | 26  | 39 |  |
| 3      | 41                   | 44   | 44   | 47   | 56   | 61   | 68   | 73   | 72   | 66   | 63   | 63   | 65   | 67   | 66   | 68   | 68   | 62   | 66   | 64   | 68   | 69    | 64   | 56   | 61.7 | 74   | 41 | 32  |    |  |
| 4      | 53                   | 55   | 58   | 63   | 69   | 72   | 76   | 79   | 74   | 69   | 67   | 66   | 66   | 64   | 63   | 64   | 64   | 66   | 74   | 73   | 65   | 68    | 59   | 60   | 66.2 | 79   | 55 | 24  |    |  |
| 5      | (66)                 | 72   | 75   | 77   | 80   | 79   | 84   | 91   | 86   | 74   | 64   | 62   | 62   | 69   | 69   | 64   | 94   | 78   | 77   | 75   | 77   | 78    | 72   | 59   | 74.3 | 102  | 54 | 48  |    |  |
| 6      | 58                   | 48   | 56   | 77   | 93   | 107  | 98   | 66   | 69   | 68   | 57   | 30   | 3    | 25   | 24   | 24   | 57   | 23   | 35   | 37   | 44   | 45    | 44   | 40   | 51.0 | 111  | 3  | 108 |    |  |
| 7      | 40                   | 33   | 36   | 43   | 52   | 56   | 57   | 59   | 57   | 50   | 57   | 52   | 52   | 56   | 54   | 53   | 56   | 57   | 60   | 70   | 68   | 61    | 64   | 64   | 54.8 | 70   | 38 | 37  |    |  |
| 8      | (6ε)                 | 58   | 55   | 29   | 13   | 44   | 49   | 47   | 51   | 56   | 56   | 57   | 58   | 64   | 68   | 67   | 67   | 68   | 74   | 66   | 58   | 66    | 61   | 59   | 56.5 | 79   | 11 | 68  |    |  |
| 9      | 44                   | 52   | 52   | 31   | 41   | 48   | 58   | 62   | 62   | 61   | 61   | 61   | 60   | 60   | 63   | 59   | 65   | 68   | 66   | 64   | 64   | 69    | 63   | 56   | 57.8 | 69   | 29 | 40  |    |  |
| 10     | 47                   | 45   | 47   | 55   | 66   | 69   | 73   | 73   | 73   | 69   | 66   | 67   | 67   | 67   | 69   | 69   | 68   | 69   | 70   | 71*  | 70   | 68    | 66   | 66   | 65.4 | 74   | 45 | 29  |    |  |
| 11     | 61                   | (61) | 58   | (66) | 73   | 74   | 77   | 75   | 75   | 74   | 73   | 72   | 73   | 75   | 74   | 75   | 73   | 74   | 73   | 73   | 73   | 71    | 70   | 63   | 71.1 | 79   | 56 | 28  |    |  |
| 12     | 57                   | 58   | 55   | 61   | 68   | 73   | 76   | 76   | 73   | 72   | 71   | 71   | 70   | 71   | 71   | 78   | 71   | 74   | 76   | 77   | 76   | 78    | 64   | 58   | 69.2 | 78   | 53 | 25  |    |  |
| 13     | 60                   | 65   | 69   | 78   | 76   | 81   | 81   | 78   | 82   | 75   | 75   | 73   | 76   | 75   | 76   | 80   | 77   | 79   | 77   | 80   | 76   | 78    | 70   | 63   | 74.6 | 82   | 56 | 26  |    |  |
| 14     | 61                   | 63   | 65   | 83   | 103  | 101  | 97   | 88   | 82   | 81   | (82) | 82   | 81   | 81   | 78   | 78   | 76   | 76   | 83   | 81   | 75   | 53    | 54   | 78.3 | 105  | 58   | 52 | 52  |    |  |
| 15     | 61                   | 56   | 68   | 68   | (70) | 79   | 84   | 79   | 79   | 80   | (82) | 82   | 76   | 74   | 80   | 81   | 79   | 78   | 79   | 81   | 82   | 81    | 71   | 57   | 75.1 | 87   | 52 | 34  |    |  |
| 16     | 54                   | 60   | 67   | 76   | 82   | 92   | 93   | 91   | 88   | 84   | 83   | 81   | 77   | 74   | 86   | 79   | 77   | 78   | 78   | 80   | 84   | 86    | 80   | 70   | 79.2 | 98   | 52 | 40  |    |  |
| 17     | 62                   | 61   | 58   | 70   | 87   | 93   | 93   | 80   | 75   | 72   | 68   | 67   | 80   | 80   | 82   | 81   | 83   | 78   | 71   | 70   | 76   | 74    | 84   | 75   | 75.5 | 96   | 48 | 53  |    |  |
| 18     | 63                   | 57   | 59   | 70   | 83   | 97   | 96   | 83   | 75   | 70   | 70   | 65   | 75   | 70   | 68   | 71   | 77   | 78   | 79   | 78   | 79   | 81    | 80   | 61   | 74.4 | 98   | 52 | 46  |    |  |
| 19     | 60                   | 52   | 47   | 59   | 69   | 77   | 77   | 64   | 49   | 36   | 42   | 43   | 43   | 54   | 61   | 53   | 67   | 62   | 64   | 58   | 61   | 62    | 56   | 59   | 57.5 | 78   | 32 | 46  |    |  |
| 20     | 59                   | 57   | 42   | 42   | 55   | 62   | 62   | 51   | 43   | 44   | 52   | 56   | 59   | 65   | 61   | 63   | 62   | 65   | 68   | 68   | 67   | 66    | 66   | 60   | 58.1 | 70   | 25 | 45  |    |  |
| 21     | 56                   | 53   | 56   | 58   | 60   | 56   | 72   | 71   | 68   | 62   | 62   | 66   | 67   | 69   | 68   | 70   | 69   | 70   | 75   | 72   | 72   | 67    | 67   | 62   | 65.3 | 75   | 50 | 25  |    |  |
| 22     | 60                   | 57   | 63   | 74   | 74   | 79   | 79   | 79   | 75   | 65   | 47   | 24   | 40   | 48   | 60   | 61   | 59   | 70   | 69   | 64   | 68   | 69    | 57   | 62   | 62.9 | 83   | 21 | 62  |    |  |
| 23     | 51                   | (4ε) | 47   | 53   | 72   | 79   | 72   | 70   | 65   | 28   | 26   | 26   | 17   | 29   | 36   | 49   | 59   | 57   | 82   | 67   | 56   | 59    | 65   | 52   | 53.0 | 87   | 16 | 71  |    |  |
| 24     | 50                   | 50   | 48   | 61   | 70   | 68   | 40   | 57   | 67   | 62   | 54   | 47   | 32   | 39   | 49   | 54   | 71   | 57   | 60   | 63   | 65   | 63    | 60   | 42   | 55.4 | 74   | 26 | 48  |    |  |
| 25     | 42                   | 44   | 31   | 40   | 57   | 52   | 55   | 33   | 22   | 45   | 43   | 53   | 43   | 57   | 49   | 42   | 64   | 58   | 61   | 56   | 54   | 64    | 44   | 52   | 48.6 | 75   | 18 | 57  |    |  |
| 26     | 49                   | 45   | 48   | 54   | 65   | 59   | 60   | 52   | 60   | 56   | 56   | 63   | 59   | 61   | 64   | 63   | 63   | 64   | 63   | 63   | 66   | 63    | 63   | 51   | 58.7 | 71   | 39 | 32  |    |  |
| 27     | 39                   | 26   | 45   | 56   | 69   | 76   | 75   | 61   | 61   | 63   | 52   | 48   | 59   | 72   | 57   | 57   | 52   | 56   | 61   | 62   | 65   | 62    | 59   | 54   | 57.8 | 81   | 21 | 60  |    |  |
| 28     | 48                   | 45   | 44   | 54   | 64   | 73   | 69   | 56   | 54   | 56   | 53   | 54   | 50   | 54   | 50   | 54   | 54   | 60   | 62   | 64   | 66   | 67    | 64   | 59   | 57.4 | 73   | 48 | 50  |    |  |
| 29     | 60                   | 55   | 62   | 72   | 81   | 98   | 96   | 89   | 79   | 74   | 61   | 58   | 64   | 67   | 70   | 69   | 70   | 67   | 68   | 65   | 63   | 66    | (62) | 51   | 69.2 | 96   | 42 | 54  |    |  |
| 30     | 42                   | 39   | 47   | 53   | 63   | 72   | 74   | 60   | 46   | 46   | 53   | 58   | 54   | 56   | 56   | 60   | 61   | 56   | 61   | 63   | 65   | 66    | 60   | 60   | 56.3 | 76   | 37 | 39  |    |  |
| 31     | —                    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    | —    | —    | —    | —  | —   | —  |  |
| mean   | 52.5                 | 50.6 | 52.7 | 58.7 | 66.9 | 72.5 | 73.5 | 68.8 | 65.7 | 62.6 | 60.7 | 59.4 | 58.6 | 61.9 | 63.7 | 62.9 | 65.9 | 65.5 | 68.4 | 67.4 | 67.4 | 67.9  | 63.4 | 57.0 | 63.2 | —    | —  | —   | —  |  |
| σ c    | 53.0                 | 54.2 | 56.0 | 62.8 | 72.8 | 77.8 | 80.8 | 78.4 | 76.6 | 73.0 | 70.6 | 70.0 | 72.4 | 72.6 | 75.4 | 74.4 | 73.8 | 71.2 | 71.4 | 71.6 | 74.2 | 73.6  | 72.8 | 58.4 | 70.6 | —    | —  | —   | —  |  |
| σ d    | 52.4                 | 49.8 | 47.4 | 52.0 | 61.0 | 70.0 | 62.3 | 54.6 | 54.8 | 51.8 | 47.2 | 43.6 | 30.6 | 42.8 | 45.2 | 47.2 | 63.6 | 52.6 | 62.4 | 57.8 | 55.4 | 59.4  | 54.8 | 50.4 | 52.9 | —    | —  | —   | —  |  |

Table 18

## Horizontal Intensity

31900γ+.....γ

October 1982.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 28   | Mean | Max. | Min. | Range |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Day    | 53   | 48   | 58   | 68   | 80   | 84   | 82   | 81   | 75   | 65   | 68   | 63   | 67   | 74   | 77   | 71   | 69   | 68   | 72   | 70   | 70   | 78   | 78   | 71   | 69.6 | 85   | 45   | 40   |       |
| 1      | 68   | 78   | 87   | 84   | 92   | 98   | 93   | 82   | 82   | 66   | 65   | 60   | 39   | 47   | 67   | 62   | 65   | 75   | 72   | 74   | 70   | 68   | 66   | 58   | 70.6 | 98   | 37   | 61   |       |
| 2      | 54   | 55   | 56   | 64   | 72   | 78   | 72   | 66   | 61   | 66   | 63   | 65   | 70   | 70   | 80   | 72   | 71   | 72   | 73   | 75   | 76   | 77   | 76   | 65   | 68.5 | 87   | 52   | 34   |       |
| 3      | 57   | 45   | 41   | 54   | 66   | 75   | 82   | 82   | 82   | 77   | 75   | 79   | 80   | 78   | 77   | 87   | 85   | 89   | 85   | 87   | 87   | 85   | 79   | 71   | 78.0 | 91   | 40   | 61   |       |
| 4      | 68   | 65   | 63   | 73   | 84   | 95   | 103  | 97   | 89   | 84   | 77   | 71   | 71   | 71   | 74   | 82   | 79   | 78   | 76   | 80   | 81   | 80   | 77   | 70   | 78.7 | 104  | 60   | 44   |       |
| 5      | 68   | 68   | 77   | 73   | 85   | 94   | 95   | 91   | 86   | 82   | 80   | 82   | 81   | 84   | 82   | 83   | 80   | 82   | 79   | 79   | 81   | 82   | 83   | 77   | 81.4 | 96   | 67   | 29   |       |
| 6      | 69   | 60   | 63   | 71   | 81   | 85   | 86   | 87   | 86   | 82   | 80   | 79   | 79   | 80   | 79   | 78   | 81   | 78   | 77   | 76   | 79   | 81   | 88   | 88   | 78.5 | 87   | 60   | 27   |       |
| 7      | 79   | 74   | (75) | (79) | 82   | 88   | 89   | 87   | 83   | 83   | 84   | 84   | 84   | 82   | 77   | 79   | 79   | 75   | 74   | 82   | 82   | 81   | 85   | 81   | 81.2 | 90   | 70   | 20   |       |
| 8      | 70   | 63   | 67   | 71   | 85   | 85   | 88   | 85   | 80   | 79   | 75   | 78   | 78   | 80   | 85   | 79   | 83   | 85   | 85   | 82   | 77   | 79   | 82   | 76   | 79.0 | 97   | 61   | 36   |       |
| 9      | 73   | 65   | 68   | 76   | 65   | 65   | 65   | 71   | 74   | 76   | 73   | 74   | 75   | 72   | 71   | 86   | 84   | 84   | 75   | 74   | 75   | 76   | 82   | 79   | 74.1 | 89   | 62   | 27   |       |
| 10     | 73   | 74   | 74   | 80   | 84   | 88   | 87   | 85   | 76   | 77   | 78   | 78   | 76   | 78   | 75   | 79   | 78   | 82   | 81   | 84   | 81   | 86   | 88   | 76   | 79.5 | 90   | 64   | 26   |       |
| 11     | 64   | 59   | 65   | 72   | 85   | 88   | 86   | 86   | 81   | 79   | 79   | 79   | 79   | 79   | 79   | 77   | 84   | 84   | 88   | 84   | 80   | 81   | 82   | 74   | 79.0 | 90   | 58   | 32   |       |
| 12     | 65   | 66   | 73   | 80   | 89   | 94   | 95   | 94   | 90   | 85   | 79   | 84   | 83   | 82   | 85   | 91   | (81) | 82   | 84   | 82   | 83   | 82   | 81   | 73   | 82.6 | 95   | 65   | 30   |       |
| 13     | 63   | 60   | 68   | 82   | 93   | 101  | 100  | 95   | 88   | 84   | 83   | 83   | 83   | 83   | 83   | 83   | 82   | 83   | 93   | 92   | 90   | 90   | 87   | 87   | 84.9 | 102  | 60   | 42   |       |
| 14     | 83   | (85) | 71   | 86   | 98   | 107  | 118  | 115  | 87   | 42   | 27   | -8   | -18  | -10  | 23   | 36   | 25   | 20   | 55   | 49   | 48   | 52   | 49   | 58   | 54.3 | 125  | -15  | 1-13 |       |
| 15     | 51   | 54   | 54   | 63   | 65   | 66   | 40   | 30   | 40   | 49   | 49   | 69   | 44   | 49   | 48   | 69   | 60   | 60   | 61   | 61   | 63   | 64   | 64   | 61   | 55.8 | 75   | 28   | 47   |       |
| 16     | 55   | 52   | 58   | 58   | 69   | 72   | 72   | 69   | 59   | 60   | 64   | 66   | 68   | 71   | 75   | 55   | 56   | 60   | 70   | 70   | 73   | 72   | 70   | 74   | 68.9 | 86   | 50   | 36   |       |
| 17     | 66   | 65   | 70   | 70   | 80   | 79   | 61   | 68   | 66   | 63   | 63   | 62   | 58   | 77   | 65   | 63   | 67   | 68   | 73   | 71   | 71   | 75   | 76   | 72   | 68.9 | 82   | 55   | 27   |       |
| 18     | 71   | (70) | 73   | 77   | 84   | 89   | 88   | 84   | 77   | 68   | 64   | 72   | 67   | 55   | 43   | 59   | 53   | 61   | 48   | 47   | 66   | 46   | 61   | 64   | 66.1 | 89   | 42   | 47   |       |
| 19     | 54   | 46   | 28   | 27   | 23   | 28   | 20   | 15   | 17   | 10   | 33   | 26   | 30   | 59   | 49   | 46   | 48   | 51   | 52   | 55   | 56   | 58   | 61   | 61   | 39.7 | 63   | 8    | 55   |       |
| 20     | 58   | 55   | 55   | 60   | 63   | 66   | 67   | 69   | 70   | 67   | 69   | 67   | 65   | 58   | 73   | 64   | 62   | 53   | 60   | 61   | 66   | 64   | 70   | 66   | 63.7 | 80   | 54   | 26   |       |
| 21     | 62   | (65) | 63   | 70   | 73   | 78   | 80   | 78   | 67   | 43   | 37   | 34   | 43   | 45   | 47   | 74   | 55   | 61   | 65   | 66   | 65   | 71   | 66   | 64   | 61.0 | 81   | 8    | 78   |       |
| 22     | 64   | 66   | 70   | 78   | 75   | 78   | 70   | 68   | 67   | 56   | 40   | 50   | 56   | 69   | 64   | 63   | 66   | 66   | 67   | 66   | 66   | 70   | 74   | 67   | 65.6 | 85   | 40   | 45   |       |
| 23     | 63   | 61   | 59   | 58   | 53   | 62   | 57   | 56   | 51   | 49   | 46   | 43   | 43   | 40   | 43   | 45   | 67   | 64   | 66   | 65   | 67   | 67   | 70   | 72   | 67.0 | 78   | 38   | 35   |       |
| 24     | 73   | 72   | 76   | 76   | 74   | 69   | 69   | 69   | 69   | 70   | 70   | 69   | 67   | 62   | 67   | 68   | 67   | 67   | 71   | 70   | 70   | 74   | 65   | 71   | 70.0 | 77   | 61   | 16   |       |
| 25     | 57   | 60   | 66   | 68   | 68   | 68   | 71   | 71   | 68   | 69   | 64   | 68   | 71   | 71   | 72   | 72   | 72   | 73   | 74   | 75   | 75   | 77   | 78   | 75   | 70.1 | 80   | 29   | 51   |       |
| 26     | 72   | 75   | 78   | 82   | 91   | 90   | 86   | 85   | 83   | 81   | 81   | 84   | 84   | 79   | 79   | 81   | 84   | 84   | 87   | 88   | 86   | 86   | 85   | 89   | 82.9 | 94   | 71   | 23   |       |
| 27     | 92   | 91   | 91   | 84   | 86   | 88   | 76   | 67   | 57   | 62   | 63   | 38   | 45   | 63   | 68   | 71   | 71   | 65   | 66   | 67   | 69   | 73   | 72   | 75   | 70.8 | 94   | 35   | 59   |       |
| 28     | 67   | 66   | 64   | 67   | 73   | 73   | 72   | 62   | 68   | 67   | 60   | 56   | 66   | 57   | 58   | 60   | —    | —    | —    | —    | —    | —    | —    | —    | —    | 88   | 55   | 83   |       |
| mean   | 66.1 | 64.1 | 66.1 | 71.3 | 76.9 | 81.0 | 78.8 | 76.5 | 72.0 | 67.2 | 64.8 | 64.2 | 62.8 | 65.6 | 68.0 | 71.3 | 70.8 | 71.1 | 72.6 | 72.7 | 73.3 | 74.0 | 74.4 | 71.5 | 70.7 | —    | —    | —    | —     |
| σ c    | 65.2 | 65.2 | 72.0 | 75.8 | 81.8 | 85.2 | 86.0 | 84.0 | 80.2 | 78.0 | 75.2 | 77.2 | 77.0 | 76.4 | 77.8 | 79.2 | 76.6 | 78.6 | 80.2 | 79.6 | 79.8 | 81.0 | 78.8 | 76.6 | 77.8 | —    | —    | —    | —     |
| σ d    | 64.2 | 62.0 | 67.8 | 64.6 | 68.6 | 73.6 | 69.2 | 64.4 | 57.6 | 42.4 | 42.0 | 39.6 | 33.2 | 39.6 | 43.2 | 56.8 | 48.2 | 52.4 | 56.2 | 55.6 | 59.6 | 58.2 | 60.2 | 55.2 | 55.4 | —    | —    | —    | —     |
|        | 56.4 | 54.2 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |

Table 19

Horizontal Intensity 31900γ+.....γ

November 1982.

| G.M.T. | 0    | 1    | 2     | 3     | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|--------|------|------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| Day    | 78   | 79   | 84    | 84    | 70   | 51   | 42   | 20   | 28   | 25   | 28   | 28   | 59   | 55   | 63   | 66   | 69   | 69   | 70   | 75   | 78   | 78   | 78   | 78   | 78.5 | 85   | 14   | 71    |    |
| 1 d    | 78   | 79   | 84    | 84    | 70   | 51   | 42   | 20   | 28   | 25   | 28   | 28   | 59   | 55   | 63   | 66   | 69   | 69   | 70   | 75   | 78   | 78   | 78   | 78   | 78.5 | 85   | 14   | 71    |    |
| 2      | 80   | 78   | 78    | 78    | 78   | 74   | 67   | 68   | 65   | 57   | 66   | (71) | (70) | (66) | (68) | (70) | —    | —    | —    | 75   | 76   | 81   | 81   | 81   | 82   | 80   | 51   | 93    |    |
| 3      | 80   | 78   | 78    | 78    | 78   | 74   | 67   | 68   | 65   | 57   | 66   | (71) | (70) | (66) | (68) | (70) | —    | —    | —    | 75   | 76   | 81   | 81   | 81   | 82   | 80   | 51   | 93    |    |
| 4      | 68   | (71) | 67    | 66    | 72   | 68   | 82   | 82   | 80   | 76   | 75   | 74   | 70   | 78   | 78   | 79   | 76   | 84   | 86   | 88   | 74   | 82   | 78   | 74   | 73.3 | 93   | 67   | 26    |    |
| 5      | 68   | (71) | 67    | 66    | 72   | 68   | 82   | 82   | 80   | 76   | 75   | 74   | 70   | 78   | 78   | 79   | 76   | 84   | 86   | 88   | 74   | 82   | 78   | 74   | 73.3 | 93   | 67   | 26    |    |
| 6 c    | 69   | 66   | 68    | 75    | 76   | 83   | 72   | 78   | 80   | 75   | 78   | 78   | 79   | 81   | 80   | 81   | 82   | 81   | 81   | 82   | 81   | 84   | 89   | 85   | 78.5 | 90   | 66   | 24    |    |
| 7      | 80   | (80) | 88    | 91    | 90   | 87   | 87   | 88   | 88   | 85   | 86   | 83   | 78   | 75   | 74   | 80   | 83   | 93   | 90   | 81   | 78   | 80   | 79   | 88   | 83.6 | 93   | 73   | 20    |    |
| 8      | 88   | (85) | 86    | 88    | 80   | 83   | 83   | 83   | 81   | 81   | 82   | 81   | 79   | 74   | 74   | 78   | 80   | 84   | 85   | 84   | 84   | 86   | 90   | 90   | 82.5 | 91   | 71   | 20    |    |
| 9 c    | 85   | (80) | (82)  | 83    | 85   | 85   | 84   | 89   | 89   | 90   | 89   | 89   | 90   | 90   | 89   | 89   | 91   | 88   | 90   | 89   | 88   | 92   | 95   | 93   | 88.1 | 95   | 82   | 13    |    |
| 10 c   | 94   | 87   | 80    | 86    | 95   | 96   | 98   | 96   | (92) | 89   | (87) | (87) | (87) | (87) | (87) | (87) | 88   | 86   | 89   | 90   | 90   | 94   | 98   | 105  | 90.6 | 105  | 80   | 25    |    |
| 11     | 104  | 96   | 98    | 95    | 99   | 96   | 98   | 89   | 90   | 94   | 96   | 94   | 95   | 92   | 97   | 95   | 94   | 92   | 91   | 86   | 90   | 90   | 96   | 96   | 94.1 | 106  | 85   | 21    |    |
| 12     | 91   | 86   | 94    | 108   | 108  | 106  | 95   | 88   | 85   | 80   | 73   | 69   | 72   | —    | —    | —    | —    | —    | —    | 79   | 78   | 83   | 87   | 83   | —    | 111  | 66   | 48    |    |
| 13     | —    | —    | 83    | 79    | 70   | 78   | 77   | 82   | 81   | 78   | 76   | 72   | 67   | 68   | 65   | 65   | 69   | 75   | 73   | 79   | 78   | 83   | 87   | 83   | —    | —    | 89   | 64    | 25 |
| 14 d   | 83   | 86   | 92    | 92    | 84   | 84   | 75   | 63   | 61   | 45   | 56   | 66   | 68   | 93   | 93   | 66   | 61   | 66   | 72   | 73   | 75   | 77   | 76   | 81   | 73.4 | 96   | 40   | 56    |    |
| 15 d   | 77   | 75   | 80    | 81    | 73   | 67   | 65   | 72   | 70   | 64   | 65   | 69   | 70   | 73   | 76   | 79   | 75   | 77   | 95   | 99   | 103  | 88   | 89   | 93   | 78.1 | 105  | 60   | 45    |    |
| 16 d   | 90   | 91   | 83    | 67    | 58   | 52   | 45   | 37   | 41   | 53   | 37   | 56   | 54   | 51   | 47   | 69   | 64   | 63   | 64   | 67   | 66   | 69   | 69   | 71   | 60.6 | 91   | 33   | 58    |    |
| 17 a   | 70   | 79   | (79)  | 78    | 75   | 72   | 63   | 66   | 66   | 66   | 62   | 53   | 52   | 68   | 57   | 70   | 69   | 71   | 71   | 67   | 67   | 70   | 78   | 84   | 68.0 | 84   | 49   | 35    |    |
| 18     | 84   | 83   | 83    | 79    | 74   | 66   | 64   | 68   | 66   | 67   | 71   | 69   | 72   | 78   | 71   | 62   | 79   | 74   | 69   | 73   | 71   | 68   | 78   | 80   | 72.9 | 84   | 61   | 23    |    |
| 19     | 86   | 81   | 70    | 74    | 78   | 74   | 67   | 66   | 69   | 61   | 63   | 64   | 61   | 63   | 63   | 63   | 71   | 73   | 73   | 76   | 75   | 75   | 82   | 82   | 82   | 84   | 61   | 23    |    |
| 20     | 82   | 81   | 81    | 76    | 76   | 75   | 75   | 66   | 71   | 72   | 70   | 71   | 72   | 76   | 73   | 78   | 83   | 84   | 76   | 76   | 75   | 78   | 80   | 82   | 76   | 75.9 | 92   | 64    | 23 |
| 21     | 77   | 75   | 70    | 70    | 78   | 71   | 74   | 78   | 73   | 71   | 74   | 74   | 76   | 75   | 77   | 77   | 83   | 79   | 80   | 80   | 79   | 80   | 80   | 78   | 76.0 | 83   | 68   | 15    |    |
| 22 c   | 74   | 74   | 71    | 72    | 73   | 75   | 77   | 76   | 72   | 75   | 77   | 77   | 78   | 75   | 74   | 74   | 75   | 79   | 81   | 79   | 79   | 82   | 85   | 87   | 76.7 | 87   | 71   | 16    |    |
| 23 c   | 86   | 83   | 79    | 75    | 75   | 77   | 81   | 84   | 83   | 81   | 81   | 81   | 78   | 72   | 75   | 79   | 81   | 82   | 83   | 88   | 87   | 88   | 89   | 91   | 81.4 | 95   | 71   | 20    |    |
| 24 c   | 94   | 88   | 88    | 90    | 87   | 85   | 89   | 93   | 93   | 88   | 87   | 86   | 85   | 84   | 86   | 86   | 87   | 84   | 88   | 89   | 89   | 92   | 95   | 99   | 88.3 | 101  | 43   | 18    |    |
| 25     | 101  | 98   | 100   | 99    | 102  | 107  | 120  | 115  | 106  | 105  | 103  | 93   | 89   | 87   | 89   | 85   | 100  | 91   | 90   | 98   | 99   | 98   | 91   | 99   | 98.5 | 122  | 72   | 50    |    |
| 26     | 96   | (89) | 92    | 96    | 90   | 89   | 85   | 83   | 74   | 77   | 80   | 75   | 76   | 79   | 77   | 77   | 80   | 82   | 84   | 87   | 88   | 91   | 98   | 96   | 84.8 | 98   | 73   | 25    |    |
| 27     | 97   | (95) | (90)  | 87    | 81   | 73   | 80   | 85   | 83   | 83   | 82   | 82   | 81   | 83   | 81   | 81   | 79   | 82   | 80   | 80   | 83   | 85   | 89   | 91   | 88.9 | 91   | 71   | 20    |    |
| 28     | 87   | 88   | 90    | 92    | 96   | 96   | 89   | 86   | 81   | 74   | 74   | 76   | 82   | 71   | 66   | 73   | 76   | 93   | 88   | 86   | 86   | 91   | 97   | 101  | 84.9 | 107  | 60   | 47    |    |
| 29     | 105  | 104  | (102) | (102) | 94   | 92   | 94   | 82   | 77   | 76   | 73   | 76   | 74   | 74   | 73   | 91   | 81   | 75   | 76   | 74   | 75   | 76   | 78   | 82   | 83.6 | 102  | 67   | 35    |    |
| 30     | 82   | 82   | 85    | 88    | 92   | 94   | 91   | 85   | 75   | 72   | 72   | 74   | 77   | 81   | 79   | 79   | 81   | 81   | 82   | 87   | 82   | 83   | 85   | 86   | 82.3 | 95   | 70   | 25    |    |
| 31     | —    | —    | —     | —     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| mean   | 85.5 | 84.0 | 83.5  | 82.8  | 82.4 | 81.1 | 80.5 | 79.3 | 77.0 | 76.0 | 75.4 | 76.1 | 76.0 | 76.9 | 75.0 | 77.9 | 79.9 | 80.8 | 81.5 | 81.6 | 82.2 | 83.2 | 85.8 | 87.6 | 80.5 | —    | —    | —     | —  |
| σ c    | 93.0 | 88.8 | 77.8  | 81.2  | 83.2 | 84.8 | 85.6 | 86.0 | 84.2 | 83.4 | 83.6 | 83.4 | 83.8 | 83.4 | 83.2 | 83.2 | 84.6 | 83.4 | 85.8 | 85.8 | 85.4 | 83.8 | 92.4 | 95.2 | 84.5 | —    | —    | —     | —  |
| σ d    | 80.0 | 82.7 | 83.5  | 77.0  | 72.5 | 65.7 | 62.0 | 59.4 | 57.0 | 57.0 | 52.5 | 61.0 | 61.0 | 71.2 | 61.5 | 71.0 | 67.2 | 69.2 | 75.5 | 76.5 | 77.7 | 76.0 | 78.0 | 82.0 | 70.0 | —    | —    | —     | —  |
| σ d    | 80.2 | 82.0 | —     | —     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |

December 1982.

Horizontal Intensity 31900γ+.....γ

Table 20

| G.M.T.<br>Day | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
|               | 1    | 89   | 79   | 79   | 81   | 84   | 92   | 95   | 98   | 86   | 81   | 72   | 65   | 74   | 78   | 79   | 80   | 81   | 91   | 84   | 87   | 78   | 81   | 88   | 84   | 82.7 | 98   | 69    | 29 |
| 2             | 81   | 76   | (71) | 79   | 84   | 85   | 88   | 86   | 86   | 85   | 81   | 81   | 81   | 82   | 82   | 81   | 82   | 82   | 82   | 88   | 88   | 84   | 88   | 90   | 83.6 | 97   | 75   | 22    |    |
| 3             | 36   | 85   | 81   | 82   | 85   | 87   | 88   | 90   | 88   | 86   | 82   | 74   | 74   | 79   | 81   | 82   | 83   | 84   | 84   | 88   | 85   | 87   | 90   | 88   | 83.7 | 94   | 69   | 25    |    |
| 4             | 89   | 87   | 80   | 77   | 79   | 85   | 85   | 85   | 85   | 78   | 79   | 78   | 80   | 87   | 75   | 76   | 85   | 85   | 89   | 87   | 87   | 91   | 92   | 94   | 84.0 | 96   | 74   | 22    |    |
| 5 c           | 94   | (94) | 80   | 88   | 86   | 85   | 87   | 91   | 91   | 86   | 85   | 84   | 84   | 85   | 86   | 86   | 86   | 86   | 87   | 88   | 89   | 88   | 89   | 91   | 87.7 | 94   | 82   | 12    |    |
| 6             | 88   | 83   | 84   | 91   | 97   | 98   | 100  | 94   | 85   | 81   | 79   | 75   | 76   | 79   | 84   | 88   | 89   | 88   | 89   | 95   | 92   | 92   | 91   | 95   | 87.8 | 104  | 74   | 80    |    |
| 7 c           | 91   | 88   | 86   | 86   | 87   | 87   | 88   | 94   | 94   | 92   | 89   | 91   | 90   | 89   | 89   | 91   | 92   | 91   | 91   | 93   | 93   | 98   | 96   | 97   | 90.7 | 100  | 84   | 16    |    |
| 8 d           | 100  | 106  | 110  | 113  | 102  | 81   | 98   | 91   | 91   | 89   | 77   | 87   | 87   | 77   | 87   | 103  | 110  | 110  | 90   | 108  | 103  | 110  | 110  | 108  | 94.2 | 126  | 64   | 62    |    |
| 9             | 111  | 95   | 91   | 81   | 75   | 69   | 69   | 60   | 55   | 58   | 61   | 60   | 59   | 62   | 57   | 74   | 78   | 75   | 77   | 79   | 79   | 79   | 83   | 86   | 78.9 | 111  | 52   | 59    |    |
| 10            | 89   | 87   | 88   | 88   | 80   | 79   | 77   | 82   | 77   | 78   | 74   | 78   | 72   | 68   | 70   | 63   | 70   | 75   | 77   | 87   | 87   | 82   | 83   | 84   | 78.4 | 89   | 68   | 26    |    |
| 11            | 85   | 84   | 81   | 80   | 77   | 74   | 75   | 76   | 78   | 76   | 75   | 76   | 78   | 80   | 80   | 80   | 80   | 81   | 84   | 88   | 83   | 83   | 85   | 89   | 80.6 | 92   | 74   | 18    |    |
| 12 c          | 87   | 83   | 78   | 77   | 75   | 70   | 74   | 73   | 72   | 72   | 74   | 75   | 79   | 80   | 80   | 80   | 80   | 80   | 82   | 82   | 82   | 83   | 85   | 86   | 79.5 | 96   | 59   | 27    |    |
| 13            | 96   | 95   | (37) | 95   | 92   | 90   | 83   | 85   | 87   | 84   | 80   | 80   | 82   | 83   | 71   | 70   | 61   | 86   | 84   | 76   | 82   | 82   | 83   | 88   | 80   | 83.9 | 99   | 55    | 40 |
| 14 d          | 94   | 97   | 91   | 97   | 91   | 89   | 92   | 98   | 96   | 91   | 80   | 62   | 79   | (59) | 38   | 57   | 48   | 54   | 45   | 45   | 45   | 47   | 47   | 69   | 61   | 72.4 | 102  | 15    | 83 |
| 15 d          | 51   | 55   | 43   | 37   | 37   | 45   | 49   | 51   | 48   | 43   | 38   | 41   | 49   | 45   | 67   | 54   | 50   | 60   | 60   | 68   | 64   | 67   | 62   | 50   | 50.0 | 69   | 32   | 87    |    |
| 16 d          | 38   | 40   | 40   | 35   | 46   | 52   | 54   | 52   | 54   | 46   | 41   | 38   | 51   | 56   | 58   | 61   | 62   | 77   | 68   | 55   | 59   | 61   | 61   | 57   | 52.6 | 85   | 35   | 50    |    |
| 17 d          | 58   | 45   | 51   | 55   | 54   | 57   | 59   | 57   | 52   | 44   | 41   | 41   | 56   | 47   | 38   | 42   | 55   | 48   | 53   | 65   | 67   | 65   | 70   | 77   | 54.0 | 85   | 34   | 51    |    |
| 18            | 85   | 85   | 80   | 78   | 70   | 70   | 74   | 70   | 63   | 56   | 50   | 52   | 58   | 58   | 72   | 65   | 69   | 71   | 71   | 73   | 73   | 78   | 78   | 86   | 69.2 | 88   | 45   | 23    |    |
| 19            | 88   | 87   | 84   | 78   | 78   | 80   | 79   | 80   | 74   | 70   | 72   | 73   | 66   | 65   | 70   | 61   | 69   | 78   | 75   | 77   | 78   | 85   | 87   | 94   | 76.8 | 98   | 61   | 87    |    |
| 20            | 97   | 96   | 88   | 88   | 86   | 83   | 81   | 79   | 78   | 71   | 75   | 74   | 74   | 76   | 78   | 79   | 80   | 81   | 82   | 82   | 82   | 88   | 84   | 86   | 82.1 | 100  | 71   | 22    |    |
| 21 c          | 88   | 86   | 79   | 80   | 81   | 85   | 86   | 84   | 79   | 74   | 73   | 73   | 72   | 73   | 82   | 78   | 81   | 81   | 81   | 82   | 84   | 84   | 84   | 86   | 80   | 81.0 | 91   | 71    | 20 |
| 22            | 91   | 91   | 92   | 89   | 84   | 86   | 89   | 86   | 88   | 79   | 76   | 81   | 78   | 77   | 75   | 78   | 78   | 87   | 87   | 84   | 85   | 86   | 88   | 92   | 84.6 | 94   | 75   | 21    |    |
| 23 c          | 93   | 90   | 89   | 84   | 83   | 85   | 87   | 88   | 89   | 88   | 83   | 72   | 70   | 74   | 79   | 80   | 82   | 88   | 85   | 86   | 88   | 87   | 86   | 95   | 84.2 | 98   | 69   | 23    |    |
| 24            | 97   | 91   | 85   | 83   | 80   | 92   | 94   | 95   | 91   | 85   | 84   | 85   | 89   | 87   | 87   | 82   | 84   | 86   | 89   | 94   | 97   | 95   | 97   | 98   | 89.9 | 99   | 85   | 16    |    |
| 25            | 96   | 97   | 92   | 90   | 91   | 90   | 108  | 110  | 108  | 99   | 90   | 98   | 86   | 86   | 80   | 74   | 80   | 79   | 80   | 76   | 76   | 73   | 84   | 78   | 87   | 88.2 | 113  | 75    | 40 |
| 26            | 94   | 81   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 27            | —    | 87   | —    | 87   | 75   | 79   | 81   | 80   | 81   | 76   | 77   | 69   | 78   | 77   | 68   | 71   | 76   | 74   | 72   | 74   | 74   | 74   | 78   | 84   | —    | 87   | 58   | 29    |    |
| 28            | —    | 88   | 87   | 84   | 85   | 84   | 84   | 82   | 79   | 76   | 78   | 76   | 81   | 74   | 62   | 81   | 75   | 84   | 72   | 82   | 80   | 78   | 87   | 86   | 80.6 | 91   | 59   | 82    |    |
| 29            | 91   | 88   | 88   | 79   | 74   | 74   | 75   | 83   | 78   | 77   | 76   | 79   | 74   | 73   | 82   | 76   | 75   | 79   | 77   | 76   | 78   | 80   | 86   | 86   | —    | 91   | 75   | 18    |    |
| 30            | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | 79   | 75   | 77   | 71   | 75   | 77   | 80   | 85   | 80   | 74   | 78   | 82   | —    | 88   | 70   | 18    |    |
| 31            | 88   | 87   | 84   | (86) | 85   | 88   | 85   | 78   | 80   | 88   | 81   | 78   | 74   | 78   | 77   | 84   | 84   | 80   | 77   | 81   | 81   | 87   | 84   | 84   | 82.0 | —    | —    | —     |    |
| mean          | 86.6 | 84.3 | 81.4 | 80.4 | 80.5 | 81.1 | 81.6 | 82.5 | 79.6 | 75.8 | 73.2 | 71.5 | 73.0 | 73.3 | 73.1 | 74.2 | 76.1 | 79.5 | 78.3 | 80.4 | 81.6 | 82.4 | 84.2 | 86.4 | 79.2 | —    | —    | —     | —  |
| σ c           | 90.6 | 88.2 | 84.4 | 88.0 | 82.4 | 88.4 | 84.4 | 86.2 | 85.2 | 81.4 | 80.8 | 79.0 | 79.0 | 80.2 | 83.2 | 83.0 | 84.2 | 84.2 | 85.4 | 86.6 | 87.4 | 87.4 | 88.6 | 92.2 | 84.6 | —    | —    | —     | —  |
| σ d           | 68.2 | 68.6 | 66.2 | 66.8 | 68.2 | 69.0 | 67.0 | 70.2 | 68.2 | 63.0 | 56.3 | 51.4 | 60.0 | 56.8 | 55.6 | 60.2 | 60.8 | 67.0 | 61.8 | 65.4 | 70.6 | 69.0 | 72.0 | 69.8 | 64.7 | —    | —    | —     | —  |
| σ d           | 68.3 | 64.0 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |

Table 21

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| Day    | 89   | 86   | 77   | 81   | 83   | 85   | 86   | 89   | 88   | 84   | 84   | 78   | 78   | 82   | 80   | 90   | 86   | 71   | 69   | 79   | 89   | 84   | 81   | 84   | 82.6 | 98   | 65   | 33    |    |
| 1 d    | 86   | 80   | (56) | 68   | 74   | 75   | 66   | (83) | 78   | 70   | 76   | 65   | 77   | 78   | 75   | 76   | 75   | 76   | 77   | 81   | 79   | 77   | 77   | 82   | 75.4 | 87   | 56   | 31    |    |
| 2      | 83   | 74   | 62   | 68   | 73   | 74   | 78   | 78   | 79   | 80   | 83   | 83   | 85   | 76   | 82   | 81   | 79   | 81   | 81   | 82   | 81   | 83   | 85   | 81   | 78.8 | 86   | 62   | 24    |    |
| 3      | 91   | 81   | 76   | 74   | 76   | 77   | 78   | 78   | 81   | 84   | 83   | 83   | 85   | 84   | 79   | 85   | 84   | 81   | 84   | 83   | 84   | 85   | 87   | 91   | 81.5 | 92   | 72   | 20    |    |
| 4 c    | 87   | 87   | (85) | 81   | 76   | 77   | 81   | 85   | 88   | 88   | 86   | 86   | 86   | 86   | 86   | 84   | 84   | 86   | 86   | 88   | 88   | 90   | 98   | 98   | 86.0 | 99   | 75   | 24    |    |
| 5 c    | 92   | 92   | 84   | 87   | 86   | 86   | 86   | 78   | 87   | 78   | 57   | 52   | 43   | 47   | 76   | 65   | 66   | 70   | 70   | 73   | 81   | 86   | 86   | 87   | 75.8 | 101  | 41   | 60    |    |
| 6      | 85   | 84   | 79   | 74   | 72   | 72   | 71   | 79   | 81   | 81   | 79   | 76   | 75   | 78   | 74   | 79   | 73   | 85   | 73   | 74   | 79   | 83   | 90   | 92   | 78.5 | 96   | 71   | 25    |    |
| 7      | 94   | 86   | 86   | 90   | 80   | 84   | 85   | 85   | 84   | 82   | 84   | 83   | 84   | 84   | 81   | 83   | 85   | 84   | 89   | 87   | 87   | 88   | 92   | 98   | 86.0 | 106  | 81   | 25    |    |
| 8      | 106  | 104  | 101  | 96   | 93   | 92   | 91   | 90   | 89   | 88   | 88   | 88   | 85   | 87   | 91   | 89   | 79   | 79   | 89   | 88   | 86   | 88   | 88   | 98   | 90.8 | 106  | 79   | 27    |    |
| 9      | 101  | 97   | 96   | 99   | 95   | 85   | 91   | 92   | 89   | 86   | 85   | 86   | 85   | 84   | 86   | 89   | 87   | 87   | 87   | 90   | 89   | 90   | 90   | 93   | 90.1 | 101  | 88   | 18    |    |
| 10 c   | 82   | 81   | 74   | 77   | 79   | 83   | 88   | 88   | 88   | 85   | 82   | 84   | 83   | 82   | 83   | 84   | 85   | 87   | 88   | 91   | 91   | 94   | 95   | 103  | 86.1 | 103  | 66   | 87    |    |
| 11 c   | 103  | 100  | 91   | 94   | 99   | 98   | 99   | 97   | 97   | 98   | 95   | 91   | 94   | 96   | 99   | 97   | 94   | 99   | 99   | 100  | 100  | 100  | 100  | 100  | 97.5 | 105  | 90   | 15    |    |
| 12     | 102  | 103  | 98   | 98   | 101  | 102  | 106  | 105  | 100  | 101  | 97   | 91   | 91   | 91   | 91   | 92   | 92   | 94   | 92   | 88   | 93   | 92   | 96   | 104  | 96.7 | 105  | 88   | 17    |    |
| 13     | 105  | 95   | 93   | 98   | 102  | 102  | 102  | 103  | 101  | 98   | 96   | 94   | 94   | 94   | 94   | 94   | 94   | 93   | 90   | 89   | 92   | 91   | 96   | 96   | 93   | 96.0 | 105  | 78    | 27 |
| 14     | 88   | 88   | 86   | 83   | 78   | 66   | 44   | 48   | 29   | 10   | 40   | 44   | 49   | 55   | 57   | 60   | 60   | 64   | 67   | 72   | 71   | 78   | 72   | 79   | 61.8 | 88   | -2   | 57    |    |
| 15     | 77   | 72   | 61   | 63   | 68   | 72   | 64   | 72   | 65   | 53   | 60   | 66   | 63   | 71   | 71   | 73   | 77   | 75   | 75   | 80   | 82   | 82   | 84   | 85   | 71.8 | 78   | 44   | 84    |    |
| 16     | 84   | 79   | 73   | 79   | 76   | 85   | 89   | 90   | 85   | 70   | 73   | 77   | 75   | 78   | 80   | 83   | 82   | 83   | 83   | 81   | 83   | 83   | 84   | 86   | 80.9 | 84   | 62   | 22    |    |
| 17     | 82   | 75   | 73   | 82   | 84   | 81   | 84   | 87   | 85   | 80   | 82   | 81   | 80   | 79   | 81   | 82   | 83   | 84   | 83   | 88   | 90   | 90   | 91   | 90   | 83.2 | 84   | 66   | 18    |    |
| 18     | 88   | 80   | 78   | 85   | 91   | 96   | 90   | 83   | 84   | 85   | 81   | 86   | 88   | 70   | 55   | 45   | 59   | 59   | 60   | 66   | 77   | 77   | 81   | 86   | 76.9 | 91   | 20   | 62    |    |
| 19 d   | 96   | 96   | 92   | 98   | 88   | 82   | 84   | 89   | 86   | 84   | 85   | 86   | 65   | 64   | 65   | 68   | 69   | 76   | 76   | 76   | 76   | 77   | 77   | 88   | 72.8 | 92   | 41   | 51    |    |
| 20     | 82   | 78   | 76   | 81   | 82   | 84   | 85   | 88   | 86   | 83   | 84   | 84   | 85   | 80   | 75   | 79   | 79   | 80   | 84   | 86   | 88   | 90   | 94   | 95   | 83.1 | 89   | 67   | 22    |    |
| 21 c   | 88   | 80   | 74   | 96   | 77   | 87   | 96   | 79   | 78   | 70   | 68   | 87   | 70   | 71   | 81   | 68   | 73   | 62   | 66   | 62   | 61   | 58   | 74   | 69   | 74.6 | 93   | 49   | 44    |    |
| 22 d   | 83   | 46   | 45   | 52   | 60   | 53   | 54   | 55   | 61   | 56   | 60   | 57   | 68   | 64   | 57   | 61   | 58   | 57   | 62   | 65   | 79   | 73   | 83   | 89   | 61.6 | 87   | 36   | 49    |    |
| 23     | 65   | 56   | 55   | 50   | 50   | 56   | 66   | 64   | 64   | 66   | 63   | 58   | 58   | 67   | 64   | 67   | 67   | 63   | 61   | 63   | 68   | 70   | 73   | 73   | 63.3 | 87   | 41   | 38    |    |
| 24     | 78   | 72   | (60) | 64   | 62   | 62   | 68   | 69   | 65   | 69   | 71   | 71   | 68   | 66   | 79   | 74   | 66   | 64   | 65   | 68   | 72   | 75   | 71   | 79   | 69.1 | 74   | 51   | 23    |    |
| 25     | 77   | 67   | 65   | 58   | 60   | 55   | 66   | 67   | 70   | 69   | 78   | 77   | 82   | 70   | 79   | 84   | 81   | 71   | 71   | 83   | 81   | 84   | 81   | (85) | 78.5 | 78   | 50   | 28    |    |
| 26     | 86   | 78   | 82   | 82   | 80   | 63   | 72   | 73   | 72   | 69   | 61   | 74   | 66   | 84   | 74   | 90   | 79   | 88   | 89   | 76   | 70   | 66   | 74   | 83   | 76.8 | 85   | 54   | 31    |    |
| 27 d   | 83   | 80   | 81   | 70   | 76   | 75   | 74   | 74   | 70   | 56   | 67   | 62   | 71   | 90   | 81   | 69   | 84   | 69   | 80   | 76   | 71   | 70   | 72   | 66   | 78.7 | 84   | 49   | 35    |    |
| 28 d   | 69   | 69   | 62   | 68   | 73   | 76   | 83   | 83   | 79   | 77   | 70   | 67   | 66   | 69   | 64   | 60   | 62   | 59   | 62   | 66   | 66   | 72   | 74   | 75   | 69.7 | 77   | 50   | 27    |    |
| 29     | 73   | 68   | 57   | 54   | 60   | 77   | 80   | 76   | 69   | 65   | 68   | 70   | 70   | 69   | 69   | 70   | 82   | 72   | 73   | 78   | 77   | 69   | 76   | 70   | 70.6 | 75   | 4f   | 23    |    |
| 30     | 77   | 67   | 60   | 60   | 70   | 78   | 81   | 76   | 76   | 77   | 73   | 74   | 71   | 71   | 73   | 69   | 70   | 81   | 76   | 73   | 74   | 76   | 75   | 78   | 78.2 | 74   | 52   | 22    |    |
| 31     | 86.6 | 80.6 | 75.4 | 77.7 | 78.0 | 78.f | 79.4 | 79.8 | 78.2 | 74.8 | 74.9 | 5.8  | 75.0 | 76.2 | 76.8 | 77.1 | 77.0 | 76.5 | 77.4 | 79.0 | 80.8 | 81.3 | 83.6 | 86.8 | 78.6 | -    | -    | -     | -  |
| mean   | 89.0 | 84.8 | 81.0 | 82.4 | 81.6 | 81.8 | 84.6 | 86.2 | 86.4 | 85.2 | 84.0 | 84.6 | 84.8 | 83.2 | 81.8 | 84.2 | 82.8 | 84.2 | 85.8 | 87.6 | 88.0 | 89.8 | 91.8 | 89.6 | 85.5 | -    | -    | -     | -  |
| σ c    | 85.8 | 80.8 | 78.4 | 82.8 | 81.4 | 83.0 | 83.6 | 79.6 | 77.4 | 72.8 | 72.2 | 77.4 | 74.6 | 79.4 | 74.2 | 72.4 | 76.2 | 68.8 | 72.8 | 71.8 | 73.6 | 71.0 | 76.4 | 87.4 | 76.8 | -    | -    | -     | -  |
| σ d    | 79.4 | 74.0 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -     | -  |

Table 22

Horizontal Intensity

31900γ+.....γ

February 1933.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | Mem. | Max. | Min. | Range |   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|---|
| Day    | 76   | 71   | 63   | 58   | 67   | 71   | 78   | 78   | 79   | 79   | 77   | 73   | 77   | 77   | 77   | 76   | 78   | 78   | 79   | 80   | 80   | 88   | 88   | 85   | 75.8 | 85   | 59   | 26   |       |   |
| 1      | 76   | 63   | 58   | 65   | 69   | 77   | 85   | 86   | 84   | 67   | 68   | 76   | 77   | 88   | 88   | 90   | 94   | 94   | 73   | 80   | 78   | 81   | 88   | 81   | 78.4 | 97   | 59   | 38   |       |   |
| 2      | 90   | 81   | 74   | 73   | 74   | 77   | 80   | 81   | 81   | 78   | 76   | 78   | 78   | 76   | 76   | 77   | 75   | 88   | 88   | 87   | 91   | 85   | 82   | 82   | 80.5 | 107  | 71   | 86   |       |   |
| 3      | 105  | 101  | 89   | 86   | 88   | 83   | 84   | 86   | 88   | 82   | 72   | 75   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |   |
| 4      | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 5      | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 6 c    | —    | —    | —    | 86   | 82   | 81   | 86   | 84   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 7      | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 8      | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 9      | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 10     | 80   | 81   | 82   | 82   | 82   | 82   | 84   | 82   | 82   | 80   | 81   | 82   | 82   | 82   | 82   | 84   | 80   | 80   | 79   | 77   | 81   | 81   | 81   | 81   | 82   | 81.3 | —    | 81   | —     |   |
| 11 c   | 82   | 82   | 82   | 85   | 82   | 81   | 81   | 82   | 87   | 87   | 87   | 86   | 87   | 87   | 86   | 86   | 86   | 86   | 86   | 85   | 85   | 85   | 84   | 84   | 84   | 84.6 | —    | —    | —     | — |
| 12     | 85   | 86   | —    | —    | —    | —    | —    | —    | —    | —    | (12) | 12   | 20   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | — |
| 13 c   | 63   | 65   | (64) | (62) | (61) | 59   | 62   | 65   | 63   | 61   | 59   | 59   | 60   | 61   | 60   | 62   | 61   | 60   | 61   | (61) | (61) | (61) | (61) | (61) | 60   | 61.3 | —    | —    | —     | — |
| 14     | (63) | (65) | (65) | (64) | (63) | 64   | 69   | 76   | 80   | 77   | 68   | 65   | 52   | 50   | 57   | 59   | 70   | 72   | 73   | 76   | 75   | 71   | 69   | 72   | 78   | 67.9 | —    | —    | —     | — |
| 15     | 73   | 68   | 64   | 68   | 70   | 67   | 74   | 76   | 73   | 55   | 64   | 62   | 51   | 60   | 61   | 62   | 84   | 69   | 74   | 66   | 65   | 65   | 67   | 62   | 66.7 | 86   | 47   | 38   | —     |   |
| 16 c   | 62   | 62   | 70   | 78   | 76   | 78   | 77   | 72   | 65   | 62   | 61   | 61   | 65   | 65   | (63) | 66   | 66   | 64   | 65   | 65   | 64   | 66   | 68   | 68   | 68   | 67.1 | 79   | 58   | 21    | — |
| 17 c   | 69   | 66   | 64   | 64   | 68   | 73   | 76   | 76   | 74   | (72) | 69   | 69   | 68   | 67   | 68   | 69   | 71   | 72   | 73   | 74   | 76   | 76   | 78   | 86   | 71.6 | 91   | 62   | 23   | —     |   |
| 18     | 91   | 92   | 88   | 81   | 78   | 81   | 82   | 81   | 80   | 80   | 80   | 78   | 77   | 76   | 76   | 78   | 78   | 77   | 74   | 69   | 65   | 74   | 76   | 79   | 78.8 | 93   | 63   | 80   | —     |   |
| 19 d   | 76   | 74   | 74   | 85   | 86   | 90   | 84   | 82   | 77   | 86   | 88   | 67   | 33   | 17   | —    | 51   | 47   | 40   | 47   | 53   | 57   | 45   | 57   | 59   | 61.4 | 91   | —    | —    | —     |   |
| 20     | 50   | 44   | 49   | 58   | 56   | 51   | 44   | 51   | 54   | 45   | 34   | 46   | 42   | 51   | 45   | 47   | 46   | 49   | 51   | 58   | 58   | 62   | 61   | 59   | 50.5 | 65   | 27   | 38   | —     |   |
| 21 d   | 57   | 69   | 64   | 51   | 33   | 36   | 50   | 55   | 53   | 51   | 50   | 53   | 43   | 61   | 41   | 58   | 59   | 45   | 40   | 55   | 64   | 65   | 59   | 74   | 53.6 | 75   | 29   | 46   | —     |   |
| 22 d   | 65   | 50   | 72   | 55   | 54   | 44   | 41   | 40   | 49   | 47   | 48   | 50   | 56   | 65   | 61   | 80   | 62   | 57   | 68   | 70   | 56   | 54   | 55   | 74   | 57.2 | 83   | 38   | 45   | —     |   |
| 23 d   | 38   | 47   | 52   | 51   | 67   | 72   | 70   | 49   | 35   | 50   | 54   | 55   | 56   | 57   | 67   | 52   | 53   | 61   | 47   | 47   | 47   | 43   | 37   | —    | —    | 76   | 30   | 46   | —     |   |
| 24 d   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 25     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 26     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 27     | 56   | 55   | 53   | 46   | 62   | 70   | 73   | 76   | 75   | 66   | 59   | 51   | 46   | 48   | 63   | 58   | 57   | 62   | 59   | 68   | 61   | 62   | 71   | 59   | —    | —    | —    | —    | —     |   |
| 28     | 52   | 54   | 56   | 51   | 55   | 64   | 67   | 66   | 64   | 60   | 64   | 65   | 65   | 66   | 67   | 67   | 69   | 71   | 69   | 68   | 65   | 66   | 67   | 70   | 68.7 | 72   | 49   | 23   | —     |   |
| 29     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 30     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 31     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| mean   | 67.7 | 65.9 | 66.2 | 65.4 | 67.2 | 69.4 | 71.3 | 70.8 | 69.1 | 66.4 | 65.8 | 64.6 | 62.5 | 65.1 | 63.0 | 68.6 | 69.1 | 67.8 | 67.3 | 68.4 | 67.9 | 67.8 | 68.6 | 67.8 | 67.5 | —    | —    | —    | —     |   |
| γ c    | 69.0 | 68.7 | 70.0 | 72.2 | 71.7 | 72.7 | 74.0 | 73.7 | 72.2 | 70.5 | 69.0 | 68.7 | 70.0 | 70.0 | 69.2 | 70.7 | 71.0 | 70.5 | 71.2 | 71.2 | 71.5 | 72.0 | 72.7 | 74.7 | 71.1 | —    | —    | —    | —     |   |
| γ d    | 59.0 | 60.0 | 65.5 | 60.5 | 60.0 | 60.5 | 61.2 | 56.5 | 53.5 | 58.5 | 60.0 | 56.2 | 37.6 | 50.0 | 42.0 | 60.2 | 55.2 | 50.7 | 50.5 | 56.2 | 55.0 | 51.2 | 52.0 | 53.0 | 55.9 | —    | —    | —    | —     |   |
|        | 51.0 | 47.0 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |



Table 23

## Horizontal Intensity

31900γ + .....γ

March 1933.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| Day    | 65   | 63   | 63   | 62   | 64   | 67   | 69   | 66   | 64   | 65   | 64   | 66   | 66   | 64   | 65   | 65   | 67   | 68   | 66   | 66   | 69   | 67   | 71   | 71   | 65.7 | 73   | 61   | 12    |    |
| 1      | 64   | 65   | 65   | 65   | 65   | 74   | 75   | 74   | 71   | 70   | 64   | 68   | 72   | 75   | 75   | 76   | 76   | 75   | 76   | 77   | 77   | 74   | 77   | 74   | 71.8 | 78   | 64   | 14    |    |
| 2      | 66   | 62   | 63   | 69   | 69   | 75   | 81   | 80   | 84   | 82   | 85   | 80   | 81   | 72   | 69   | 77   | 77   | 70   | 72   | 70   | 76   | 79   | 80   | 78   | 74.9 | 85   | 61   | 24    |    |
| 3      | 72   | 72   | 74   | 70   | 69   | 77   | 83   | 84   | 81   | 78   | 62   | 69   | 65   | 67   | 67   | 68   | 67   | 67   | 70   | 66   | 68   | 69   | 73   | 71   | 71.3 | 85   | 62   | 23    |    |
| 4      | 76   | 73   | 75   | 79   | 82   | 82   | 79   | 75   | 74   | 73   | 72   | 72   | 72   | 73   | 74   | 73   | 74   | 76   | 77   | 76   | 78   | 77   | 77   | 74   | 75.5 | 88   | 71   | 12    |    |
| 5      | 70   | 67   | 69   | 75   | 84   | 87   | 87   | 84   | 85   | 85   | 82   | 82   | 76   | 76   | 73   | 87   | 78   | 79   | 80   | 81   | 82   | 84   | 86   | 85   | 80.2 | 99   | 67   | 22    |    |
| 6      | 86   | 85   | 88   | 87   | 90   | 93   | 90   | 87   | 86   | 86   | 83   | 83   | 86   | 85   | 88   | 86   | 86   | 84   | 83   | 86   | 86   | 88   | 90   | 98   | 86.9 | 94   | 83   | 11    |    |
| 7      | 88   | 87   | 90   | 94   | 95   | 96   | 97   | 95   | 93   | 93   | 94   | 95   | 94   | 92   | 82   | 83   | 82   | 81   | 80   | 84   | 82   | 84   | 83   | 80   | 88.1 | 97   | 79   | 18    |    |
| 8      | 77   | 75   | 77   | 78   | 77   | 77   | 77   | 78   | 78   | 77   | 75   | 75   | 77   | 77   | 78   | 80   | 80   | 82   | 82   | 80   | 82   | 82   | 86   | 88   | 77.5 | 86   | 66   | 20    |    |
| 9      | 76   | 72   | 72   | 65   | 62   | 73   | 79   | 86   | 85   | 82   | 83   | 84   | 82   | 86   | 86   | 84   | 87   | 88   | 85   | 85   | 84   | 84   | 89   | 92   | 86   | 81.4 | 92   | 62    | 30 |
| 10     | 73   | 50   | 49   | 55   | 67   | 81   | 84   | 82   | 81   | 77   | 71   | 70   | 67   | 65   | 74   | 66   | 66   | 68   | 71   | 72   | 75   | 77   | 77   | 82   | 70.1 | 85   | 47   | 38    |    |
| 11     | 77   | 70   | 70   | 72   | 72   | 78   | 76   | 80   | 70   | 71   | 65   | 67   | 67   | 67   | 65   | 74   | 76   | 76   | 75   | 79   | 76   | 76   | 77   | 76   | 72.9 | 80   | 68   | 17    |    |
| 12     | 76   | 77   | 78   | 71   | 71   | 78   | 84   | 77   | 74   | 75   | 75   | 75   | 75   | 65   | 79   | 72   | 64   | 63   | 71   | 66   | 74   | 75   | 76   | 71   | 73.2 | 85   | 60   | 26    |    |
| 13     | 67   | 67   | 67   | 72   | 81   | 73   | 62   | 61   | 62   | 61   | 63   | 64   | 63   | 73   | 73   | 69   | 75   | 74   | 69   | 71   | 70   | 71   | 71   | 68   | 68.6 | 81   | 58   | 23    |    |
| 14     | 67   | 67   | 67   | 61   | 65   | 69   | 71   | 79   | 82   | 82   | 81   | 74   | 66   | 59   | 74   | 71   | 74   | 76   | 76   | 76   | 76   | 77   | 76   | 77   | 74   | 73.0 | 83   | 58    | 25 |
| 15     | 69   | 73   | 75   | 76   | 76   | 82   | 86   | 88   | 82   | 82   | 82   | 82   | 84   | 83   | 88   | 88   | 82   | 82   | 82   | 84   | 83   | 84   | 87   | 89   | 81.6 | 89   | 69   | 20    |    |
| 16     | 87   | 84   | 82   | 80   | 86   | 94   | 99   | 99   | 97   | 91   | 85   | 80   | 78   | 79   | 75   | 75   | 82   | 80   | 81   | 84   | 84   | 89   | 93   | 94   | 85.7 | 99   | 78   | 26    |    |
| 17     | 93   | 95   | 94   | 74   | 73   | 69   | 62   | 69   | 68   | 65   | 65   | 58   | 62   | 69   | 67   | 59   | 88   | 74   | 70   | 87   | 82   | 87   | 82   | 87   | 74.5 | 96   | 47   | 43    |    |
| 18     | 49   | 58   | 72   | 57   | 56   | 64   | 78   | 73   | 72   | 68   | 68   | 60   | 65   | 67   | 62   | 69   | 63   | 79   | 84   | 62   | 75   | 75   | 81   | 79   | 67.5 | 89   | 47   | 42    |    |
| 19     | 67   | 67   | 67   | 61   | 65   | 69   | 71   | 79   | 82   | 82   | 81   | 50   | 56   | 62   | 66   | 64   | 58   | 82   | 82   | 82   | 83   | 59   | 60   | 57   | 45   | 58.0 | 91   | 25    | 68 |
| 20     | 41   | 42   | 36   | 40   | 36   | 40   | 28   | 48   | 54   | 57   | 49   | 49   | 34   | 45   | 58   | 65   | 71   | 64   | 60   | 59   | 60   | 65   | 62   | 69   | 58.3 | 75   | 26   | 49    |    |
| 21     | 35   | 40   | 35   | 50   | 55   | 50   | 55   | 39   | 45   | 34   | 50   | 50   | 60   | 44   | 57   | 55   | 57   | 62   | 63   | 68   | 67   | 62   | 70   | 72   | 52.0 | 78   | 31   | 42    |    |
| 22     | 60   | 56   | 59   | 58   | 58   | 39   | 41   | 56   | 57   | 55   | 55   | 54   | 50   | 72   | 60   | 63   | 62   | 67   | 64   | 60   | 58   | 66   | 74   | 57   | 58.7 | 79   | 28   | 51    |    |
| 23     | 65   | 49   | 38   | 39   | 44   | 55   | 45   | 50   | 54   | 47   | 46   | 56   | 46   | 61   | 54   | 66   | 62   | 63   | 71   | 64   | 59   | 52   | 55   | 50   | 53.8 | 72   | 30   | 42    |    |
| 24     | 38   | 35   | 36   | 33   | 45   | 52   | 49   | 37   | 32   | 44   | 40   | 55   | 54   | 66   | 66   | 56   | 61   | 61   | 59   | 61   | 61   | 60   | 56   | 55   | 50.5 | 69   | 29   | 40    |    |
| 25     | 51   | 51   | 51   | 56   | 66   | 71   | 73   | 65   | 67   | 63   | 47   | 51   | 63   | 64   | 66   | 67   | 69   | 75   | 74   | 71   | 74   | 78   | 82   | 86   | 66.6 | 88   | 47   | 41    |    |
| 26     | 76   | 73   | 75   | 73   | 85   | 98   | 91   | 78   | 78   | 78   | 68   | 64   | 75   | 48   | 39   | 68   | 63   | 64   | 73   | 72   | 66   | 64   | 62   | 64   | 70.2 | 98   | 37   | 61    |    |
| 27     | 55   | 55   | 54   | 49   | 50   | 71   | 78   | 80   | 76   | 72   | 68   | 64   | 66   | 71   | 64   | 88   | 69   | 67   | 71   | 73   | 68   | 73   | 73   | 39   | 65.6 | 80   | 39   | 41    |    |
| 28     | 43   | 43   | 45   | 61   | 54   | 68   | 81   | 84   | 76   | 58   | 59   | 44   | 46   | 54   | 60   | 59   | 62   | 61   | 62   | 68   | 67   | 67   | 66   | 54   | 60.1 | 85   | 43   | 42    |    |
| 29     | 54   | 53   | 54   | 49   | 68   | 78   | 81   | 75   | 65   | 70   | 71   | 64   | 59   | 61   | 69   | 73   | 66   | 66   | 67   | 68   | 68   | 68   | 69   | 66   | 65.9 | 81   | 46   | 35    |    |
| 30     | 59   | 54   | 48   | 46   | 51   | 66   | 76   | 77   | 73   | 73   | 59   | 50   | 60   | 68   | 71   | 70   | 69   | 69   | 71   | 77   | 77   | 77   | 79   | 74   | 66.4 | 81   | 42   | 39    |    |
| 31     | 66.8 | 63.8 | 62.6 | 62.2 | 66.4 | 71.7 | 73.4 | 73.2 | 71.7 | 68.5 | 66.5 | 66.1 | 66.8 | 67.9 | 69.4 | 70.8 | 71.4 | 72.5 | 73.0 | 72.9 | 73.1 | 74.2 | 75.9 | 72.4 | 69.7 | —    | —    | —     | —  |
| mean   | 75.6 | 74.6 | 75.8 | 77.0 | 79.8 | 83.0 | 83.8 | 81.4 | 81.0 | 80.6 | 78.3 | 78.8 | 79.0 | 78.8 | 80.2 | 81.6 | 80.0 | 80.6 | 80.8 | 81.8 | 82.2 | 83.0 | 85.2 | 78.0 | 80.3 | —    | —    | —     | —  |
| σ c    | 69.4 | 65.8 | 57.6 | 53.2 | 56.0 | 57.4 | 55.4 | 61.6 | 62.2 | 58.4 | 53.0 | 55.6 | 55.8 | 66.2 | 61.8 | 64.2 | 66.6 | 73.0 | 74.2 | 67.2 | 66.6 | 68.0 | 69.8 | 75.3 | 62.5 | —    | —    | —     | —  |
| σ d    | 55.2 | 50.0 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |

Table 24

Horizontal Intensity 81900 $\gamma$ +..... $\gamma$ 

April 1938.

| G.M.T.     | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |   |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|---|
| 1          | 78   | 73   | 67   | 61   | 69   | 66   | 78   | 73   | 71   | 67   | 64   | 67   | 66   | 70   | 70   | 68   | 67   | 73   | 78   | 69   | 71   | 72   | 78   | 70   | 69.2 | 78   | 57   | 21    |   |
| 2          | 64   | 64   | 63   | 66   | 67   | 78   | 83   | 82   | 76   | 73   | 70   | 74   | 73   | 68   | 64   | 66   | 71   | 71   | 78   | 71   | 80   | 79   | 78   | 78   | 72.2 | 83   | 61   | 22    |   |
| 3          | 69   | 64   | 62   | 64   | 59   | 56   | 69   | 81   | 81   | 70   | 50   | 34   | 61   | 49   | 58   | 64   | 59   | 61   | 60   | 64   | 71   | 72   | 74   | 71   | 63.4 | 83   | 33   | 50    |   |
| 4          | 67   | 61   | 51   | 59   | 68   | 80   | 88   | 84   | 79   | 80   | 78   | 78   | 81   | 81   | 79   | 78   | 78   | 78   | 81   | 78   | 78   | 82   | 80   | 75   | 75.7 | 90   | 51   | 33    |   |
| 5          | 57   | 54   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 6          | 76   | —    | —    | 67   | 78   | 90   | 86   | 75   | 65   | 64   | 69   | 69   | 68   | 68   | 72   | 76   | 78   | 81   | 81   | 84   | 81   | 88   | 83   | 81   | —    | 92   | 60   | 32    |   |
| 7          | 70   | 68   | 65   | 72   | 76   | 86   | 95   | 93   | 86   | 84   | 84   | 77   | 78   | 71   | 80   | 66   | 85   | 80   | 81   | 80   | 77   | 81   | 74   | 72   | 78.6 | 97   | 63   | 34    |   |
| 8          | 70   | 66   | 62   | 69   | 72   | 78   | 84   | 72   | 69   | 73   | 71   | 68   | 73   | 74   | 71   | 74   | 78   | 68   | 76   | 79   | 77   | 83   | 85   | 82   | 73.7 | 85   | 66   | 19    |   |
| 9          | 76   | 72   | 68   | 75   | 84   | 83   | 84   | 74   | 65   | 56   | 66   | 57   | 58   | 62   | 57   | 60   | 74   | 66   | 69   | 69   | 71   | 76   | 83   | 81   | 70.2 | 86   | 40   | 46    |   |
| 10         | 76   | 71   | 70   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 11 c       | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 12 c       | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 13 c       | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| 14         | 80   | 71   | 72   | 81   | 95   | 93   | 100  | 98   | 97   | 94   | 98   | 90   | 81   | 74   | 66   | 78   | 68   | 80   | 76   | 71   | 88   | 85   | 85   | 80   | 83.2 | 100  | 61   | 39    |   |
| 15 d       | 78   | 71   | 70   | 70   | 74   | 80   | 78   | 84   | 87   | 84   | 82   | 78   | 70   | 68   | 66   | 63   | 75   | 72   | 64   | 64   | 73   | 79   | 88   | 75   | 74.7 | 89   | 57   | 82    |   |
| 16 d       | 62   | 64   | 59   | 56   | 65   | 66   | 84   | 88   | 75   | 70   | 57   | 64   | 66   | 62   | 84   | 75   | 71   | 73   | 68   | 86   | 93   | 81   | 81   | 73   | 71.8 | 98   | 49   | 44    |   |
| 17 d       | 51   | 51   | 53   | 59   | 59   | 68   | 66   | 64   | 73   | 63   | 61   | 48   | 45   | 44   | 44   | 51   | 78   | 85   | 61   | 61   | 62   | 65   | 65   | 65   | 60.2 | 86   | 32   | 54    |   |
| 18         | 68   | 59   | 51   | 61   | 76   | 54   | 72   | 77   | 58   | 72   | 66   | 67   | 63   | 57   | 59   | 61   | 71   | 69   | 71   | 72   | 72   | 68   | 60   | 54   | 64.7 | 79   | 51   | 28    |   |
| 19 d       | 47   | 34   | 41   | 44   | 56   | 69   | 67   | 49   | 53   | 53   | 50   | 59   | 41   | 78   | 54   | 62   | 67   | 63   | 61   | 60   | 64   | 68   | 65   | 42   | 56.5 | 75   | 34   | 41    |   |
| 20         | 57   | 60   | 61   | 73   | 81   | 68   | 44   | 54   | 54   | 55   | 53   | 53   | 66   | 60   | 72   | 71   | 61   | 50   | 52   | 59   | 64   | 58   | 62   | 59   | 60.3 | 86   | 37   | 49    |   |
| 21         | 52   | 48   | 39   | 49   | 61   | 78   | 78   | 73   | 71   | 66   | 65   | 71   | 66   | 65   | 66   | 68   | 71   | 71   | 69   | 81   | 78   | 76   | 74   | 66   | 66.5 | 85   | 39   | 46    |   |
| 22         | 60   | 54   | 54   | 54   | 56   | 50   | 59   | 56   | 59   | 50   | 38   | 55   | 46   | 70   | 59   | 71   | 68   | 74   | 78   | 74   | 74   | 66   | 76   | 71   | 61.1 | 78   | 35   | 43    |   |
| 23         | 61   | 59   | 61   | 61   | 66   | 71   | 51   | 59   | 70   | 71   | 71   | 73   | 71   | 73   | 78   | 57   | 61   | 68   | 66   | 64   | 67   | 70   | 69   | 61   | 65.8 | 78   | 45   | 33    |   |
| 24         | 56   | 61   | 61   | 64   | 71   | 70   | 70   | 76   | 71   | 67   | 68   | 71   | 71   | 73   | 78   | 89   | 80   | 69   | 63   | 70   | 73   | 76   | 73   | 64   | 69.2 | 83   | 55   | 28    |   |
| 25         | 65   | 61   | 66   | 78   | 83   | 82   | 35   | 85   | 76   | 69   | 71   | 67   | 69   | 78   | 73   | 73   | 72   | 86   | 73   | 72   | 71   | 78   | 72   | 68   | 73.8 | 87   | 58   | 29    |   |
| 26         | 66   | 64   | 66   | 66   | 72   | 75   | 82   | 82   | 74   | 73   | —    | —    | —    | —    | 66   | 78   | 76   | 68   | 78   | —    | —    | 78   | 78   | 74   | —    | 82   | 64   | 18    |   |
| 27         | 67   | 62   | 63   | 65   | 67   | 78   | 84   | 85   | 78   | 71   | 71   | 73   | 75   | 74   | 73   | 70   | 69   | 70   | 71   | 78   | 81   | 80   | 83   | 78   | 73.6 | 87   | 60   | 27    |   |
| 28 c       | 64   | 64   | 65   | 69   | 75   | 79   | 78   | 76   | 77   | 71   | 71   | 73   | 73   | 77   | 78   | 73   | 74   | 72   | 73   | 75   | 71   | 73   | 71   | 66   | 72.4 | 79   | 61   | 18    |   |
| 29 c       | 62   | 61   | 64   | 71   | 79   | 85   | 87   | 85   | 77   | 73   | 70   | 71   | 71   | 71   | 76   | 76   | 75   | 76   | 77   | 77   | 77   | 76   | 78   | 74   | 74.5 | 88   | 61   | 27    |   |
| 30 d       | 63   | 59   | 64   | 80   | 92   | 97   | 97   | 93   | 88   | 79   | 79   | 78   | 87   | 78   | 87   | 87   | 88   | 114  | 114  | 97   | 88   | 98   | 108  | 84   | 87.5 | 125  | 59   | 66    |   |
| 31         | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |   |
| mean       | 64.7 | 61.2 | 60.1 | 65.3 | 71.4 | 74.5 | 77.6 | 76.6 | 73.5 | 70.3 | 67.1 | 67.2 | 67.5 | 68.5 | 69.2 | 68.8 | 72.0 | 73.4 | 71.5 | 72.6 | 74.6 | 75.3 | 76.6 | 76.6 | 69.9 | 70.4 | —    | —     | — |
| $\gamma$ c | 68.0 | 62.5 | 64.5 | 70.0 | 77.0 | 82.0 | 82.5 | 80.5 | 77.0 | 72.0 | 70.5 | 72.0 | 72.0 | 74.0 | 77.0 | 74.5 | 74.5 | 74.0 | 75.0 | 76.0 | 73.5 | 74.5 | 74.5 | 74.5 | 70.0 | 73.5 | —    | —     | — |
| $\gamma$ d | 60.2 | 56.0 | 57.4 | 61.8 | 69.2 | 75.4 | 80.0 | 75.6 | 75.2 | 70.8 | 65.8 | 65.4 | 61.8 | 66.0 | 67.0 | 67.6 | 75.8 | 81.4 | 73.6 | 73.6 | 76.0 | 78.2 | 81.4 | 71.2 | 70.1 | —    | —    | —     | — |

Table 25

## Horizontal Intensity

31900γ+.....γ

May 1938.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| Day    | 63   | 46   | 49   | 54   | 63   | 64   | 91   | 82   | 78   | 71   | 75   | 67   | 66   | 78   | 20   | 5    | 40   | 4    | 10   | 32   | 28   | 21   | 44   | 29   | 49.2 | 107  | -17  | 124   |    |
| 1 d    | 16   | -8   | 19   | 27   | 36   | 43   | 39   | 27   | 27   | 22   | 30   | 29   | 34   | 37   | 40   | 44   | 46   | 50   | 48   | 48   | 49   | 51   | 51   | 45   | 35.4 | 53   | -12  | 65    |    |
| 2      | 3    | 40   | 36   | 37   | 47   | 53   | 56   | 46   | 56   | 56   | 54   | 53   | 57   | 56   | 59   | 61   | 61   | 57   | 59   | 66   | 66   | 66   | 70   | 60   | 55.1 | 71   | 23   | 88    |    |
| 3      | 4    | 50   | 47   | 46   | 47   | 43   | 52   | 59   | 66   | 55   | 59   | 60   | 68   | 72   | 68   | 63   | 66   | 66   | 63   | 76   | 73   | 71   | 67   | 61   | 67.0 | 77   | 43   | 84    |    |
| 4      | 5    | 59   | 56   | 61   | 71   | 77   | 54   | 70   | 71   | 66   | 62   | 62   | 67   | 59   | 71   | 71   | 72   | 72   | 76   | 72   | 68   | 73   | 76   | 76   | 68.0 | —    | —    | —     |    |
| 5      | 6    | 74   | 67   | 55   | (29) | (44) | 66   | 68   | 68   | 58   | 53   | 48   | 68   | 60   | 78   | 63   | 63   | 63   | 66   | 69   | 70   | 72   | 68   | 58   | 61.7 | 86   | 37   | 49    |    |
| 6      | 7    | 40   | 44   | 69   | 77   | 85   | 77   | 65   | 60   | 41   | 59   | 62   | 61   | 56   | 60   | 62   | 61   | 61   | 68   | 63   | 66   | 67   | 64   | 63   | 63.1 | 90   | 38   | 52    |    |
| 7      | 8    | 65   | 67   | 71   | 83   | 90   | 90   | 86   | 77   | 72   | 71   | 70   | 68   | 73   | 66   | 71   | 73   | 75   | 75   | 73   | 76   | 78   | 78   | 68   | 75.0 | 96   | 65   | 80    |    |
| 8      | 9    | 66   | 68   | 73   | 74   | 81   | 89   | 86   | 83   | 76   | 71   | 71   | 73   | 74   | 78   | 74   | 75   | 73   | 76   | 77   | 76   | 78   | 78   | 78   | 76.0 | 90   | 66   | 24    |    |
| 9 c    | 10 c | 71   | 66   | 70   | 76   | 83   | 89   | 88   | 81   | 67   | 61   | 68   | 71   | 77   | 74   | 75   | 73   | 76   | 75   | 76   | 78   | 78   | 77   | 66   | 74.6 | 90   | 61   | 29    |    |
| 11     | 11   | 58   | 60   | 64   | 71   | 73   | 74   | 79   | 79   | 76   | 71   | 69   | 75   | 78   | 74   | 77   | 73   | 72   | 78   | 78   | 81   | 80   | 81   | 78   | 74.0 | 82   | 58   | 24    |    |
| 12 c   | 12 c | 74   | 77   | 87   | 89   | 93   | 95   | 93   | 87   | 85   | 83   | 85   | 86   | 85   | 88   | 84   | 83   | 83   | 88   | 88   | 87   | 85   | 80   | 75   | 84.9 | 96   | 69   | 26    |    |
| 13     | 13   | 78   | 73   | 78   | 83   | 83   | 86   | 88   | 80   | 67   | 57   | 47   | 53   | 59   | 63   | 68   | 71   | 75   | 74   | 73   | 80   | 86   | 78   | 73.1 | 90   | 46   | 44   |       |    |
| 14     | 14   | 63   | 64   | 73   | 85   | 96   | 105  | 102  | 89   | 78   | 77   | 76   | 81   | 74   | 76   | 76   | 68   | 64   | 63   | 68   | 62   | 81   | 73   | 63   | 77.6 | 107  | 61   | 46    |    |
| 15     | 15   | 59   | 50   | 48   | 58   | 45   | 37   | 60   | 66   | 68   | 55   | 51   | 55   | 51   | 66   | 69   | 71   | 73   | 68   | 73   | 75   | 73   | 71   | 63   | 61.0 | 76   | 36   | 40    |    |
| 16     | 16   | 64   | 62   | 69   | 72   | 85   | 88   | 80   | 78   | 63   | 58   | 58   | 58   | 73   | 68   | 70   | 70   | 68   | 79   | 72   | 78   | 73   | 70   | 65   | 70.4 | 83   | 51   | 32    |    |
| 17     | 17   | 53   | 50   | 56   | 72   | 75   | 72   | 76   | 68   | 66   | 69   | 66   | 68   | 71   | 71   | 73   | 75   | 73   | 71   | 73   | 68   | 70   | 66   | 66   | 68.8 | 82   | 44   | 38    |    |
| 18 d   | 18 d | 44   | 58   | 76   | 68   | 74   | 38   | 40   | 84   | 31   | 37   | 39   | 34   | 42   | 53   | 55   | 55   | 53   | 56   | 61   | 61   | 63   | 63   | 58   | 51.1 | 87   | 22   | 65    |    |
| 19     | 19   | 53   | 48   | 48   | 51   | 60   | 61   | 66   | 66   | 65   | 63   | 66   | 61   | 61   | 57   | 59   | 56   | 60   | 59   | 61   | 63   | 63   | 58   | 60   | 59.5 | 71   | 46   | 25    |    |
| 20     | 20   | 61   | 63   | 63   | 71   | 72   | 71   | 62   | 63   | 71   | 73   | 72   | 71   | 71   | 68   | 68   | 69   | 70   | 71   | 66   | 67   | 68   | 70   | 68   | 61   | 67.9 | 76   | 52    | 24 |
| 21     | 21   | 52   | 53   | 68   | 79   | 86   | 81   | 81   | 73   | 75   | 67   | 71   | 73   | 75   | 75   | 76   | 71   | 68   | 76   | 75   | 68   | 76   | 69   | 60   | 71.8 | 85   | 51   | 34    |    |
| 22     | 22   | 53   | 48   | 69   | 90   | 101  | 97   | 92   | -86  | 80   | 75   | 75   | 78   | 78   | 77   | 77   | 84   | 78   | 78   | 78   | 75   | 77   | 74   | 71   | 77.4 | 102  | 48   | 54    |    |
| 23     | 23   | 68   | 66   | 73   | 81   | 90   | 90   | 90   | 87   | 81   | 74   | 73   | 75   | 73   | 78   | 78   | 76   | 76   | 79   | 80   | 81   | 81   | 72   | 66   | 77.7 | 93   | 56   | 37    |    |
| 24 c   | 24 c | 58   | 58   | 61   | 67   | 69   | 75   | 70   | 83   | 82   | 78   | 82   | 86   | 83   | 83   | 90   | 92   | 93   | 96   | 96   | 94   | 93   | 86   | 80   | 81.2 | 97   | 58   | 39    |    |
| 25     | 25   | 80   | 76   | 81   | 90   | 95   | 95   | 98   | 98   | 90   | 83   | 85   | 86   | 83   | 85   | 81   | 83   | 85   | 85   | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |
| 26 c   | 26 c | —    | 84   | 88   | 88   | 85   | 88   | 96   | 94   | 88   | 88   | 85   | 86   | 86   | 85   | 88   | 83   | 81   | 88   | 85   | 88   | 93   | 90   | 85   | —    | 97   | 79   | 18    |    |
| 27     | 27   | 74   | 68   | 68   | 79   | 90   | 96   | 100  | 98   | 97   | 98   | 94   | 97   | 95   | 96   | 97   | 101  | 94   | 95   | 95   | 98   | 98   | 87   | 100  | 92.3 | 106  | 66   | 40    |    |
| 28     | 28   | 68   | 59   | 66   | 78   | 92   | 91   | 90   | 88   | 81   | 78   | 80   | 82   | 82   | 82   | 81   | 79   | 80   | 83   | 83   | 83   | 86   | 86   | 88   | 81.2 | 88   | 57   | 86    |    |
| 29 d   | 29 d | 83   | 81   | 81   | 79   | 93   | 97   | 93   | 105  | 108  | 104  | 102  | 100  | 100  | 99   | 87   | 78   | 76   | 67   | 76   | 81   | 87   | 90   | 88   | 89.2 | 110  | 66   | 44    |    |
| 30 d   | 30 d | 81   | 61   | 48   | 53   | 56   | 64   | 76   | 70   | 66   | 36   | 39   | 45   | 45   | 50   | 52   | 63   | 63   | 90   | 81   | 77   | 80   | 78   | 78   | 63.4 | 100  | 32   | 63    |    |
| 31 d   | 31 d | 71   | 68   | 66   | 64   | 58   | 56   | 58   | 69   | 72   | 70   | 63   | 61   | 66   | 76   | 66   | 63   | 73   | 73   | 72   | 72   | 76   | 73   | 78   | 68.1 | 78   | 53   | 25    |    |
| mean   | 60.5 | 53.0 | 62.8 | 68.8 | 74.1 | 74.9 | 76.5 | 75.3 | 72.3 | 66.6 | 66.7 | 66.5 | 68.9 | 70.1 | 69.7 | 69.2 | 70.6 | 70.0 | 71.3 | 73.0 | 72.6 | 75.0 | 73.1 | 68.8 | 69.8 | —    | —    | —     | —  |
| γ c    | 67.2 | 70.6 | 72.8 | 77.4 | 81.4 | 86.3 | 87.0 | 86.8 | 80.0 | 75.6 | 77.4 | 80.0 | 81.2 | 80.2 | 81.4 | 81.4 | 81.6 | 82.6 | 83.8 | 84.2 | 84.6 | 86.4 | 82.2 | 71.5 | 80.8 | —    | —    | —     | —  |
| γ d    | 68.4 | 62.8 | 64.0 | 63.6 | 68.8 | 63.8 | 70.6 | 72.0 | 70.0 | 63.6 | 63.0 | 60.2 | 62.2 | 68.0 | 55.2 | 50.6 | 61.4 | 59.2 | 61.0 | 65.4 | 65.0 | 66.0 | 69.6 | 80.2 | 64.2 | —    | —    | —     | —  |
|        | 59.8 | 48.0 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |    |

Table 26

## Horizontal Intensity 31900γ + .....γ

June 1933.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|
| Day    | 78   | 71   | 76   | 44   | 53   | 68   | 65   | 64   | 69   | 71   | 71   | 69   | 66   | 68   | 72   | 68   | 76   | 73   | 73   | 68   | 69   | 65   | 76   | 77   | 78   | 78   | 41   | 87    |      |      |
| 1 d    | 71   | 68   | 66   | 70   | 71   | 76   | 79   | 83   | 87   | 74   | 60   | 64   | 71   | 65   | 76   | 78   | 75   | 76   | 83   | 80   | 79   | 83   | 83   | 83   | 83   | 88   | 60   | 28    |      |      |
| 2      | 79   | 79   | 78   | 84   | 81   | 78   | 75   | 74   | 58   | 78   | 67   | 71   | 74   | 76   | 79   | 78   | 80   | 81   | 81   | 87   | 81   | 82   | 79   | 76   | 76.8 | 84   | 58   | 26    |      |      |
| 3      | 79   | 79   | 83   | 88   | 86   | 88   | 86   | 83   | 86   | 83   | 84   | 80   | 86   | 81   | 84   | 83   | 83   | 83   | 83   | 87   | 85   | 85   | 84   | 76   | 71   | 83.0 | 88   | 68    | 20   |      |
| 4      | 79   | 84   | 77   | 82   | 89   | 92   | 92   | 92   | 88   | 84   | 85   | 85   | 87   | 86   | 84   | 87   | 85   | 87   | (37) | (37) | (37) | (39) | (92) | (92) | (92) | (92) | (92) | (92)  | (92) | (92) |
| 5 c    | (89) | (89) | 87   | 93   | 95   | 91   | 92   | 90   | 88   | 83   | 82   | 86   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 86   | 85   | 88   | 87   | 88   | 92   | 95   | 81   | 14    |      |      |
| 6 c    | 88   | 88   | 90   | 93   | 94   | 92   | 92   | 86   | 78   | 80   | 81   | 85   | 91   | 90   | 88   | 89   | 88   | 88   | 88   | 88   | 89   | 90   | 86   | 88   | 85   | 88.0 | 96   | 78    | 18   |      |
| 7      | 86   | 86   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 8      | 86   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 9      | (67) | 63   | 68   | 77   | 76   | 71   | 74   | 61   | 65   | 56   | 63   | 67   | 65   | 66   | 65   | 68   | 68   | 65   | 70   | 68   | 68   | 70   | 68   | 60   | 66.8 | 81   | 50   | 81    | —    |      |
| 10     | 63   | 63   | 69   | 81   | 86   | 89   | 85   | 85   | 83   | 80   | 82   | 79   | 83   | 83   | 85   | 87   | 85   | 86   | 83   | 83   | 88   | 78   | 83   | 76   | 80.4 | 92   | 58   | 84    | —    |      |
| 11     | 68   | 75   | 79   | 85   | 94   | 97   | 92   | 93   | 86   | 78   | 81   | 82   | 78   | 81   | 81   | 81   | 83   | 79   | 81   | 82   | 82   | 88   | 83   | 81   | 82.3 | 97   | 66   | 81    | —    |      |
| 12     | 66   | 59   | 73   | 86   | 85   | 91   | 93   | 95   | 80   | 85   | 79   | 93   | 84   | 85   | 85   | 85   | 83   | 84   | 84   | 83   | 83   | 86   | 88   | 82   | 83.6 | 95   | 59   | 86    | —    |      |
| 13 d   | 81   | 79   | 71   | 39   | 41   | 65   | 88   | 79   | 58   | 64   | 74   | 77   | 76   | 77   | 81   | 79   | 78   | 76   | 74   | 71   | 78   | 86   | 81   | 83   | 78.0 | 92   | 89   | 53    | —    |      |
| 14 d   | 71   | 61   | 72   | 84   | 86   | 86   | 78   | 71   | 71   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 15     | —    | —    | 66   | 61   | 73   | 83   | 85   | 87   | 78   | 69   | 63   | 68   | 83   | 73   | 76   | 75   | 76   | 77   | 80   | 82   | 79   | 86   | 83   | 80   | —    | 88   | 58   | 30    | —    |      |
| 16 c   | 74   | 71   | 71   | 83   | 81   | 82   | 86   | 87   | 85   | 82   | 81   | 85   | 83   | 84   | 83   | 83   | 84   | 84   | 85   | 81   | 81   | 85   | 83   | 76   | 81.7 | 87   | 69   | 18    | —    |      |
| 17     | 78   | 71   | 51   | 86   | 94   | 100  | 93   | 76   | 76   | 76   | 73   | 76   | 77   | 78   | 71   | 76   | 79   | 76   | 76   | 79   | 78   | 81   | 78   | 73   | 77.6 | —    | —    | —     | —    |      |
| 18 c   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 19     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 20 d   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 21     | —    | —    | 78   | 86   | 90   | 92   | 83   | 69   | 69   | 68   | 66   | 68   | 63   | 68   | 69   | 78   | 83   | 86   | 86   | 76   | 71   | 83   | 86   | 78   | —    | 98   | 62   | 81    | —    |      |
| 22     | 78   | 73   | 73   | 71   | 71   | 76   | 78   | 71   | 86   | 83   | 83   | 83   | 88   | 88   | 84   | 84   | 92   | 94   | 81   | 86   | 86   | 88   | 88   | 86   | 77   | —    | 95   | 73    | 22   |      |
| 23     | 73   | —    | 79   | 83   | 80   | 83   | 92   | 89   | 86   | 84   | 85   | 88   | 88   | 88   | 92   | 92   | 90   | 88   | 92   | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 24 c   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 25     | —    | —    | —    | 111  | 110  | 102  | 99   | 93   | 83   | 96   | 98   | 105  | 114  | 121  | 112  | 110  | 103  | 100  | 101  | 102  | 103  | 100  | 93   | 98   | —    | 121  | 78   | 42    | —    |      |
| 26     | 98   | 98   | 102  | 111  | 109  | 102  | 99   | 97   | 88   | 85   | 77   | 81   | 86   | 88   | 81   | 83   | 82   | 88   | 86   | 88   | 83   | 89   | 66   | 91   | 85   | 89.4 | 111  | 77    | 34   | —    |
| 27     | 80   | 68   | 93   | 98   | 103  | 106  | 106  | 106  | 106  | 85   | 83   | 74   | 78   | 76   | 72   | 75   | 71   | 75   | 80   | 76   | 73   | 68   | 55   | 62   | 80.6 | 106  | 58   | 53    | —    |      |
| 28 d   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| 29     | —    | —    | 86   | 87   | 85   | 73   | 73   | 74   | 68   | 66   | 66   | 73   | 71   | 75   | 76   | 72   | 83   | 88   | 80   | 81   | 80   | 84   | 76   | 77   | —    | 90   | 58   | 32    | —    |      |
| 30     | 77   | 76   | 79   | 84   | 75   | 76   | 86   | 84   | 82   | 72   | 69   | 71   | 75   | 76   | 78   | 79   | 80   | 82   | 80   | 81   | 81   | 84   | 84   | 83   | 88   | 79.0 | 85   | 69    | 16   | —    |
| 31     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |
| mean   | 77.4 | 75.2 | 77.0 | 80.8 | 82.4 | 85.6 | 86.7 | 83.9 | 79.9 | 77.3 | 75.9 | 78.4 | 79.7 | 79.1 | 80.0 | 81.0 | 81.3 | 80.3 | 81.4 | 80.4 | 81.0 | 81.8 | 79.9 | 77.8 | 80.2 | —    | —    | —     | —    | —    |
| σ c    | 82.7 | 81.3 | 78.3 | 86.0 | 88.3 | 88.3 | 90.0 | 89.7 | 87.0 | 83.0 | 82.7 | 85.3 | 86.0 | 86.0 | 85.0 | 86.0 | 85.7 | 86.3 | 86.0 | 84.3 | 86.0 | 85.0 | 880  | 81.8 | 85.7 | —    | —    | —     | —    | —    |
| σ d    | 79.5 | 75.0 | 73.5 | 41.5 | 47.0 | 66.5 | 76.5 | 71.5 | 63.5 | 67.5 | 72.5 | 73.0 | 71.0 | 72.5 | 76.5 | 73.5 | 77.0 | 74.5 | 71.0 | 70.0 | 69.0 | 81.0 | 79.0 | 80.0 | 70.9 | —    | —    | —     | —    | —    |
|        | 71.0 | 64.5 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —    |      |

Table 27

Horizontal Intensity 31900 $\alpha$ +.....Y

July 1938.

| G.M.T.     | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24    | Mean | Min. | Max. | Range |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|-------|
| Day        | 76   | 69   | 76   | 77   | 77   | 78   | 78   | 78   | 77   | 82   | 83   | 82   | 88   | 88   | 90   | 87   | 86   | 85   | 87   | 83   | 88   | 88   | 86   | 85   | 81.6  | 89   | 74   | 15   |       |
| 1          | 77   | 87   | 90   | 87   | 86   | 84   | 82   | 82   | 84   | 88   | 82   | (82) | 84   | 88   | 82   | 85   | 88   | 98   | 93   | 84   | 83   | 85   | 85   | 88   | —     | —    | 110  | 71   | 39    |
| 2          | —    | 71   | 88   | 98   | 98   | 110  | 107  | 97   | 97   | 97   | 92   | 91   | 86   | 88   | 88   | 95   | 89   | 88   | 88   | 84   | 84   | 86   | 81   | 78   | 90.4  | 101  | 78   | 23   |       |
| 3          | 93   | 98   | 90   | 95   | 90   | 95   | 90   | 95   | 98   | 99   | 91   | 92   | 91   | 92   | 83   | 87   | 88   | 90   | 90   | 92   | 93   | 97   | 93   | 90   | 85.7  | 98   | 69   | 29   |       |
| 4          | 78   | 76   | 69   | 75   | 76   | 81   | 83   | 84   | 86   | 88   | 89   | 90   | 88   | 90   | 88   | 81   | 90   | 90   | 85   | 85   | 85   | 86   | 86   | 89   | 89.0  | 105  | 74   | 31   |       |
| 5          | 83   | 88   | 95   | 95   | 94   | 95   | 101  | 108  | 93   | 93   | 88   | 81   | 92   | 91   | 88   | 86   | 84   | 86   | 85   | 92   | 85   | 83   | 86   | 79   | 88.8  | 98   | 74   | 24   |       |
| 6          | 74   | 78   | 78   | 83   | 88   | 89   | 96   | 98   | 97   | 83   | 88   | 92   | 91   | 92   | 89   | 88   | 91   | 88   | 95   | 88   | 91   | 92   | 92   | 92   | 100.7 | 135  | 79   | 56   |       |
| 7          | 8    | 93   | 86   | 90   | 117  | 115  | 107  | 99   | 92   | 86   | 85   | 89   | 93   | 96   | 97   | 93   | 99   | 103  | 94   | 96   | 98   | 125  | 133  | 115  | 100.7 | 135  | 79   | 56   |       |
| 8          | 79   | 68   | 68   | 79   | 92   | 91   | 87   | 69   | 55   | 52   | 60   | 73   | 63   | 71   | 71   | 70   | 70   | 71   | 76   | 82   | 79   | 71   | 78   | 68   | 72.6  | 95   | 45   | 50   |       |
| 9d         | 64   | 68   | 78   | 85   | 88   | 71   | 78   | 84   | 87   | 78   | 66   | 74   | 79   | 80   | 81   | 80   | 83   | 83   | 85   | 78   | 88   | 78   | 68   | 68   | 77.8  | 90   | 64   | 26   |       |
| 10         | 71   | 61   | 53   | 78   | 86   | 88   | 86   | 86   | 88   | 76   | 80   | 82   | 84   | 88   | 91   | 92   | 81   | 81   | 76   | 74   | 76   | 78   | 78   | 78   | 79.2  | 94   | 51   | 43   |       |
| 11         | 68   | 71   | 73   | 78   | 83   | 78   | 83   | 79   | 81   | 82   | 76   | 78   | 79   | 82   | 81   | 81   | 77   | 78   | 78   | 76   | 78   | 79   | 76   | 71   | 77.2  | 86   | 63   | 23   |       |
| 12         | 65   | 68   | 66   | 68   | 69   | 74   | 81   | 86   | 86   | 81   | 80   | 80   | 83   | 87   | 88   | 88   | 85   | 83   | 78   | 83   | 85   | 87   | 85   | 78   | 79.7  | 88   | 63   | 25   |       |
| 13c        | 71   | 61   | 65   | 71   | 85   | 88   | 88   | 88   | 83   | 84   | 83   | 79   | 85   | 86   | 87   | 85   | 85   | 85   | 85   | 85   | 85   | 85   | 87   | 84   | 80    | 81.7 | 88   | 61   | 28    |
| 14c        | 78   | 80   | 84   | 86   | 88   | 88   | 88   | 85   | 83   | 90   | 85   | 83   | 86   | 87   | 86   | 86   | 85   | 86   | 89   | 88   | 88   | 91   | 90   | 85   | 86.7  | 95   | 77   | 18   |       |
| 15c        | 82   | 84   | 95   | 105  | 108  | 104  | 108  | 104  | 102  | 94   | 86   | 90   | 91   | 88   | 92   | 98   | 95   | 97   | 95   | 91   | 98   | 85   | 85   | 85   | 85    | 93.6 | 109  | 79   | 50    |
| 16         | 84   | 83   | 83   | 97   | 111  | 113  | 107  | 101  | 98   | 98   | 105  | 93   | 90   | 78   | 63   | 73   | 83   | 83   | 85   | 85   | 90   | 97   | 90   | 85   | 90.7  | 115  | 63   | 52   |       |
| 17d        | 88   | 78   | 80   | 101  | 99   | 95   | 88   | 88   | 87   | 72   | 71   | 78   | 72   | 70   | 76   | 81   | 81   | 78   | 78   | 80   | 83   | 81   | 74   | 73   | 80.9  | 112  | 65   | 47   |       |
| 18         | 73   | 68   | 62   | 63   | 68   | 70   | 75   | 73   | 74   | 76   | 78   | 73   | 79   | 80   | 82   | 78   | 80   | 80   | 77   | 77   | 76   | 76   | 71   | 72   | 74.2  | 82   | 89   | 23   |       |
| 19         | 73   | 76   | 87   | 88   | 83   | 81   | 85   | 88   | 82   | 71   | 67   | 77   | 78   | 78   | 77   | 75   | 74   | 75   | 73   | 75   | 76   | 78   | 72   | 66   | 77.3  | 90   | 58   | 32   |       |
| 20         | 62   | 56   | 62   | 62   | 62   | 71   | 78   | 79   | 76   | 76   | 73   | 76   | 79   | 80   | 81   | 81   | 81   | 80   | 78   | 77   | 77   | 76   | 77   | 86   | 83    | 75.3 | 86   | 56   | 32    |
| 21c        | 80   | 88   | 85   | 82   | 88   | 86   | 84   | 83   | 83   | 82   | 83   | 80   | 84   | 80   | 78   | 81   | 85   | 85   | 85   | 88   | 89   | 85   | 73   | 70   | 82.4  | 92   | 68   | 24   |       |
| 22         | 70   | 76   | 76   | 89   | 93   | 95   | 90   | 93   | 95   | 88   | 93   | 81   | 62   | 62   | 69   | 65   | 68   | 81   | 73   | 73   | 83   | 92   | 91   | 81   | 80.5  | 98   | 46   | 52   |       |
| 23d        | 68   | 76   | 80   | 71   | 35   | 59   | 74   | 64   | 26   | 41   | 57   | 55   | 45   | 58   | 57   | 61   | 95   | 65   | 70   | 71   | 71   | 68   | 63   | 62   | 62.3  | 97   | 21   | 76   |       |
| 24d        | 66   | 64   | 62   | 63   | 63   | 66   | 64   | 67   | 74   | 76   | 77   | 68   | 63   | 68   | 69   | 69   | 72   | 71   | 71   | 72   | 73   | 76   | 76   | 75   | 69.7  | 78   | 60   | 18   |       |
| 25         | 73   | 73   | 79   | 81   | 78   | 78   | 88   | 85   | 81   | 78   | 76   | 80   | 81   | 84   | 80   | 80   | 75   | 76   | 81   | 83   | 78   | 82   | 73   | 65   | 78.6  | 88   | 55   | 38   |       |
| 26         | 54   | 73   | 78   | 93   | 93   | 81   | 82   | 88   | 90   | —    | —    | —    | —    | —    | —    | —    | 71   | 74   | 78   | 78   | 78   | 81   | 68   | 45   | —     | —    | 58   | 38   |       |
| 27d        | 59   | 67   | 66   | 86   | 90   | 89   | 82   | 75   | 70   | 65   | 65   | 71   | 74   | 73   | 73   | 74   | 77   | 76   | 75   | 77   | 78   | 78   | 67   | 74.5 | 91    | 58   | 38   |      |       |
| 28         | 58   | 60   | 56   | 78   | 87   | 88   | 90   | 85   | 82   | 81   | 79   | 79   | 74   | 73   | 65   | 75   | 75   | 75   | 75   | 77   | 79   | 83   | 81   | 73   | 76.2  | 98   | 57   | 36   |       |
| 29         | 61   | 56   | 56   | 66   | 68   | 75   | 79   | 81   | 81   | 78   | 77   | 72   | 71   | 78   | 75   | 78   | 78   | 78   | 79   | 82   | 80   | 81   | 81   | 78   | 74.5  | 84   | 55   | 29   |       |
| 30c        | 71   | 66   | 62   | 69   | 72   | 83   | 85   | 85   | 83   | 78   | 78   | 84   | 84   | 86   | 85   | 83   | 79   | 80   | 76   | 88   | 85   | 83   | 83   | 82   | 79.6  | 88   | 60   | 28   |       |
| mean       | 73.6 | 72.4 | 75.3 | 81.9 | 83.6 | 86.2 | 87.2 | 85.9 | 82.7 | 79.8 | 79.5 | 80.3 | 79.6 | 81.0 | 80.7 | 80.9 | 82.5 | 82.2 | 81.7 | 82.3 | 82.9 | 84.5 | 82.2 | 78.2 | 81.1  | —    | —    | —    | —     |
| $\sigma$ c | 67.4 | 64.2 | 66.6 | 70.6 | 76.2 | 80.6 | 84.2 | 84.4 | 83.4 | 80.6 | 78.4 | 78.8 | 80.8 | 83.6 | 83.4 | 83.6 | 82.8 | 82.4 | 81.8 | 83.0 | 82.8 | 84.6 | 85.0 | 80.8 | 79.6  | —    | —    | —    | —     |
| $\sigma$ d | 75.2 | 74.2 | 76.7 | 84.0 | 82.7 | 89.5 | 89.5 | 81.7 | 68.5 | 69.7 | 78.7 | 75.5 | 65.0 | 66.0 | 65.0 | 67.2 | 79.0 | 76.0 | 76.0 | 79.0 | 81.4 | 82.0 | 80.5 | 87.7 | 75.3  | —    | —    | —    | —     |
|            | 71.3 | 70.2 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |       |

Table 28

## Horizontal Intensity 81900γ+.....γ

August 1933.

| G.N.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 c    | 81   | 76   | 76   | 78   | 79   | 84   | 92   | 96   | 98   | 95   | 90   | 91   | 92   | 93   | 95   | 93   | 93   | 93   | 90   | 89   | 87   | 85   | 82   | 78   | 87.7 | 94   | 68   | 26    |
| 2      | 77   | 80   | 86   | 98   | 97   | 101  | 108  | 99   | 98   | 98   | 95   | 90   | 86   | 85   | 87   | 84   | 88   | 84   | 88   | 83   | 83   | 83   | 82   | 82   | 89.0 | 99   | 73   | 26    |
| 3      | 85   | 91   | 88   | 91   | 89   | 85   | 88   | 96   | 98   | 95   | 93   | 91   | 90   | 92   | 92   | 91   | 90   | 88   | 90   | 88   | 85   | 83   | 78   | 81   | 89.1 | 94   | 72   | 22    |
| 4      | 85   | 88   | 90   | 101  | 98   | 97   | 97   | 97   | 93   | 91   | 90   | 90   | 88   | 95   | 95   | 95   | 93   | 90   | 90   | 90   | 90   | 91   | 86   | 84   | 91.8 | 97   | 79   | 18    |
| 5 d    | 87   | 90   | 95   | 99   | 97   | 92   | 90   | 74   | 71   | 58   | 63   | 53   | 55   | 55   | 24   | 38   | 63   | 66   | 36   | 45   | 24   | 36   | 31   | 48   | 64.2 | 96   | 15   | 81    |
| 6 d    | 50   | 43   | 43   | —    | 33   | 37   | 31   | 43   | 44   | 43   | 46   | 43   | 40   | 61   | 53   | 50   | 48   | 48   | 56   | 58   | 56   | 58   | 53   | 48   | 45.1 | 60   | —    | 68    |
| 7      | 44   | 39   | 31   | 31   | 39   | 51   | 59   | 66   | 63   | 56   | 53   | 53   | 56   | 58   | 57   | 57   | 57   | 58   | 58   | 58   | 59   | 58   | 58   | 58   | 53.2 | 67   | 23   | 44    |
| 8      | 51   | 54   | 58   | 71   | 68   | 77   | 80   | 77   | 72   | 69   | 66   | 65   | 67   | 70   | 67   | 66   | 69   | 71   | 68   | 68   | 66   | 66   | 63   | 43   | 65.9 | 77   | 37   | 40    |
| 9 c    | (45) | 48   | 66   | 78   | 83   | 81   | (76) | 71   | 68   | 67   | 67   | 64   | 63   | 64   | 66   | 66   | 68   | 66   | 66   | 67   | 68   | 70   | 67   | 61   | 66.9 | —    | —    | —     |
| 10 c   | 44   | 42   | 41   | 57   | (63) | (69) | (78) | (77) | 78   | 78   | 76   | 76   | 76   | 76   | 76   | 74   | 76   | 76   | 76   | 73   | 78   | 76   | 76   | 68   | 69.4 | —    | —    | —     |
| 11 c   | 67   | 72   | 80   | 88   | 88   | 88   | 86   | 82   | 78   | 75   | 73   | 75   | 76   | 77   | 76   | 76   | 78   | 77   | 76   | 76   | 75   | 73   | 73   | 71   | 77.3 | 86   | 61   | 25    |
| 12     | 67   | 70   | 84   | 84   | 93   | 91   | 89   | 88   | 87   | 85   | 85   | 81   | 83   | 81   | 83   | 83   | 85   | 85   | 83   | 86   | 88   | 85   | 78   | 70   | 83.1 | 89   | 59   | 30    |
| 13 d   | 65   | 67   | 71   | 83   | 92   | 99   | 106  | 108  | 98   | 90   | 88   | 41   | 41   | 53   | 64   | 81   | 81   | 65   | 68   | 74   | 83   | 79   | 72   | 66   | 75.8 | 106  | 33   | 73    |
| 14     | 71   | 65   | 63   | 53   | 63   | 68   | 69   | 53   | 60   | 62   | 68   | 68   | 73   | 68   | 73   | 63   | 62   | 63   | 67   | 68   | 68   | 68   | 66   | 61   | 65.3 | 69   | 49   | 20    |
| 15     | 56   | 63   | 61   | 63   | 60   | 61   | 63   | 64   | 63   | 60   | 58   | 58   | 52   | 54   | 65   | 66   | 73   | 71   | 68   | 76   | 74   | 71   | 68   | 65   | 63.9 | 77   | 46   | 31    |
| 16     | 62   | 65   | 59   | 63   | 79   | 86   | 86   | 81   | 75   | 64   | 74   | 76   | 76   | 76   | 76   | 76   | 73   | 72   | 72   | 73   | 78   | 70   | 60   | 58   | 71.9 | 82   | 52   | 30    |
| 17     | 56   | 63   | 70   | 70   | 73   | 77   | 84   | 66   | 44   | 50   | 67   | 70   | 69   | 63   | 64   | 51   | 57   | 60   | 64   | 64   | 65   | 66   | 59   | 58   | 63.3 | 80   | 29   | 51    |
| 18 d   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |
| 19     | 49   | 56   | 61   | 52   | 50   | 49   | 46   | 34   | 46   | 49   | 53   | 56   | 80   | 63   | 71   | 69   | 70   | 68   | 68   | 68   | 71   | 73   | 65   | 53   | 59.2 | 79   | 29   | 50    |
| 20     | 56   | 62   | 61   | 62   | 61   | 63   | 67   | 80   | 76   | 74   | 66   | 73   | 64   | 74   | 73   | 74   | —    | —    | —    | —    | 81   | 80   | 62   | 63   | —    | —    | —    | —     |
| 21 d   | 56   | 53   | 58   | 62   | 62   | 68   | 62   | 68   | 62   | 54   | 44   | 43   | 48   | 48   | 59   | 53   | 58   | 64   | 60   | 61   | 64   | 66   | 59   | 52   | 58.6 | 79   | 31   | 48    |
| 22     | 53   | 63   | 73   | 76   | 75   | 74   | 77   | 58   | 60   | 59   | 64   | 65   | 65   | 67   | 66   | 65   | 67   | 68   | 71   | 73   | 76   | 74   | 73   | 69   | 67.7 | 74   | 49   | 25    |
| 23     | 60   | —    | —    | —    | —    | —    | —    | —    | 76   | 64   | 68   | 77   | 69   | 70   | 60   | 66   | 71   | 73   | 69   | 77   | 76   | 71   | 61   | 65   | —    | —    | —    | —     |
| 24     | 61   | 60   | 68   | 68   | 73   | 85   | 85   | 84   | 71   | 39   | 53   | 61   | 63   | 65   | 68   | 64   | 64   | 76   | 72   | 68   | 73   | 61   | 61   | 44   | 66.9 | 81   | 28   | 53    |
| 25     | 32   | 35   | 41   | 48   | 52   | 51   | 62   | 58   | 58   | 58   | 53   | 51   | 59   | 64   | 61   | 63   | 66   | 66   | 68   | 73   | 71   | 75   | 71   | 52   | 57.7 | 72   | 27   | 45    |
| 26     | 42   | 40   | 49   | 67   | 78   | 96   | 95   | 89   | 72   | 70   | 75   | 70   | 65   | 73   | 74   | 76   | 77   | 78   | 81   | 82   | 78   | 76   | 71   | 68   | 72.5 | 94   | 36   | 58    |
| 27     | 61   | 58   | 64   | 70   | 68   | 71   | 74   | 80   | 76   | 67   | 76   | 81   | 82   | 83   | 78   | 75   | 75   | 76   | 77   | 78   | 74   | 76   | 75   | 71   | 73.6 | 79   | 54   | 25    |
| 28     | 68   | 66   | 69   | 68   | 75   | 83   | 83   | 86   | 87   | 88   | 79   | 78   | 78   | 77   | 78   | 79   | 80   | 79   | 79   | 81   | 77   | 76   | 73   | 64   | 76.9 | 84   | 57   | 27    |
| 29     | 61   | 61   | 68   | 71   | 77   | 79   | 75   | 74   | 76   | 78   | 80   | 79   | 74   | 74   | 75   | 76   | 76   | 76   | 76   | 78   | 80   | 80   | 77   | 76   | 74.9 | 77   | 57   | 20    |
| 30     | 74   | 76   | 81   | 78   | 81   | 86   | 86   | 83   | 83   | 83   | 85   | 84   | 85   | 88   | 93   | 88   | 86   | 86   | 82   | 79   | 86   | 85   | 81   | 81   | 83.4 | 89   | 67   | 22    |
| 31 c   | 71   | 73   | 77   | 79   | 85   | 93   | 96   | 98   | 94   | 89   | 85   | 83   | 84   | 84   | 83   | 84   | 85   | 85   | 88   | 86   | 85   | 86   | 81   | 78   | 84.8 | 94   | 67   | 27    |
| mean   | 61.5 | 63.1 | 66.6 | 69.5 | 73.9 | 77.7 | 79.0 | 76.8 | 73.9 | 70.1 | 70.9 | 70.3 | 70.9 | 72.6 | 71.8 | 71.5 | 73.2 | 73.5 | 72.5 | 74.0 | 73.4 | 73.1 | 69.1 | 64.5 | 71.4 | —    | —    | —     |
| γ c    | 63.7 | 66.0 | 68.0 | 76.0 | 79.6 | 83.0 | 84.6 | 84.8 | 83.2 | 79.8 | 78.2 | 77.8 | 78.2 | 78.8 | 79.2 | 78.6 | 80.0 | 80.0 | 78.2 | 78.2 | 78.6 | 78.0 | 75.8 | 67.0 | 77.2 | —    | —    | —     |
| γ d    | 54.5 | 52.5 | 65.5 | 60.2 | 71.0 | 74.0 | 72.2 | 73.2 | 68.7 | 61.2 | 55.2 | 53.7 | 51.0 | 61.2 | 50.0 | 55.5 | 62.5 | 60.7 | 55.0 | 59.5 | 56.7 | 59.7 | 53.7 | 66.2 | 60.9 | —    | —    | —     |

Table 29.

## Vertical Intensity 33900γ + .....γ

August 1982.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23    | Mean | Max. | Min. | Range |    |    |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|-------|----|----|
| DRY    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |       |    |    |
| 1      | 70   | 62   | 56   | 68   | 79   | 81   | 83   | 87   | 87   | 82   | 84   | 86   | 85   | 84   | 84   | 86   | 87   | 84   | 86   | 86   | 85   | 89   | 83   | 75    | 80.8 | 90   | 56   | 34    |    |    |
| 2d     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |       |    |    |
| 3d     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |       |    |    |
| 4      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |       |    |    |
| 5      |      |      |      |      | 90   | 94   | 89   | 92   | 95   | 100  | 98   | 101  | 96   | 96   | 97   | 96   | 96   | 97   | 96   | 96   | 92   | 76   |      |       |      | 101  | 70   | 81    |    |    |
| 6      | 70   | 67   | 76   | 88   | 87   | 94   | 97   | 96   | 94   | 92   | 98   | 95   | 97   | 95   | 95   | 96   | 95   | 95   | 95   | 95   | 95   | 97   | 99   | 94    | 91   | 91.2 | 99   | 67    | 82 |    |
| 7      | 91   | 88   | 87   | 83   | 84   | 87   | 86   | 89   | 92   | 91   | 92   | 94   | 94   | 94   | 92   | 94   | 95   | 95   | 95   | 95   | 94   | 96   | 99   | 97    | 89   | 91.5 | 100  | 82    | 18 |    |
| 8      | 85   | 79   | 69   | 71   | 73   | 72   | 79   | 84   | 88   | 91   | 92   | 92   | 93   | 94   | 94   | 94   | 96   | 96   | 96   | 97   | 96   | 95   | 99   | 96    | 89   | 88.0 | 99   | 68    | 81 |    |
| 9      | 85   | 84   | 84   | 89   | 91   | 88   | 92   | 94   | 98   | 96   | 99   | 101  | 101  | 107  | 105  | 103  | 102  | 102  | 102  | 103  | 108  | 104  | 107  | 105   | 96   | 97.5 | 107  | 84    | 23 |    |
| 10 c   | 86   | 83   | 84   | 86   | 87   | 88   | 94   | 99   | 101  | (99) | 99   | 101  | 101  | 100  | 100  | 101  | 102  | 102  | 102  | 102  | 103  | 102  | 105  | (102) | 97   | 96.8 | 105  | 82    | 22 |    |
| 11     | 88   | 75   | 74   | 83   | 88   | 93   | 95   | 96   | 97   | 94   | 94   | 96   | 97   | 96   | 97   | 96   | 98   | 99   | 99   | 99   | 100  | 97   | 103  | 96    | 87   | 98.2 | 104  | 73    | 81 |    |
| 12     | (75) | 78   | 83   | 82   | 84   | 91   | 94   | 93   | 95   | 96   | 95   | 99   | 100  | 99   | 98   | 97   | 96   | 96   | 96   | 97   | 97   | 98   | 99   | 98    | (91) | 98.0 | 101  | 72    | 29 |    |
| 13     | 84   | 77   | 76   | 81   | 89   | 96   | 100  | 99   | 95   | 95   | 96   | 97   | 98   | 96   | 97   | 96   | 95   | 97   | 97   | 98   | 98   | 96   | 98   | 94    | 86   | 98.1 | 101  | 74    | 27 |    |
| 14     | 80   | 71   | 68   | 75   | 77   | 83   | 86   | 86   | 90   | 92   | 92   | 93   | 95   | 95   | 96   | 96   | 96   | 96   | 96   | 96   | 95   | 95   | 95   | 95    | 92   | 89.0 | 96   | 68    | 28 |    |
| 15     | 85   | 78   | 77   | 81   | 83   | 86   | 89   | 92   | 92   | 91   | 91   | 92   | 93   | 94   | 94   | 94   | 95   | 96   | 96   | 97   | 95   | 96   | 97   | 94    | 87   | 90.3 | 98   | 74    | 24 |    |
| 16 c   | 78   | 69   | 70   | 72   | 80   | 88   | 93   | 93   | 93   | 88   | 87   | 89   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 92   | 93   | 96   | 92    | 84   | 87.3 | 97   | 69    | 28 |    |
| 17 c   | 75   | 71   | 74   | 75   | 81   | 84   | 91   | 90   | 86   | 85   | 85   | 87   | 88   | 89   | 89   | 89   | 91   | 90   | 89   | 89   | 87   | 88   | 89   | 85    | 80   | 84.9 | 92   | 71    | 21 |    |
| 18 c   | 75   | 69   | 64   | 68   | 68   | 72   | 79   | 82   | 85   | 84   | 83   | 85   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 89   | 88   | 89   | 91   | 88    | 79   | 81.7 | 92   | 62    | 30 |    |
| 19 c   | 64   | 59   | 63   | 71   | 78   | 81   | 86   | 91   | 91   | 87   | 85   | 86   | 87   | 87   | 87   | 87   | 87   | 88   | 88   | 88   | 89   | 89   | 91   | 89    | 81   | 88.0 | 91   | 58    | 33 |    |
| 20     | 78   | 61   | 59   | 63   | 66   | 74   | 81   | 86   | 88   | 85   | 84   | 85   | 87   | 89   | 89   | 88   | 89   | 89   | 89   | 90   | 89   | 88   | 90   | 87    | 81   | 81.7 | 90   | 58    | 32 |    |
| 21     | 63   | (59) | 59   | 53   | 59   | 68   | 73   | 77   | 85   | 86   | 86   | 86   | 87   | 88   | 88   | 88   | 89   | 91   | 91   | 91   | 94   | 92   | 93   | 90    | 82   | 80.3 | 96   | 53    | 42 |    |
| 22     | 73   | 64   | 61   | 62   | 66   | 75   | 79   | 84   | 84   | 83   | 84   | 84   | 87   | 87   | 87   | 86   | 87   | 88   | 88   | 89   | 87   | 88   | 89   | 87    | 80   | 80.8 | 90   | 61    | 29 |    |
| 23     | 75   | 68   | 66   | 69   | 70   | 68   | 72   | 82   | 87   | 86   | 84   | 84   | 85   | 87   | 88   | 89   | 86   | 87   | 88   | 88   | 89   | 89   | 90   | 89    | 85   | 81.8 | 90   | 66    | 24 |    |
| 24     | 77   | 68   | 71   | 69   | 71   | 77   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80    | 80   | 80   | 80   | 80    | 80 | 80 |
| 25     | 73   | 66   | 67   | 72   | 78   | 77   | 85   | 87   | 84   | 85   | 84   | 85   | 86   | 86   | 85   | 85   | 87   | 89   | 89   | 88   | 88   | 88   | 89   | 86    | 79   | 82.6 | 90   | 65    | 25 |    |
| 26     | 68   | 69   | 71   | 77   | 81   | 84   | 83   | 84   | 83   | 83   | 83   | 85   | 87   | 88   | 87   | 87   | 88   | 89   | 89   | 90   | 91   | 91   | 93   | 93    | 91   | 84.6 | 95   | 67    | 28 |    |
| 27 d   | 87   | 82   | 77   | 79   | 77   | 82   | 86   | 86   | 82   | 80   | 86   | 98   | 96   | 98   | 99   | 98   | 98   | 98   | 98   | 102  | 101  | 101  | 102  | 94    | 82   | 90.2 | 103  | 77    | 26 |    |
| 28 d   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77    | 77   | 77   | 77   | 77    | 77 | 77 |
| 29 d   | 74   | 74   | 76   | 80   | 83   | 85   | 90   | 89   | 90   | 86   | 88   | 89   | 92   | 97   | 95   | 92   | 94   | 94   | 94   | 96   | 93   | 93   | 93   | 86    | 81   | 87.9 | 98   | 73    | 25 |    |
| 30     | 74   | 69   | 71   | 78   | 91   | 91   | 87   | 89   | 87   | 91   | 89   | 92   | 94   | 90   | 88   | 90   | 95   | 94   | 94   | 89   | 92   | 92   | 92   | 88    | 83   | 87.3 | 95   | 69    | 26 |    |
| 31     | 77   | 78   | 77   | 78   | (88) | (91) | 94   | 93   | 92   | 88   | 88   | 90   | 90   | 90   | 89   | 88   | 91   | 92   | 91   | 91   | 90   | 90   | 90   | 88    | 88   | 87.4 | 94   | 73    | 21 |    |
| mean   | 77.2 | 71.8 | 71.6 | 75.0 | 79.4 | 83.2 | 87.0 | 89.1 | 89.8 | 88.6 | 89.0 | 90.7 | 92.0 | 92.4 | 92.1 | 92.1 | 92.8 | 93.0 | 93.4 | 93.2 | 93.2 | 95.1 | 91.9 | 85.2  | 87.5 |      |      |       |    |    |
| σ c    | 75.6 | 70.2 | 71.0 | 73.4 | 78.8 | 82.6 | 88.6 | 91.0 | 91.2 | 88.6 | 87.8 | 89.6 | 91.0 | 91.0 | 91.0 | 91.2 | 91.8 | 91.8 | 91.8 | 91.8 | 92.2 | 94.4 | 91.2 | 84.2  | 79.1 |      |      |       |    |    |
| σ d    | 80.5 | 78.0 | 76.5 | 79.5 | 80.0 | 83.5 | 88.0 | 87.5 | 86.0 | 83.0 | 87.0 | 91.0 | 94.0 | 97.5 | 97.0 | 95.0 | 96.0 | 96.0 | 96.0 | 99.0 | 97.0 | 97.0 | 97.5 | 90.0  | 91.0 | 89.1 |      |       |    |    |
|        | 75.5 | 69.0 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |       |    |    |

Table 80.

## Vertical Intensity

88900y+.....y

September 1982.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |   |   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|---|---|
| 1 Day  | 76   | 70   | 67   | 72   | 80   | 85   | 91   | 98   | 92   | 88   | 88   | 89   | 90   | 89   | 91   | 87   | 89   | 92   | 92   | 91   | 91   | 98   | 87   | 80   | 86.0 | 94   | 67   | 27    |    |   |   |
| 2      | 70   | 62   | 64   | 68   | 78   | 82   | 96   | 94   | 90   | 87   | 88   | 89   | 91   | 89   | 92   | 91   | 92   | 93   | 93   | 92   | 92   | 98   | 89   | 80   | 86.1 | 96   | 62   | 34    |    |   |   |
| 3      | 70   | 57   | 54   | 60   | 70   | 78   | 77   | 82   | 85   | 82   | 83   | 85   | 87   | 88   | 89   | 88   | 89   | 88   | 90   | 89   | 90   | 90   | 90   | 79   | 80.6 | 94   | 54   | 40    |    |   |   |
| 4      | 70   | 60   | 67   | 67   | 77   | 80   | 81   | 83   | 83   | 83   | 83   | 85   | 86   | 87   | 86   | 88   | 88   | 89   | 91   | 91   | 89   | 89   | 87   | 83   | 81.8 | 92   | 56   | 36    |    |   |   |
| 5      | (66) | (68) | (62) | (65) | 67   | 71   | 74   | 78   | 80   | 80   | 80   | 82   | 84   | 86   | 87   | 88   | 94   | 89   | 89   | 89   | 89   | 91   | 89   | 81   | 80.2 | 91   | 62   | 29    |    |   |   |
| 6      | (69) | 58   | 61   | 68   | 68   | 81   | 84   | 80   | 83   | 85   | 85   | 86   | 82   | 83   | 86   | 93   | 99   | 96   | 95   | 97   | 97   | 100  | 95   | 90   | 84.0 | 100  | 58   | 42    |    |   |   |
| 7      | 83   | 75   | 77   | 84   | 89   | 92   | 94   | 93   | 92   | 92   | 98   | 91   | 91   | 90   | 90   | 90   | 92   | 93   | 94   | 95   | 95   | 95   | 92   | 90   | 89.8 | 96   | 78   | 28    |    |   |   |
| 8      | 84   | 76   | 72   | 69   | 67   | 83   | 86   | 86   | 88   | 89   | 90   | 92   | 92   | 93   | 94   | 93   | 93   | 98   | 95   | 92   | 90   | 95   | 92   | 87   | 87.3 | 98   | 67   | 28    |    |   |   |
| 9      | 83   | 79   | 81   | 74   | 84   | 90   | 93   | 93   | 90   | 88   | 89   | 90   | 90   | 90   | 91   | 90   | 92   | 92   | 92   | 91   | 90   | 92   | 88   | 87   | 88.2 | 93   | 78   | 20    |    |   |   |
| 10     | 88   | 78   | 79   | 81   | 88   | 89   | 90   | 88   | 88   | 86   | 85   | 87   | 86   | 87   | 88   | 88   | 88   | 88   | 88   | 89   | 88   | 89   | 86   | 82   | 86.2 | 92   | 77   | 15    |    |   |   |
| 11     | 82   | 78   | 75   | 80   | 85   | 85   | 84   | 82   | 82   | 85   | 88   | 86   | 87   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 89   | 87   | 84   | 85.8 | 90   | 74   | 16    |    |   |   |
| 12     | 82   | 78   | 79   | 82   | 80   | 84   | 86   | 87   | 85   | 88   | 84   | 86   | 86   | 86   | 87   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 89   | 84   | 81   | 84.9 | 89   | 76    | 13 |   |   |
| 13     | 79   | 72   | 73   | 79   | 82   | 88   | 91   | 91   | 88   | 86   | 87   | 87   | 88   | 88   | 88   | 89   | 88   | 88   | 88   | 88   | 88   | 89   | 85   | 84   | 85.6 | 91   | 72   | 19    |    |   |   |
| 14     | 78   | (69) | 74   | 81   | 84   | 86   | 88   | 87   | 85   | 84   | 86   | 87   | 85   | 89   | 89   | 90   | 90   | 90   | 92   | 92   | 90   | 91   | 89   | 87   | 86.0 | 92   | 69   | 23    |    |   |   |
| 15     | 83   | 78   | 70   | 74   | 81   | 92   | 97   | 94   | 90   | 85   | 87   | 87   | 87   | 88   | 88   | 90   | 89   | 89   | 89   | 89   | 89   | 88   | 86   | 80   | 86.0 | 97   | 69   | 28    |    |   |   |
| 16     | 74   | 75   | 78   | 81   | 86   | 89   | 88   | 88   | 86   | 82   | 88   | 84   | 84   | 85   | 86   | 87   | 87   | 86   | 87   | 87   | 87   | 88   | 88   | 84   | 84.6 | 91   | 74   | 17    |    |   |   |
| 17     | 74   | (68) | 62   | 68   | 76   | 77   | 81   | 86   | 83   | 80   | 80   | 83   | 85   | 85   | 85   | 85   | 86   | 87   | 87   | 87   | 87   | 87   | 86   | 84   | 81.3 | 88   | 62   | 26    |    |   |   |
| 18     | 79   | 71   | 70   | 76   | 85   | 87   | 86   | 85   | 82   | 79   | 82   | 84   | 86   | 86   | 86   | 87   | 86   | 86   | 86   | 84   | 86   | 85   | 85   | 85   | 83.9 | 91   | 69   | 22    |    |   |   |
| 19     | 76   | 69   | 68   | 75   | 80   | 83   | 86   | 84   | 80   | 78   | 84   | 86   | 87   | 89   | 91   | 90   | 93   | 91   | 91   | 90   | 89   | 89   | 88   | 85   | 84.3 | 96   | 67   | 28    |    |   |   |
| 20     | 79   | 73   | 66   | 67   | 79   | 83   | 86   | 85   | 84   | 83   | 86   | 87   | 88   | 89   | 88   | 89   | 88   | 89   | 90   | 89   | 88   | 87   | 86   | 85   | 83.9 | 92   | 64   | 28    |    |   |   |
| 21     | 80   | 73   | 78   | 76   | 78   | 82   | 84   | 87   | 87   | 83   | 83   | 86   | 85   | 86   | 85   | 85   | 86   | 86   | 86   | 86   | 86   | 84   | 84   | 84   | 83.1 | 89   | 71   | 18    |    |   |   |
| 22     | 78   | 74   | 66   | 65   | 67   | 72   | 76   | 81   | 80   | 77   | 75   | 77   | 82   | 85   | 87   | 87   | 86   | 86   | 86   | 84   | 86   | 85   | 85   | 85   | 79.6 | 88   | 64   | 24    |    |   |   |
| 23     | 80   | (72) | 64   | 67   | 75   | 84   | 85   | 87   | 83   | 76   | 76   | 81   | 81   | 86   | 89   | 92   | 91   | 93   | 97   | 91   | 87   | 87   | 91   | 88   | 88.5 | 97   | 64   | 53    |    |   |   |
| 24     | 82   | 80   | 78   | 81   | 89   | 88   | 82   | 87   | 90   | 87   | 87   | 85   | 82   | 87   | 91   | 94   | 96   | 90   | 90   | 89   | 90   | 87   | 86   | 84   | 86.8 | 94   | 77   | 17    |    |   |   |
| 25     | 82   | 75   | 70   | 76   | 86   | 87   | 88   | 88   | 88   | 85   | 87   | 88   | 83   | 88   | 89   | 88   | 89   | 87   | 85   | 85   | 82   | 83   | 82   | 86   | 84.0 | 96   | 68   | 28    |    |   |   |
| 26     | 85   | 78   | 77   | 80   | 88   | 89   | 87   | 86   | 87   | 84   | 85   | 87   | 85   | 87   | 88   | 87   | 87   | 87   | 86   | 86   | 86   | 86   | 83   | 84   | 85.1 | 91   | 76   | 15    |    |   |   |
| 27     | 78   | 65   | 66   | 75   | 83   | 87   | 87   | 81   | 82   | 83   | 80   | 79   | 84   | 86   | 83   | 83   | 82   | 84   | 86   | 85   | 86   | 85   | 85   | 84   | 81.6 | 88   | 64   | 24    |    |   |   |
| 28     | 89   | 71   | (68) | 71   | 77   | 84   | 85   | 82   | 80   | 82   | 70   | 81   | 81   | 83   | 84   | 84   | 86   | 87   | 86   | 86   | 86   | 85   | 85   | 85   | 83   | 81.5 | 87   | 68    | 19 |   |   |
| 29     | 83   | 77   | 79   | 82   | 86   | 90   | 88   | 87   | 80   | 78   | 78   | 80   | 83   | 84   | 85   | 85   | 86   | 86   | 85   | 85   | 85   | 83   | 83   | 83   | 83.3 | 90   | 75   | 15    |    |   |   |
| 30     | 82   | 76   | 76   | 81   | 83   | 86   | 89   | 86   | 82   | 82   | 84   | 86   | 86   | 85   | 88   | 87   | 86   | 86   | 87   | 87   | 87   | 88   | 88   | 88   | 84.8 | 90   | 74   | 16    |    |   |   |
| 31     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |   |   |
| mean   | 78.3 | 71.5 | 70.0 | 73.7 | 79.7 | 84.6 | 86.2 | 86.2 | 84.9 | 83.4 | 84.2 | 85.5 | 85.8 | 87.1 | 87.9 | 88.4 | 89.3 | 89.0 | 89.5 | 88.9 | 88.4 | 88.8 | 87.1 | 84.3 | 84.0 | —    | —    | —     | —  |   |   |
| ♯ c    | 76.6 | 71.2 | 69.6 | 74.0 | 81.0 | 83.2 | 84.0 | 85.2 | 84.8 | 83.0 | 83.8 | 85.0 | 85.8 | 86.6 | 87.2 | 87.2 | 87.6 | 87.4 | 88.0 | 88.0 | 88.2 | 88.6 | 87.4 | 82.6 | 83.6 | —    | —    | —     | —  | — |   |
| ♯ d    | 79.4 | 72.2 | 69.0 | 71.2 | 77.0 | 84.6 | 85.0 | 84.6 | 84.3 | 84.4 | 85.0 | 86.4 | 84.0 | 87.4 | 89.8 | 92.0 | 93.8 | 91.8 | 92.4 | 90.8 | 89.2 | 90.4 | 89.2 | 85.6 | 85.1 | —    | —    | —     | —  | — | — |
|        | 83.0 | 77.4 | —    | —    | —    | —    | 85.0 | 84.6 | 84.3 | 84.4 | 85.0 | 86.4 | 84.0 | 87.4 | 89.8 | 92.0 | 93.8 | 91.8 | 92.4 | 90.8 | 89.2 | 90.4 | 89.2 | 85.6 | 85.1 | —    | —    | —     | —  | — | — |



Table 31.

Vertical Intensity 83900r+ .....γ

October 1932.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | Mean | Max. | Min. | Range |   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|---|
| Day    | 82   | 76   | 73   | 74   | 76   | 80   | 84   | 87   | 84   | 80   | 82   | 84   | 85   | 86   | 85   | 84   | 85   | 85   | 85   | 85   | 85   | 84   | 87   | 86   | 82.7 | 87   | 72   | 15   |       |   |
| 1      | 80   | 76   | 72   | 71   | 76   | 79   | 83   | 82   | 79   | 74   | 76   | 79   | 78   | 83   | 87   | 86   | 86   | 89   | 88   | 87   | 84   | 83   | 85   | 83   | 81.1 | 89   | 70   | 19   |       |   |
| 2      | 79   | 71   | 69   | 75   | 76   | 79   | 82   | 82   | 80   | 80   | 79   | 84   | 85   | 85   | 87   | 84   | 84   | 84   | 85   | 85   | 85   | 85   | 87   | 84   | 81.5 | 88   | 68   | 20   |       |   |
| 3      | 81   | 78   | 70   | 74   | 79   | 81   | 83   | 87   | 85   | 80   | 81   | 84   | 83   | 82   | 88   | 85   | 86   | 87   | 87   | 87   | 84   | 84   | 83   | 83   | 82.1 | 87   | 69   | 18   |       |   |
| 4      | 80   | 78   | 71   | 70   | 77   | 78   | 80   | 80   | 80   | 80   | 81   | 81   | 82   | 84   | 86   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 85   | 85   | 81.9 | 86   | 63   | 17   |       |   |
| 5      | 83   | 77   | 72   | 67   | 69   | 70   | 71   | 76   | 79   | 78   | 79   | 80   | 81   | 82   | 82   | 82   | 83   | 84   | 83   | 83   | 83   | 83   | 85   | 85   | 79.0 | 87   | 67   | 20   |       |   |
| 6 c    | 88   | 77   | 70   | 66   | 70   | 72   | 78   | 84   | 84   | 81   | 81   | 80   | 81   | 82   | 82   | 82   | 83   | 85   | 84   | 84   | 84   | 85   | 84   | 87   | 80.7 | 89   | 66   | 23   |       |   |
| 7      | 88   | 81   | (72) | (72) | (75) | 84   | 87   | 86   | 82   | 81   | 83   | 84   | 84   | 84   | 84   | 85   | 86   | 86   | 86   | 86   | 86   | 86   | 84   | 87   | 89   | 80.7 | 89   | 66   | 23    |   |
| 8      | 86   | 81   | (72) | (72) | (75) | 84   | 87   | 86   | 82   | 81   | 83   | 84   | 84   | 84   | 84   | 85   | 86   | 86   | 86   | 86   | 86   | 86   | 84   | 87   | 89   | 80.7 | 89   | 66   | 23    |   |
| 9      | 83   | 74   | 70   | 70   | 70   | 74   | 78   | 81   | 79   | 81   | 81   | 82   | 83   | 83   | 84   | 85   | 84   | 86   | 83   | 85   | 85   | 82   | 83   | 85   | 80.5 | 86   | 70   | 16   |       |   |
| 10     | 81   | 78   | 74   | 73   | 69   | 76   | 76   | 79   | 80   | 83   | 83   | 83   | 83   | 83   | 83   | 83   | 86   | 85   | 82   | 82   | 82   | 84   | 85   | 86   | 87   | 81.0 | 87   | 68   | 13    |   |
| 11     | 83   | 80   | 78   | 68   | 72   | 74   | 76   | 78   | 79   | 81   | 81   | 81   | 81   | 82   | 82   | 82   | 83   | 84   | 84   | 84   | 84   | 83   | 82   | 83   | 83   | 80.0 | 85   | 68   | 17    |   |
| 12     | 81   | 79   | 75   | 75   | 79   | 82   | 84   | 82   | 81   | 80   | 81   | 82   | 81   | 83   | 82   | 84   | 84   | 84   | 84   | 85   | 85   | 83   | 81   | 84   | 83   | 81.7 | 85   | 74   | 11    |   |
| 13 c   | 76   | 72   | 66   | 64   | 69   | 76   | 79   | 82   | 78   | 79   | 79   | 81   | 81   | 81   | 81   | 84   | 85   | 81   | 83   | 83   | 84   | 82   | 83   | 82   | 78.9 | 85   | 63   | 22   |       |   |
| 14 c   | 75   | 70   | 68   | 65   | 65   | 74   | 80   | 79   | 76   | 77   | 77   | 77   | 79   | 79   | 80   | 81   | 82   | 82   | 82   | 83   | 83   | 82   | 81   | 82   | 84   | 77.5 | 85   | 65   | 20    |   |
| 15 d   | 82   | 78   | 67   | 61   | 64   | 75   | 79   | 79   | 73   | 69   | 70   | 70   | 73   | 82   | 91   | 91   | 89   | 88   | 91   | 88   | 91   | 88   | 86   | 84   | 84   | 79.2 | 93   | 59   | 34    |   |
| 16 d   | 75   | 78   | 66   | 65   | 76   | 81   | 78   | 79   | 85   | 84   | 85   | 86   | 82   | 84   | 85   | 88   | 86   | 87   | 85   | 84   | 85   | 86   | 88   | 88   | 88   | 81.7 | 91   | 68   | 28    |   |
| 17     | 85   | 82   | 77   | 74   | 77   | 85   | 86   | 84   | 80   | 80   | 80   | 80   | 82   | 83   | 85   | 80   | 82   | 82   | 83   | 83   | 83   | 85   | 86   | 88   | 88   | 86   | 73   | 13   |       |   |
| 18     | 80   | 79   | 74   | 67   | 67   | 72   | 78   | 77   | 78   | 78   | 80   | 80   | 79   | 84   | 80   | 81   | 83   | 88   | 88   | 88   | 88   | 82   | 82   | 88   | 82   | 78.3 | 85   | 65   | 20    |   |
| 19     | 80   | (76) | 72   | 66   | 68   | 70   | 73   | 74   | 75   | 74   | 74   | 80   | 79   | 84   | 77   | 82   | 88   | 84   | 83   | 83   | 86   | 78   | 79   | 80   | 77.2 | 86   | 66   | 20   |       |   |
| 20 d   | 77   | 75   | 70   | 66   | 69   | 76   | 81   | 82   | 82   | 82   | 85   | 84   | 85   | 89   | 86   | 84   | 85   | 86   | 85   | 86   | 85   | 84   | 86   | 86   | 85   | 81.4 | 89   | 65   | 24    |   |
| 21 d   | 82   | 80   | 77   | 74   | 74   | 77   | 80   | 80   | 80   | 80   | 81   | 80   | 80   | 80   | 83   | 80   | 81   | 81   | 83   | 83   | 83   | 84   | 85   | 85   | 82   | 80.4 | 85   | 73   | 12    |   |
| 22     | 77   | 75   | 74   | 73   | 75   | 80   | 83   | 82   | 79   | 74   | 77   | 80   | 84   | 86   | 87   | 91   | 86   | 88   | 88   | 88   | 88   | 88   | 86   | 86   | 87   | 82.3 | 93   | 71   | 22    |   |
| 23 d   | 84   | 86   | 80   | 78   | 78   | 80   | 80   | 80   | 80   | 77   | 81   | 81   | 84   | 90   | 85   | 85   | 85   | 85   | 85   | 84   | 85   | 85   | 85   | 87   | 86   | 83.0 | 90   | 75   | 25    |   |
| 24     | 85   | 81   | 75   | 68   | 70   | 74   | 79   | 80   | 81   | 81   | 81   | 82   | 83   | 84   | 86   | 86   | 90   | 88   | 87   | 86   | 86   | 86   | 86   | 85   | 85   | 82.0 | 90   | 68   | 22    |   |
| 25     | 85   | 82   | 83   | 74   | 67   | 71   | 76   | 82   | 83   | 82   | 83   | 82   | 82   | 82   | 83   | 84   | 84   | 85   | 85   | 85   | 84   | 84   | 85   | 85   | 85   | 81.6 | 86   | 66   | 20    |   |
| 26 c   | 84   | 80   | 75   | 72   | 72   | 74   | —    | —    | —    | —    | —    | 80   | 83   | 88   | 86   | 91   | 85   | 89   | 86   | 86   | 86   | 86   | 85   | 86   | 86   | 81.6 | 92   | 71   | 21    |   |
| 27     | 81   | 77   | 78   | 68   | 73   | 79   | 83   | 85   | 84   | 83   | 83   | 84   | 86   | 84   | 85   | 85   | 85   | 85   | 84   | 84   | 83   | 85   | 86   | 86   | 82.0 | 85   | 68   | 17   |       |   |
| 28 c   | 82   | 78   | 69   | 62   | 68   | 74   | 78   | 82   | 81   | 81   | 83   | 84   | 84   | 85   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 85   | 85   | 87   | 81.2 | 87   | 61   | 26   |       |   |
| 29     | 85   | 81   | 75   | 68   | 68   | 73   | 80   | 81   | 79   | 82   | 86   | 82   | 86   | 90   | 91   | 91   | 91   | 89   | 89   | 90   | 90   | 90   | 88   | 84   | 83.7 | 92   | 66   | 26   |       |   |
| 30     | 81   | (80) | 79   | 74   | 74   | 81   | 84   | 84   | 85   | 84   | 84   | 84   | 87   | 86   | 87   | 88   | 89   | 89   | 89   | 89   | 88   | 88   | 90   | 88   | 84.7 | 90   | 72   | 18   |       |   |
| 31     | 81.3 | 77.3 | 72.6 | 69.9 | 72.4 | 77.0 | 80.0 | 81.4 | 80.5 | 79.6 | 80.5 | 81.5 | 82.2 | 83.7 | 84.6 | 84.9 | 85.1 | 85.5 | 85.2 | 85.0 | 84.5 | 84.1 | 85.1 | 85.1 | 84.7 | 81.2 | —    | —    | —     |   |
| mean   | 80.0 | 75.6 | 72.4 | 67.6 | 68.6 | 74.0 | 77.8 | 80.8 | 80.0 | 79.8 | 80.0 | 81.0 | 81.4 | 81.6 | 82.8 | 83.4 | 83.0 | 83.8 | 83.6 | 83.8 | 82.8 | 83.2 | 84.2 | 84.2 | 84.2 | 79.8 | —    | —    | —     | — |
| σ c    | 18.2 | 76.6 | 69.8 | 66.2 | 70.4 | 76.2 | 78.8 | 79.2 | 78.8 | 78.6 | 78.2 | 80.0 | 80.6 | 83.8 | 85.2 | 87.2 | 85.8 | 86.6 | 86.4 | 85.8 | 86.0 | 84.4 | 84.6 | 84.6 | 84.6 | 80.4 | —    | —    | —     | — |
| σ d    | 78.2 | 75.4 | 69.8 | 66.2 | 70.4 | 76.2 | 78.8 | 79.2 | 78.8 | 78.6 | 78.2 | 80.0 | 80.6 | 83.8 | 85.2 | 87.2 | 85.8 | 86.6 | 86.4 | 85.8 | 86.0 | 84.4 | 84.6 | 84.6 | 84.6 | 80.4 | —    | —    | —     | — |
|        | 81.0 | 79.0 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |   |

Table 52.

Vertical Intensity 38900 + .....

November 1932

| G. M. T. | Vertical Intensity |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 22   | 23   | Mean | Max. | Min. | Range |    |    |   |   |
|----------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|----|---|---|
|          | 0                  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   |      |      |      |      |      |       | 20 | 21 |   |   |
| 1 d      | 82                 | 73   | 68   | 65   | 66   | 68   | 72   | 78   | 79   | 82   | 86   | 88   | 88   | 91   | —    | —    | —    | —    | 87   | 87   | 86   | —    | —    | —    | —    | 89    | 70 | —  |   |   |
| 2        | 85                 | 81   | 76   | 73   | 75   | 79   | 82   | 87   | 86   | 87   | 87   | 86   | 87   | 84   | 87   | 88   | —    | —    | 87   | 86   | 85   | 86   | 86   | 88   | 84.3 | 88    | 86 | —  |   |   |
| 3        | 85                 | 80   | 72   | 68   | 68   | 71   | 78   | 83   | 84   | 88   | 84   | 84   | 87   | 88   | 88   | —    | —    | —    | 87   | 86   | 85   | 86   | 86   | 86   | 82.0 | 88    | 86 | —  |   |   |
| 4        | 85                 | 81   | 73   | 65   | 68   | 72   | 79   | 84   | 84   | 83   | 83   | 84   | 86   | 85   | 85   | 86   | 87   | 87   | 85   | 83   | 85   | 86   | 86   | 86   | 82.7 | 89    | 86 | —  |   |   |
| 5        | 84                 | 81   | 74   | 68   | 71   | 77   | 83   | 86   | 86   | 85   | 85   | 84   | 84   | 83   | 84   | 85   | 86   | 87   | 85   | 83   | 85   | 86   | 86   | 86   | 82.7 | 89    | 86 | —  |   |   |
| 6 c      | 80                 | 79   | 74   | 70   | 71   | 76   | 80   | 82   | 82   | 83   | 84   | 84   | 84   | 84   | 84   | 85   | 85   | 85   | 84   | 85   | 85   | 86   | 87   | 86   | 81.8 | 87    | 86 | —  |   |   |
| 7        | 82                 | 76   | 75   | 74   | 74   | 78   | 80   | 83   | 83   | 82   | 82   | 81   | 81   | 81   | 82   | 81   | 81   | 81   | 86   | 83   | 83   | 83   | 83   | 83   | 81.0 | 87    | 83 | —  |   |   |
| 8        | 82                 | (80) | 77   | 72   | 73   | 81   | 86   | 85   | 84   | 85   | 85   | 86   | 86   | 85   | 87   | 87   | 88   | 88   | 88   | 87   | 87   | 86   | 87   | 87   | 82.9 | 88    | 86 | —  |   |   |
| 9 c      | 86                 | 83   | (77) | 71   | 71   | 76   | 80   | 86   | 85   | 83   | 83   | 84   | 84   | 84   | 85   | 85   | 85   | 84   | 84   | 86   | 84   | 86   | 84   | 87   | 82.6 | 86    | 84 | —  |   |   |
| 10 c     | 84                 | 74   | 72   | 72   | 76   | 79   | 81   | 83   | (81) | 82   | 83   | 83   | 83   | 83   | 84   | 84   | 87   | 86   | 86   | 86   | 86   | 86   | 86   | 87   | 82.3 | 86    | 86 | —  |   |   |
| 11       | 82                 | 72   | 69   | 69   | 73   | 79   | 81   | 82   | 84   | 84   | 84   | 84   | 85   | 84   | 86   | 86   | 86   | 86   | 85   | 84   | 85   | 84   | 86   | 86   | 81.9 | 88    | 86 | —  |   |   |
| 12       | 81                 | 75   | 72   | 69   | 72   | 74   | 79   | 79   | 81   | 80   | 79   | 80   | 82   | (82) | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  | —  | — |   |
| 13       | 79                 | (75) | 69   | 67   | 70   | 77   | 81   | 85   | 84   | 81   | 80   | 81   | 81   | 81   | 83   | 84   | 85   | 85   | 84   | 85   | 84   | 84   | 85   | 84   | 81.5 | —     | —  | —  | — |   |
| 14 d     | 79                 | 74   | 69   | 66   | 66   | 72   | 73   | 74   | 77   | 74   | 80   | 82   | 86   | 89   | 81   | 83   | 83   | 83   | 86   | 85   | 86   | 85   | 85   | 86   | 79.4 | 90    | 85 | —  | — |   |
| 15 d     | 86                 | 83   | 81   | 78   | 75   | 77   | 81   | 87   | 87   | 83   | 87   | 87   | 87   | 90   | 89   | 88   | 89   | 89   | 91   | 91   | 90   | 85   | 87   | 89   | 85.7 | 94    | 75 | —  | — |   |
| 16 d     | 85                 | 77   | 72   | 66   | 68   | 71   | 77   | 81   | 83   | 87   | 85   | 88   | 88   | 88   | 87   | 90   | 88   | 86   | 90   | 87   | 84   | 85   | 85   | 85   | 82.6 | 91    | 84 | —  | — |   |
| 17 d     | 79                 | 75   | (71) | 67   | 69   | 72   | 74   | 78   | 78   | 81   | 81   | 81   | 81   | 86   | 84   | 86   | 85   | 86   | 86   | 86   | 84   | 84   | 86   | 88   | 80.5 | 89    | 87 | —  | — |   |
| 18       | 88                 | 80   | 75   | 71   | 70   | 70   | 75   | 81   | 83   | 82   | 86   | 85   | 85   | 88   | 86   | 84   | 83   | 86   | 85   | 87   | 86   | 85   | 88   | 88   | 82.6 | 88    | 88 | —  | — |   |
| 19       | 85                 | 79   | 73   | 71   | 72   | 76   | 77   | 81   | 85   | 82   | 83   | 84   | 84   | 85   | 86   | 86   | 86   | 88   | 88   | 88   | 88   | 87   | 87   | 88   | 82.6 | 90    | 88 | —  | — |   |
| 20       | 86                 | 81   | 77   | 70   | 69   | 75   | 82   | 82   | 82   | 83   | 83   | 83   | 83   | 84   | 84   | 84   | 86   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 83.0 | 90    | 88 | —  | — |   |
| 21       | 81                 | 77   | 73   | 69   | 70   | 75   | 81   | 85   | 83   | 81   | 83   | 82   | 83   | 84   | 84   | 84   | 85   | 84   | 84   | 84   | 84   | 85   | 84   | 86   | 81.3 | 86    | 84 | —  | — |   |
| 22 c     | 83                 | 79   | 71   | 70   | 75   | 77   | 78   | 80   | 83   | 82   | 83   | 84   | 85   | 84   | 84   | 85   | 85   | 87   | 88   | 87   | 86   | 87   | 86   | 87   | 82.3 | 88    | 87 | —  | — |   |
| 23       | 82                 | 79   | 75   | 75   | 76   | 79   | 88   | 86   | 84   | 83   | 83   | 83   | 83   | 82   | 83.  | 85   | 86   | 86   | 85   | 85   | 86   | 86   | 85   | 86   | 82.7 | 87    | 85 | —  | — |   |
| 24 c     | 82                 | 74   | 70   | 67   | 68   | 71   | 76   | 81   | 82   | 80   | 79   | 80   | 80   | 80   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 82   | 82   | 86   | 78.6  | 85 | 87 | — | — |
| 25       | 82                 | 78   | 74   | —    | 75   | 75   | 79   | 83   | 79   | 79   | 80   | 78   | 79   | 80   | 81   | 82   | 87   | 84   | 83   | 84   | 84   | 84   | 82   | 82   | 80.1 | 87    | 71 | —  | — |   |
| 26       | 77                 | 73   | 73   | 74   | 73   | 77   | 80   | 80   | 80   | 80   | 81   | 81   | 81   | 82   | 83   | 83   | 83   | 83   | 83   | 83   | 83   | 83   | 84   | 83   | 80.1 | 85    | 84 | —  | — |   |
| 27       | 83                 | 78   | (69) | 67   | 67   | 69   | 76   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 82   | 82   | 82   | 82   | 83   | 83   | 83   | 83   | 83   | 82   | 79.0 | 83    | 82 | —  | — |   |
| 28       | 76                 | 76   | 71   | 71   | 73   | 75   | 78   | 80   | 78   | 76   | 78   | 79   | 81   | 81   | 80   | 82   | 84   | 85   | 84   | 82   | 82   | 82   | 83   | 83   | 79.2 | 86    | 86 | —  | — |   |
| 29       | 81                 | 74   | (68) | (68) | 64   | 69   | 76   | 76   | 74   | 76   | 78   | 81   | 81   | 81   | 81   | 82   | 85   | 84   | 81   | 82   | 81   | 81   | 81   | 81   | 77.6 | 86    | 82 | —  | — |   |
| 30       | 84                 | 81   | 75   | 73   | 75   | 81   | 83   | 82   | 78   | 78   | 79   | 81   | 82   | 83   | 84   | 84   | 84   | 84   | 84   | 84   | 83   | 83   | 84   | 84   | 81.5 | 85    | 84 | —  | — |   |
| 31       | —                  | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  | —  | — |   |
| mean     | 82.5               | 77.4 | 72.9 | 69.9 | 71.1 | 74.9 | 78.9 | 81.7 | 81.8 | 81.4 | 82.4 | 83.0 | 83.5 | 84.1 | 84.2 | 84.7 | 85.3 | 85.1 | 85.3 | 84.9 | 84.7 | 84.5 | 85.0 | 85.6 | 81.5 | —     | —  | —  | — |   |
| σ c      | 83.0               | 77.8 | 72.8 | 70.0 | 72.2 | 75.8 | 79.0 | 82.4 | 82.6 | 82.0 | 82.4 | 83.0 | 83.2 | 83.0 | 83.8 | 84.0 | 84.6 | 84.4 | 84.6 | 85.0 | 84.2 | 85.0 | 85.2 | 86.2 | 81.5 | —     | —  | —  | — |   |
| σ d      | 82.2               | 76.4 | 72.2 | 68.4 | 68.6 | 72.0 | 75.4 | 79.6 | 80.8 | 81.4 | 83.8 | 85.4 | 86.0 | 86.2 | 86.4 | 87.0 | 86.0 | 86.0 | 86.3 | 86.8 | 86.0 | 85.3 | 86.3 | 86.2 | 81.9 | —     | —  | —  | — |   |
| 84.5     | 78.8               | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  | —  | — |   |

Table 88.

Vertical Intensity 35900γ<sup>+</sup>.....γ

December 1982.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| Day    | 84   | 77   | 70   | 67   | 71   | 77   | 81   | 83   | 79   | 79   | 80   | 80   | 82   | 82   | 84   | 85   | 85   | 87   | 86   | 85   | 83   | 83   | 84   | 86   | 81.0 | 85   | 66   | 19    |    |
| 1      | 84   | 81   | 75   | 68   | 71   | 73   | 76   | 83   | 81   | 80   | 80   | 82   | 82   | 83   | 83   | 83   | 84   | 84   | 85   | 87   | 86   | 84   | 84   | 86   | 81.0 | 86   | 67   | 19    |    |
| 2      | 84   | 78   | 75   | 71   | 74   | 75   | 78   | 82   | 82   | 81   | 83   | 82   | 83   | 85   | 86   | 86   | 86   | 86   | 85   | 85   | 85   | 85   | 85   | 87   | 82.0 | 86   | 70   | 16    |    |
| 3      | 84   | 81   | 74   | 70   | 74   | 78   | 80   | 79   | 80   | 79   | 80   | 81   | 82   | 81   | 82   | 82   | 84   | 84   | 83   | 82   | 82   | 84   | 83   | 86   | 80.6 | 88   | 70   | 18    |    |
| 4      | 85   | (80) | 74   | 70   | 67   | 72   | 79   | 83   | 83   | 81   | 81   | 82   | 83   | 83   | 83   | 83   | 83   | 83   | 82   | 82   | 82   | 82   | 82   | 86   | 80.4 | 86   | 67   | 19    |    |
| 5 c    | 86   | 84   | 74   | 72   | 71   | 75   | 79   | 77   | 77   | 77   | 77   | 77   | 80   | 79   | 80   | 81   | 81   | 82   | 80   | 80   | 80   | 80   | 81   | 83   | 78.8 | 84   | 71   | 18    |    |
| 6      | 80   | 75   | 73   | 73   | 72   | 73   | 76   | 81   | 80   | 80   | 81   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 81   | 81   | 81   | 79.5 | 83   | 72   | 11    |    |
| 7 c    | 81   | 80   | 77   | 74   | 74   | 73   | 71   | 77   | 80   | 80   | 78   | 77   | 76   | 81   | 83   | 84   | 84   | 84   | 84   | 81   | 82   | 82   | 83   | 82   | 79.3 | 85   | 70   | 15    |    |
| 8 d    | 80   | 80   | 76   | 74   | 71   | 72   | 75   | 76   | 77   | 77   | 78   | 80   | 81   | 82   | 83   | 83   | 86   | 87   | 84   | 86   | 84   | 83   | 83   | 83   | 80.2 | 87   | 70   | 17    |    |
| 9      | 80   | 80   | 76   | 74   | 71   | 72   | 75   | 76   | 77   | 77   | 78   | 80   | 81   | 82   | 83   | 83   | 86   | 87   | 84   | 86   | 84   | 83   | 83   | 83   | 80.2 | 85   | 70   | 17    |    |
| 10     | 84   | 80   | 77   | 77   | 77   | 79   | 79   | 81   | 80   | 80   | 79   | 80   | 81   | 81   | 81   | 81   | 80   | 82   | 82   | 82   | 84   | 83   | 81   | 81   | 82   | 80.5 | 87   | 76    | 11 |
| 11     | 82   | 79   | 75   | 70   | 72   | 74   | 75   | 77   | 79   | 79   | 80   | 81   | 81   | 81   | 82   | 82   | 82   | 82   | 82   | 81   | 81   | 81   | 82   | 82   | 85   | 79.4 | 83   | 69    | 14 |
| 12 c   | 81   | 76   | 70   | 68   | 71   | 72   | 73   | 76   | 79   | 79   | 80   | 81   | 82   | 83   | 83   | 82   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 78.5 | 83   | 67    | 16 |
| 13     | 80   | 77   | 74   | 73   | 76   | 76   | 77   | 80   | 82   | 80   | 80   | 80   | 81   | 81   | 81   | 81   | 81   | 82   | 86   | 86   | 84   | 84   | 85   | 85   | 80.7 | 88   | 78   | 15    |    |
| 14 d   | 83   | 75   | 66   | 66   | 68   | 72   | 76   | 81   | 80   | 78   | 76   | 74   | 79   | (70) | 73   | 84   | 84   | 86   | 84   | 82   | 86   | 80   | 82   | 83   | 77.8 | 87   | 68   | 24    |    |
| 15 d   | 83   | 80   | 76   | 75   | 76   | 79   | 85   | 88   | 88   | 85   | 83   | 85   | 88   | 88   | 90   | 89   | 87   | 88   | 88   | 85   | 88   | 84   | 79   | 79   | 84.0 | 91   | 74   | 17    |    |
| 16 d   | 78   | 80   | 74   | 74   | 81   | 86   | 87   | 88   | 86   | 84   | 84   | 84   | 86   | 86   | 89   | 89   | 89   | 88   | 88   | 84   | 86   | 85   | 86   | 86   | 86   | 84.5 | 92   | 72    | 20 |
| 17 d   | 84   | 75   | 74   | 77   | 77   | 77   | 81   | 82   | 82   | 81   | 82   | 83   | 87   | 86   | 84   | 85   | 85   | 89   | 87   | 88   | 89   | 90   | 87   | 87   | 86   | 83.5 | 92   | 78    | 19 |
| 18     | 84   | 80   | 76   | 75   | 78   | 79   | 81   | 83   | 82   | 81   | 81   | 84   | 84   | 84   | 84   | 89   | 86   | 86   | 87   | 87   | 88   | 87   | 87   | 85   | 83.2 | 89   | 74   | 15    |    |
| 19     | 88   | 86   | 82   | 80   | 81   | 83   | 83   | 84   | 83   | 82   | 83   | 83   | 83   | 83   | 84   | 86   | 83   | 86   | 87   | 87   | 86   | 86   | 88   | 86   | 84.4 | 88   | 79   | 9     |    |
| 20     | 85   | 81   | 79   | 81   | 81   | 82   | 82   | 84   | 82   | 84   | 84   | 84   | 85   | 85   | 86   | 86   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 89   | 84.6 | 89   | 78   | 11    |    |
| 21 c   | 88   | 86   | 78   | 78   | 79   | 79   | 82   | 84   | 82   | 81   | 82   | 83   | 83   | 83   | 84   | 85   | 85   | 86   | 85   | 85   | 86   | 86   | 84   | 84   | 84   | 82.2 | 86   | 76    | 10 |
| 22     | 84   | 82   | 83   | 80   | 80   | 82   | 84   | 84   | 82   | 81   | 80   | 80   | 82   | 82   | 82   | 82   | 82   | 82   | 84   | 83   | 82   | 83   | 83   | 83   | 82   | 88   | 80   | 8     |    |
| 23 c   | 86   | 84   | 78   | 76   | 75   | 75   | 78   | 82   | 82   | 79   | 79   | 78   | 79   | 82   | 84   | 84   | 83   | 83   | 82   | 83   | 83   | 83   | 83   | 82   | 85   | 81.0 | 88   | 78    | 15 |
| 24     | 88   | 84   | 77   | 77   | 79   | 80   | 81   | 82   | 82   | 80   | 80   | 79   | 81   | 82   | 81   | 81   | 81   | 81   | 82   | 83   | 83   | 82   | 82   | 82   | 82   | 81.4 | 88   | 76    | 12 |
| 25     | 83   | 79   | 72   | 72   | 74   | 75   | 81   | 84   | 84   | 79   | 79   | 79   | 79   | 79   | 80   | 80   | 79   | 81   | 81   | 81   | 81   | 80   | 82   | 81   | 84   | 79.6 | 87   | 71    | 16 |
| 26     | 86   | 80   | 79   | 81   | 83   | 81   | 83   | 84   | 79   | 81   | 82   | 83   | 83   | 83   | 83   | 84   | 84   | 84   | 84   | 85   | 83   | 80   | 82   | 82   | 82   | 82.5 | 86   | 79    | 7  |
| 27     | 79   | 73   | 68   | 69   | 76   | 73   | 82   | 85   | 82   | 84   | 83   | 82   | 85   | 86   | 85   | 86   | 86   | 88   | 87   | 86   | 87   | 87   | 87   | 88   | 89   | 82.7 | 90   | 67    | 28 |
| 28     | 87   | 81   | 78   | 78   | 77   | 78   | 82   | 86   | 86   | 84   | 84   | 85   | 86   | 86   | 86   | 85   | 90   | 88   | 89   | 86   | 87   | 86   | 87   | 85   | 84.3 | 91   | 73   | 18    |    |
| 29     | 85   | 82   | —    | —    | —    | —    | 82   | 85   | 85   | 83   | 84   | 85   | 85   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 85   | 86   | 86   | —    | —    | 89   | 75    | 14 |
| 30     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | 80   | 81   | 83   | 84   | 85   | 84   | 85   | 86   | 86   | 86   | 87   | 85   | 83   | 83   | 84   | —    | —    | —     | —  |
| 31     | 85   | 88   | 80   | (80) | 80   | 81   | 82   | 85   | 83   | 83   | 83   | 83   | 83   | 85   | 85   | 85   | 86   | 87   | 84   | 86   | 85   | 85   | 84   | 84   | 83.6 | —    | —    | —     | —  |
| mean   | 83.7 | 79.7 | 75.3 | 73.8 | 75.4 | 77.3 | 79.7 | 82.2 | 81.6 | 80.7 | 80.9 | 81.3 | 82.5 | 83.2 | 83.7 | 84.1 | 84.6 | 84.8 | 84.4 | 84.4 | 84.2 | 83.6 | 83.5 | 84.1 | 81.6 | —    | —    | —     | —  |
| σ c    | 84.0 | 80.2 | 74.6 | 73.0 | 72.8 | 74.4 | 77.6 | 81.2 | 81.2 | 80.0 | 80.6 | 81.2 | 81.8 | 82.8 | 83.4 | 83.2 | 83.2 | 82.8 | 82.4 | 82.8 | 82.6 | 82.2 | 82.0 | 83.0 | 80.6 | —    | —    | —     | —  |
| σ d    | 81.8 | 76.6 | 73.4 | 73.2 | 75.2 | 78.2 | 80.2 | 83.2 | 82.8 | 82.8 | 81.6 | 80.6 | 83.2 | 82.8 | 83.8 | 86.2 | 86.4 | 87.4 | 85.8 | 84.6 | 86.4 | 83.8 | 83.2 | 83.2 | 81.8 | —    | —    | —     | —  |
| σ d    | 81.8 | 77.6 | 73.4 | 73.2 | 75.2 | 78.2 | 80.2 | 83.2 | 82.8 | 82.8 | 81.6 | 80.6 | 83.2 | 82.8 | 83.8 | 86.2 | 86.4 | 87.4 | 85.8 | 84.6 | 86.4 | 83.8 | 83.2 | 83.2 | 81.8 | —    | —    | —     | —  |

Table 34.

## Vertical Intensity

33900γ + .....γ

January 1938.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | Mean | Max. | Min. Range |    |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|----|
| 1 d    | 84   | 79   | 77   | 80   | 81   | 84   | 85   | 84   | 84   | 85   | 84   | 85   | 86   | 86   | 88   | 89   | 85   | 87   | 88   | 90   | 89   | 88   | 86   | 85   | 88   | 85.0 | 91   | 76         | 15 |
| 2      | 88   | 83   | (78) | 79   | 83   | 86   | 92   | 88   | 85   | 88   | 86   | 86   | 90   | 90   | 89   | 90   | 89   | 89   | 90   | 91   | 91   | 89   | 91   | 92   | 87.8 | 95   | 78   | 20         |    |
| 3      | 92   | 84   | 75   | 82   | 89   | 88   | 88   | 87   | 90   | 90   | 89   | 89   | 89   | 89   | 91   | 90   | 89   | 90   | 89   | 89   | 88   | 88   | 89   | 89   | 88.2 | 91   | 75   | 16         |    |
| 4 c    | 90   | 89   | 81   | 77   | 76   | 79   | 83   | 87   | 88   | 88   | 88   | 87   | 88   | 88   | 88   | 89   | 87   | 88   | 89   | 88   | 88   | 88   | 88   | 89   | 86.8 | 90   | 76   | 14         |    |
| 5 c    | 90   | 88   | (75) | 75   | 74   | 77   | 80   | 85   | 88   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 86   | 86   | 86   | 86   | 87   | 84.8 | 92   | 78   | 19         |    |
| 6      | 90   | 86   | 77   | 74   | 76   | 81   | 83   | 86   | 88   | 84   | 80   | 80   | 83   | 86   | 92   | 89   | 88   | 88   | 89   | 88   | 89   | 89   | 89   | 90   | 85.2 | 92   | 78   | 19         |    |
| 7      | 89   | 81   | 77   | 78   | 80   | 81   | 85   | 92   | 90   | 87   | 87   | 86   | 87   | 87   | 87   | 88   | 87   | 89   | 86   | 85   | 86   | 87   | 89   | 90   | 85.8 | 92   | 77   | 15         |    |
| 8      | 90   | 81   | 77   | 75   | 70   | 78   | 86   | 88   | 86   | 84   | 85   | 86   | 86   | 87   | 86   | 86   | 86   | 86   | 87   | 86   | 86   | 86   | 87   | 89   | 84.4 | 90   | 70   | 20         |    |
| 9      | 88   | 86   | 83   | 78   | 79   | 80   | 81   | 82   | 83   | 83   | 84   | 85   | 85   | 86   | 86   | 86   | 84   | 85   | 86   | 87   | 87   | 87   | 86   | 88   | 84.4 | 89   | 77   | 12         |    |
| 10 c   | 89   | 81   | 74   | 70   | 73   | 74   | 80   | 88   | 86   | 83   | 84   | 85   | 85   | 86   | 86   | 86   | 84   | 85   | 86   | 87   | 87   | 86   | 86   | 88   | 83.5 | 89   | 70   | 19         |    |
| 11 c   | 86   | 80   | 78   | 72   | 74   | 80   | 86   | 89   | 85   | 83   | 83   | 84   | 85   | 85   | 86   | 87   | 86   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 84.2 | 89   | 71   | 18         |    |
| 12     | 87   | 78   | 84   | 67   | 73   | 75   | 78   | 84   | 85   | 84   | 82   | 83   | 84   | 85   | 86   | 85   | 85   | 85   | 85   | 85   | 85   | 85   | 85   | 86   | 82.4 | 87   | 66   | 21         |    |
| 13     | 86   | 77   | 70   | 71   | 77   | 81   | 84   | 85   | 84   | 83   | 82   | 82   | 82   | 83   | 84   | 84   | 85   | 85   | 85   | 85   | 84   | 85   | 84   | 84   | 88   | 82.2 | 88   | 69         | 19 |
| 14     | 85   | 79   | 79   | 78   | 78   | 82   | 86   | 85   | 83   | 82   | 82   | 82   | 83   | 83   | 84   | 84   | 84   | 84   | 84   | 84   | 85   | 84   | 84   | 84   | 86   | 83.0 | 87   | 75         | 12 |
| 15     | 81   | 77   | (74) | (74) | (74) | 74   | 74   | 79   | 76   | 74   | 85   | 88   | 89   | 90   | 89   | 89   | 89   | 89   | 90   | 89   | 90   | 89   | 88   | 91   | 83.4 | 92   | 70   | 22         |    |
| 16     | 91   | 86   | 81   | 79   | 82   | 83   | 81   | 83   | 83   | 79   | 83   | 87   | 86   | 87   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 87   | 87   | 85.8 | 91   | 79   | 12         |    |
| 17     | 86   | 82   | 71   | 70   | 80   | 89   | 90   | 89   | 85   | 81   | 81   | 83   | 83   | 85   | 84   | 84   | 85   | 84   | 85   | 84   | 84   | 84   | 84   | 84   | 87   | 83.2 | 91   | 67         | 24 |
| 18     | 83   | 73   | 74   | 77   | 86   | 88   | 90   | 88   | 84   | 83   | 83   | 83   | 83   | 83   | 83   | 84   | 84   | 84   | 84   | 85   | 85   | 84   | 85   | 87   | 83.4 | 90   | 72   | 18         |    |
| 19 d   | 83   | 75   | 68   | 66   | 68   | 75   | 81   | 78   | 80   | 81   | 81   | 82   | 83   | 80   | 78   | 80   | 86   | 86   | 85   | 87   | 88   | 87   | 87   | 86   | 80.4 | 88   | 66   | 22         |    |
| 20     | 85   | 83   | 80   | 79   | 79   | 74   | 79   | 82   | 83   | 83   | 84   | 86   | 85   | 86   | 86   | 87   | 87   | 87   | 88   | 88   | 87   | 87   | 87   | 87   | 90   | 84.2 | 91   | 72         | 18 |
| 21 c   | 87   | 82   | 78   | 72   | 72   | 77   | 81   | 84   | 84   | 82   | 82   | 82   | 83   | 82   | 82   | 83   | 83   | 83   | 84   | 84   | 84   | 84   | 84   | 86   | 81.6 | 86   | 71   | 15         |    |
| 22 d   | 84   | 78   | 70   | 66   | 68   | 78   | 84   | 85   | 80   | 79   | 80   | 82   | 83   | 84   | 85   | 85   | 85   | 85   | 84   | 82   | 81   | 81   | 84   | 84   | 80.6 | 86   | 66   | 20         |    |
| 23     | 84   | 76   | 71   | 74   | 82   | 86   | 88   | 90   | 88   | 84   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 85   | 86   | 84.4 | 91   | 71   | 20         |    |
| 24     | 85   | 75   | 71   | 69   | 70   | 77   | 84   | 87   | 86   | 84   | 84   | 84   | 84   | 85   | 85   | 85   | 85   | 84   | 83   | 83   | 83   | 83   | 83   | 85   | 81.0 | 90   | 69   | 21         |    |
| 25     | 85   | 77   | 67   | 70   | 74   | 76   | 80   | (81) | 81   | 81   | 82   | 83   | 84   | 84   | 87   | 86   | 82   | 84   | 83   | 84   | 84   | 84   | 83   | 87   | 81.2 | 88   | 67   | 21         |    |
| 26     | 85   | 78   | 78   | 73   | 75   | 73   | 79   | 83   | 84   | 83   | 84   | 84   | 84   | (82) | 85   | 85   | 85   | 82   | 83   | 85   | 83   | 83   | 82   | 87   | 81.6 | 85   | 75   | 12         |    |
| 27 d   | 84   | 81   | 79   | 76   | 74   | 75   | 75   | 80   | 82   | 81   | 80   | 84   | 82   | 86   | 84   | 87   | 84   | 84   | 86   | 81   | 80   | 79   | 80   | 83   | 81.1 | 87   | 73   | 14         |    |
| 28 d   | 82   | 80   | 80   | 77   | 81   | 79   | 77   | 79   | 81   | 78   | 83   | 82   | 85   | 86   | 87   | 81   | 85   | 83   | 83   | 84   | 82   | 81   | 82   | 83   | 81.7 | 87   | 76   | 11         |    |
| 29     | 79   | 80   | 72   | 72   | 75   | 78   | 80   | 83   | 81   | 81   | 81   | 81   | 82   | 84   | 82   | 83   | 85   | 84   | 85   | 85   | 85   | 85   | 85   | 85   | 81.4 | 86   | 71   | 15         |    |
| 30     | 82   | 76   | 72   | 72   | 77   | 82   | 80   | 82   | 81   | 81   | 84   | 84   | 85   | 84   | 85   | 85   | 87   | 84   | 85   | 85   | 85   | 85   | 83   | 84   | 82.1 | 87   | 71   | 16         |    |
| 31     | 78   | 70   | 63   | 63   | 66   | 74   | 83   | 86   | 84   | 82   | 82   | 83   | 82   | 82   | 84   | 83   | 84   | 84   | 84   | 84   | 84   | 84   | 85   | 85   | 80.2 | 89   | 65   | 26         |    |
| mean   | 85.8 | 80.0 | 75.2 | 73.7 | 76.3 | 79.5 | 82.5 | 84.9 | 84.3 | 82.7 | 83.6 | 84.1 | 84.4 | 85.3 | 85.8 | 85.9 | 85.8 | 85.8 | 86.0 | 85.9 | 85.7 | 85.3 | 85.6 | 87.2 | 83.4 | —    | —    | —          | —  |
| σ c    | 87.4 | 82.0 | 77.0 | 73.2 | 73.8 | 77.4 | 82.0 | 86.6 | 86.8 | 85.0 | 84.8 | 85.0 | 85.6 | 85.6 | 85.8 | 86.4 | 86.2 | 86.0 | 86.6 | 86.4 | 86.2 | 86.2 | 86.2 | 87.2 | 83.7 | —    | —    | —          | —  |
| σ d    | 82.4 | 78.6 | 74.8 | 73.0 | 74.4 | 78.2 | 80.4 | 81.4 | 81.4 | 80.6 | 81.8 | 82.8 | 83.6 | 84.4 | 84.4 | 84.4 | 85.0 | 84.6 | 85.2 | 84.8 | 84.0 | 83.2 | 83.8 | 84.6 | 81.8 | —    | —    | —          | —  |
|        | 83.6 | 80.4 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |            |    |

Table 35.

Vertical Intensity 33900γ + .....γ

February 1932.

| G.M.T.<br>Day | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| 1             | 85   | 77   | 71   | 71   | 73   | 75   | 75   | 73   | 81   | 81   | 82   | 82   | 84   | 83   | 83   | 83   | 83   | 83   | 83   | 84   | 84   | 84   | 85   | 87   | 80.8 | 87   | 63   | 18    |    |
| 2             | 75   | 63   | 59   | 59   | 63   | 69   | 75   | 81   | 82   | 77   | 79   | 82   | 82   | 84   | 83   | 82   | 85   | 82   | 81   | 83   | 83   | 83   | 85   | 89   | 77.8 | 89   | 59   | 30    |    |
| 3             | 85   | 83   | 75   | 70   | 72   | 78   | 80   | 81   | 81   | 81   | 81   | 81   | 80   | 81   | 81   | 81   | 83   | 83   | 82   | 83   | 83   | 83   | 83   | 86   | 80.7 | 87   | 70   | 17    |    |
| 4             | 83   | 68   | 59   | 58   | 60   | 61   | 68   | 74   | 80   | 79   | 77   | 80   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | 88   | 57   | 26    |    |
| 5             | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 6 c           | —    | —    | —    | 73   | 76   | 74   | 73   | 77   | 81   | 81   | 81   | 81   | 83   | 84   | 84   | 84   | 85   | 85   | 85   | 85   | 85   | 86   | 86   | 88   | —    | —    | —    | —     |    |
| 7             | 82   | 79   | 77   | 78   | 78   | 81   | 81   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 8             | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 9             | 86   | 81   | 75   | 72   | 74   | 78   | 73   | 81   | 82   | 83   | 84   | 85   | 86   | 83   | 86   | 84   | 87   | 88   | 88   | 86   | 85   | 87   | 86   | 89   | 83.1 | 89   | 71   | 18    |    |
| 10            | 85   | 81   | 78   | 78   | 81   | 85   | 87   | 87   | 85   | 83   | 85   | 85   | 85   | 86   | 86   | 85   | 86   | 86   | 86   | 85   | 84   | 85   | 86   | 88   | 84.5 | 88   | 78   | 10    |    |
| 11 c          | 83   | (77) | 71   | 68   | 76   | 84   | 85   | 85   | 85   | 83   | 83   | 82   | 84   | 84   | 84   | 85   | 85   | 84   | 84   | 84   | 84   | 85   | 86   | 89   | 82.6 | 89   | 66   | 23    |    |
| 12            | 77   | 63   | —    | —    | —    | —    | —    | —    | —    | —    | —    | 79   | 81   | 81   | 85   | 85   | 83   | 84   | 84   | 84   | 84   | 84   | 85   | 85   | —    | —    | —    | —     |    |
| 13 c          | 78   | 68   | 66   | —    | —    | 78   | 84   | 85   | 83   | 81   | 81   | 82   | 84   | 84   | 84   | 85   | 85   | 85   | 86   | (87) | —    | —    | —    | —    | —    | 87   | 65   | 22    |    |
| 14            | —    | —    | —    | 66   | 72   | 77   | 83   | 87   | 86   | 82   | 82   | 81   | 81   | 84   | 85   | 87   | 87   | 87   | 87   | 87   | 86   | 85   | 84   | 86   | —    | —    | 87   | 66    | 21 |
| 15            | 82   | 75   | 72   | 74   | 75   | 78   | 84   | 85   | 83   | 78   | 82   | 84   | 82   | 85   | 85   | 85   | 86   | 89   | 86   | 82   | 84   | 84   | 85   | 82   | 81.9 | 89   | 72   | 17    |    |
| 16 c          | 81   | 76   | 73   | 73   | 75   | 77   | 81   | 80   | 83   | 80   | 84   | 85   | 87   | 86   | 87   | 87   | 87   | 87   | 87   | 87   | 88   | 89   | 88   | 89   | 88.3 | 90   | 72   | 18    |    |
| 17 c          | 88   | 83   | 75   | 69   | 77   | 81   | 84   | 85   | 85   | (85) | 85   | 85   | 85   | 85   | 85   | 85   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 88.7 | 87   | 69   | 18    |    |
| 18            | 82   | 74   | 65   | 63   | 66   | 74   | 76   | 80   | 81   | 82   | 83   | 83   | 82   | 83   | 83   | 84   | 84   | 84   | 83   | 83   | 83   | 82   | 84   | 83   | 79.5 | 84   | 63   | 21    |    |
| 19 d          | 77   | 73   | 67   | 67   | 72   | 77   | 81   | 81   | 81   | 83   | 84   | 79   | 76   | 78   | 80   | 91   | 88   | 88   | 88   | 88   | 88   | 83   | 84   | 87   | 89   | 81.1 | 90   | 65    | 25 |
| 20            | 85   | 83   | 82   | 84   | 84   | 83   | 82   | 82   | 85   | 86   | 85   | 88   | 89   | 91   | 88   | 89   | 89   | 89   | 89   | 89   | 89   | 88   | 88   | 87   | 86   | 96.3 | 91   | 81    | 10 |
| 21 d          | 82   | 81   | 76   | 69   | 65   | 74   | 82   | 86   | 86   | 86   | 87   | 88   | 87   | 91   | 88   | 92   | 88   | 87   | 86   | 90   | 89   | 89   | 85   | 88   | 84.3 | 92   | 65   | 27    |    |
| 22 d          | 82   | 82   | 79   | 74   | 77   | 79   | 81   | 85   | 88   | 88   | 88   | 89   | 89   | 91   | 91   | 92   | 88   | 86   | 88   | 88   | 86   | 84   | 85   | 85   | 86.2 | 92   | 74   | 18    |    |
| 23 d          | 83   | 85   | 80   | 73   | 76   | 80   | 82   | 79   | 80   | 86   | 87   | 89   | 89   | 89   | 92   | 89   | 89   | 89   | 86   | 86   | 86   | 86   | 84   | 86   | 84.6 | 94   | 72   | 22    |    |
| 24 d          | 87   | 84   | 84   | 81   | 79   | 82   | 84   | 84   | 84   | 85   | 89   | 86   | 90   | 88   | 89   | 90   | 92   | 93   | 93   | 88   | 84   | 87   | 83   | 87   | 86.4 | 94   | 78   | 16    |    |
| 25            | 87   | 84   | 80   | 75   | 74   | 81   | 82   | 81   | 84   | 84   | 88   | 87   | 85   | 90   | 89   | 91   | 90   | 90   | 89   | 89   | 89   | 86   | 85   | 85   | 85.0 | 91   | 74   | 17    |    |
| 26            | 82   | 78   | —    | —    | —    | —    | 84   | 84   | 86   | 86   | 86   | 86   | 85   | 87   | 90   | 88   | 88   | 88   | 88   | 87   | 87   | 85   | 84   | 84   | —    | —    | —    | —     |    |
| 27            | 78   | 73   | 64   | 57   | 65   | 74   | 80   | 80   | 84   | 82   | 82   | 83   | 84   | 84   | 86   | 86   | 87   | 87   | 86   | 85   | 85   | 85   | 84   | 81   | 80.1 | 87   | 57   | 30    |    |
| 28            | 78   | 75   | 71   | 69   | 72   | 78   | 84   | 86   | 87   | 85   | 86   | 87   | 87   | 87   | 87   | 87   | 88   | 88   | 87   | 88   | 87   | 87   | 88   | 88   | 83.7 | 90   | 68   | 22    |    |
| 29            | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 30            | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 31            | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| mean          | 82.7 | 78.4 | 73.5 | 70.8 | 73.5 | 78.3 | 81.3 | 82.5 | 83.5 | 83.0 | 84.4 | 84.8 | 84.9 | 85.7 | 86.0 | 86.9 | 87.0 | 86.6 | 86.0 | 86.2 | 85.4 | 85.6 | 85.3 | 86.5 | 82.9 | —    | —    | —     |    |
| γ c           | 84.0 | 78.7 | 73.0 | 70.0 | 76.0 | 80.7 | 83.3 | 83.3 | 84.3 | 82.7 | 84.0 | 84.3 | 85.3 | 85.0 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 86.0 | 86.3 | 87.0 | 86.7 | 86.3 | 86.3 | 87.7 | —    | —     | —  |
| γ d           | 82.2 | 81.0 | 77.2 | 72.8 | 78.8 | 78.4 | 82.0 | 83.0 | 83.8 | 85.6 | 87.0 | 86.2 | 86.2 | 87.4 | 88.0 | 90.8 | 89.0 | 88.6 | 88.2 | 88.0 | 86.6 | 86.0 | 84.6 | 85.6 | 84.5 | —    | —    | —     | —  |
| 84.8          | 83.6 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |

Table 36.

Vertical Intensity

33900γ+.....γ

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March 1938.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 28   | Mean | Max. | Min. | Range |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Day 1  | 83   | 74   | 62   | 59   | 63   | 72   | 80   | 85   | 87   | 86   | 86   | 85   | 86   | 86   | 86   | 85   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 87   | 88   | 81.5 | 89   | 59   | 80    |
| 2      | 81   | 77   | 70   | 62   | 65   | 73   | 79   | 84   | 86   | 84   | 83   | 83   | 84   | 86   | 86   | 86   | 86   | 85   | 85   | 86   | 86   | 85   | 85   | 86   | 87   | 81.3 | 87   | 62   | 25    |
| 3      | 80   | 75   | 67   | 62   | 68   | 71   | 77   | 81   | 84   | 84   | 83   | 83   | 84   | 84   | 84   | 86   | 86   | 86   | 86   | 85   | 86   | 86   | 83   | 84   | 84   | 80.4 | 86   | 62   | 24    |
| 4      | 82   | 84   | (76) | 68   | 68   | 76   | 82   | 84   | 87   | 83   | 81   | 83   | 83   | 84   | 84   | 86   | 86   | 85   | 84   | 85   | 84   | 84   | 84   | 84   | 86   | 82.1 | 89   | 66   | 22    |
| 5 c    | 87   | 83   | 72   | 62   | 64   | 70   | 79   | 87   | 88   | 84   | 84   | 84   | 84   | 84   | 85   | 86   | 85   | 85   | 86   | 85   | 85   | 85   | 86   | 86   | 86   | 81.9 | 89   | 61   | 27    |
| 6 c    | 80   | 71   | (63) | 60   | 63   | 69   | 78   | 81   | 84   | 83   | 82   | 83   | 83   | 83   | 83   | 87   | 84   | 84   | 85   | 84   | 85   | 85   | 86   | 86   | 87   | 79.7 | 87   | 60   | 27    |
| 7 c    | 83   | 78   | 73   | 67   | 66   | 71   | 75   | 80   | 84   | 83   | 82   | 83   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 85   | 84   | 84   | 86   | 88   | 80.8 | 88   | 65   | 23    |
| 8      | 84   | 78   | 65   | 56   | 57   | 62   | 70   | 76   | 81   | 82   | 81   | 83   | 82   | 80   | 83   | 82   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 86   | 78.2 | 87   | 54   | 83    |
| 9 c    | 85   | 79   | 70   | 62   | 62   | 66   | 71   | 78   | 83   | 84   | 83   | 84   | 84   | 85   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 84   | 86   | 88   | 80.6 | 89   | 61   | 28    |
| 10     | 85   | 80   | 67   | 57   | 57   | 65   | 77   | 84   | 87   | 84   | 83   | 84   | 84   | 84   | 85   | 85   | 85   | 85   | 84   | 85   | 84   | 85   | 84   | 86   | 87   | 80.5 | 88   | 56   | 82    |
| 11     | 83   | 71   | 62   | 61   | 66   | 74   | 77   | 80   | 82   | 82   | 81   | 83   | 83   | 83   | 83   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 89   | 92   | 81.1 | 93   | 60   | 83    |
| 12     | 89   | 83   | 75   | 69   | 71   | 77   | 82   | 86   | 83   | 82   | 82   | 83   | 84   | 84   | 85   | 87   | 86   | 87   | 86   | 85   | 85   | 83   | 83   | 85   | 87   | 82.6 | 88   | 68   | 20    |
| 13     | 85   | 82   | 72   | 63   | 69   | 73   | 80   | 81   | 80   | 80   | 80   | 82   | 81   | 83   | 86   | 85   | 83   | 84   | 86   | 87   | 88   | 88   | 90   | 88   | 91   | 81.7 | 90   | 67   | 22    |
| 14     | 81   | 73   | 65   | 61   | 62   | 66   | 73   | 81   | 82   | 84   | 84   | 85   | 85   | 87   | 87   | 87   | 87   | 87   | 87   | 85   | 86   | 86   | 86   | 86   | 87   | 80.5 | 88   | 60   | 26    |
| 15     | 86   | 83   | 72   | 68   | 72   | 77   | 83   | 86   | (87) | 86   | 84   | 83   | 83   | 81   | 86   | 87   | 87   | 87   | 87   | 87   | 87   | 86   | 86   | 87   | 87   | 83.2 | 88   | 68   | 20    |
| 16 c   | 84   | 79   | 70   | 65   | 64   | 70   | 75   | 81   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 84   | 85   | 85   | 85   | 85   | 87   | 90   | 81.1 | 91   | 64   | 27    |
| 17     | 91   | 86   | 75   | 66   | 69   | 74   | 80   | 83   | 85   | 84   | 82   | 82   | 82   | 84   | 84   | 84   | 86   | 87   | 86   | 87   | 86   | 85   | 85   | 87   | 87   | 82.6 | 91   | 66   | 25    |
| 18 d   | 86   | 77   | 57   | 50   | 55   | 65   | 74   | 84   | 87   | 84   | 85   | 85   | 87   | 89   | 88   | 87   | 94   | 88   | 87   | 90   | 87   | 90   | 87   | 87   | 87   | 81.1 | 94   | 49   | 45    |
| 19 d   | 81   | 80   | 70   | 65   | 61   | 66   | 73   | 81   | 85   | 86   | 84   | 86   | 88   | 87   | 88   | 90   | 90   | 92   | 91   | 84   | 87   | 84   | 85   | 85   | 88   | 82.2 | 93   | 61   | 32    |
| 20 d   | 88   | 82   | 66   | 62   | 74   | 82   | 88   | 92   | 92   | 89   | 86   | 89   | 92   | 92   | 93   | 92   | 92   | 95   | 93   | 86   | 86   | 85   | 86   | 88   | 84   | 86.2 | 95   | 62   | 33    |
| 21     | 88   | 78   | 66   | 62   | 60   | 65   | 79   | 85   | 90   | 89   | 91   | 87   | 88   | 92   | 92   | 92   | 90   | 91   | 87   | 87   | 88   | 89   | 87   | 87   | 92   | 84.0 | 93   | 53   | 34    |
| 22     | 87   | (75) | 71   | 74   | 78   | 77   | 77   | 80   | 89   | 90   | 91   | 92   | 92   | 92   | 92   | 92   | 90   | 91   | 91   | 92   | 91   | 92   | 90   | 88   | 91   | 86.5 | 96   | 71   | 24    |
| 23 d   | 92   | 80   | 72   | 69   | 72   | 74   | 83   | 92   | 91   | 89   | 89   | 89   | 89   | 94   | 90   | 91   | 91   | 92   | 89   | 87   | 87   | 86   | 90   | 90   | 86.1 | 95   | 68   | 68   | 27    |
| 24 d   | 90   | 81   | 69   | 62   | 65   | 76   | 77   | 86   | 90   | 89   | 88   | 92   | 89   | 93   | 91   | 92   | 92   | 92   | 92   | 88   | 87   | 88   | 85   | 85   | 89   | 85.1 | 94   | 61   | 33    |
| 25     | 86   | 82   | 73   | 63   | 68   | 75   | 82   | 84   | 89   | 96   | 89   | 93   | 91   | 92   | 94   | 91   | 91   | 91   | 90   | 90   | 90   | 90   | 90   | 89   | 91   | 86.5 | 96   | 66   | 30    |
| 26     | 89   | 80   | 70   | 68   | 72   | 75   | 80   | 88   | 84   | 84   | 86   | 90   | 90   | 90   | 91   | 92   | 93   | 93   | 91   | 91   | 91   | 90   | 91   | 92   | 96   | 85.8 | 95   | 67   | 28    |
| 27     | 92   | 80   | 67   | 62   | 62   | 64   | 67   | 72   | 80   | 82   | 84   | 85   | 90   | 87   | 87   | 94   | 92   | 92   | 92   | 89   | 88   | 87   | 91   | 91   | 95   | 82.6 | 96   | 61   | 35    |
| 28     | 93   | 87   | 79   | 75   | 73   | 86   | 96   | 97   | 94   | 90   | 88   | 88   | 89   | 91   | 89   | 90   | 90   | 90   | 90   | 89   | 88   | 90   | 91   | 88   | 88.4 | 97   | 72   | 25   |       |
| 29     | 86   | 78   | 62   | 52   | 61   | 72   | 83   | 89   | 89   | 85   | 86   | 85   | 87   | 91   | 91   | 92   | 92   | 91   | 91   | 91   | 91   | 91   | 91   | 94   | 84.2 | 94   | 52   | 42   |       |
| 30     | 90   | 80   | 70   | 70   | 72   | 80   | 82   | 84   | 86   | 89   | 90   | 89   | 88   | 89   | 90   | 92   | 89   | 88   | 89   | 89   | 89   | 89   | 88   | 90   | 92   | 85.6 | 93   | 70   | 23    |
| 31     | 91   | 82   | 72   | 68   | 69   | 73   | 77   | 84   | 86   | 89   | 86   | 86   | 89   | 91   | 91   | 90   | 90   | 90   | 90   | 92   | 90   | 90   | 90   | 94   | 96   | 85.7 | 96   | 66   | 30    |
| mean   | 86.0 | 79.3 | 69.1 | 63.7 | 65.7 | 72.1 | 78.6 | 83.6 | 86.0 | 85.5 | 84.8 | 85.6 | 86.1 | 86.9 | 87.5 | 88.1 | 88.0 | 88.0 | 87.6 | 87.0 | 86.6 | 86.5 | 87.7 | 89.0 | 89.0 | 82.9 | -    | -    | -     |
| ∑ c    | 83.8 | 78.0 | 69.6 | 63.2 | 63.8 | 69.2 | 75.6 | 81.4 | 84.6 | 83.6 | 83.0 | 83.6 | 83.8 | 84.2 | 84.6 | 85.2 | 84.6 | 84.6 | 85.0 | 85.0 | 84.8 | 84.6 | 86.2 | 87.8 | 80.8 | -    | -    | -    | -     |
| ∑ d    | 87.4 | 80.0 | 66.8 | 61.6 | 65.4 | 72.6 | 79.0 | 87.0 | 89.0 | 87.4 | 86.4 | 88.2 | 89.0 | 91.2 | 90.0 | 90.4 | 91.8 | 91.6 | 90.4 | 87.0 | 86.6 | 86.2 | 87.0 | 89.4 | 84.2 | -    | -    | -    | -     |
|        | 86.6 | 80.6 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |

Table 37.

## Vertical Intensity

33900r+.....γ

April 1938.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | Mean | Max. | Min. | Range |    |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| Day    | 96   | 90   | 78   | 69   | 71   | 77   | 85   | 90   | 91   | 91   | 89   | 87   | 90   | 91   | 91   | 91   | 91   | 91   | 91   | 90   | 89   | 90   | 94   | 96   | 87.9 | 95   | 68   | 27    |    |
| 1      | 91   | 81   | 71   | 65   | 68   | 76   | 81   | 85   | 89   | 88   | 87   | 89   | 90   | 90   | 90   | 90   | 91   | 91   | 91   | 92   | 90   | 91   | 92   | 92   | 96   | 96   | 65   | 81    |    |
| 2      | 93   | 88   | 76   | 76   | 79   | 88   | 88   | 91   | 91   | 91   | 86   | 85   | 93   | 91   | 94   | 95   | 93   | 93   | 93   | 93   | 93   | 93   | 94   | 93   | 93   | 93   | 95   | 75    | 20 |
| 3      | 90   | 82   | 70   | 69   | 80   | 85   | 90   | 90   | 90   | 92   | 91   | 90   | 91   | 91   | 91   | 91   | 92   | 91   | 91   | 91   | 90   | 90   | 90   | 90   | 87.5 | 93   | 67   | 26    |    |
| 4      | 81   | 71   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 5      | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| 6      | —    | —    | —    | 75   | 80   | 85   | 86   | 89   | 89   | 89   | 90   | 90   | 92   | 93   | 93   | 94   | 94   | 93   | 92   | 92   | 92   | 92   | 93   | 98   | —    | 98   | 75   | 23    |    |
| 7      | 93   | 82   | 71   | 67   | 68   | 74   | 82   | 88   | 90   | 89   | 87   | 87   | 89   | 90   | 93   | 90   | 94   | 93   | 93   | 93   | 90   | 90   | 92   | 89   | 86.3 | 97   | 66   | 31    |    |
| 8      | 86   | 76   | 69   | 72   | 74   | 81   | 88   | 90   | 90   | 90   | 90   | 90   | 92   | 92   | 92   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 96   | 99   | 86.3 | 100  | 67   | 33    |    |
| 9      | 94   | 82   | 69   | 71   | 76   | 79   | 84   | 87   | 87   | 88   | 90   | 90   | 91   | 93   | 93   | 93   | 96   | 94   | 94   | 93   | 93   | 93   | 93   | 96   | 88.2 | 97   | 68   | 29    |    |
| 10     | 92   | 81   | 74   | 74   | 78   | 84   | 87   | 90   | 92   | 92   | 90   | 90   | 90   | 90   | 91   | 96   | 92   | 91   | 90   | 90   | 90   | 90   | 93   | 97   | 88.8 | 98   | 73   | 25    |    |
| 11 c   | 92   | 79   | 71   | 71   | 78   | 84   | 89   | 92   | 90   | 90   | 89   | 90   | 89   | 89   | 90   | 90   | 91   | 92   | 91   | 90   | 90   | 92   | 95   | 96   | 87.9 | 96   | 69   | 27    |    |
| 12 c   | 94   | 87   | 75   | 71   | 78   | 84   | 89   | 92   | 91   | 89   | 86   | 88   | 89   | 89   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 92   | 93   | 95   | 96   | 87.9 | 95   | 70    | 25 |
| 13 c   | 90   | 81   | 72   | 74   | 84   | 90   | 93   | 93   | 93   | 93   | 88   | 87   | 88   | 89   | 89   | 89   | 89   | 90   | 90   | 90   | 90   | 92   | 93   | 95   | 88.2 | 94   | —    | —     |    |
| 14     | 89   | 77   | 66   | 67   | 72   | 80   | 83   | 83   | 86   | 88   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 86   | 88   | 88   | 90   | 92   | 91   | 84.7 | 92   | 65   | 27    |    |
| 15 d   | 87   | 78   | 71   | 69   | 71   | 80   | 83   | 87   | 91   | 92   | 88   | 89   | 87   | 89   | 89   | 90   | 93   | 92   | 92   | 90   | 89   | 91   | 90   | 90   | 90   | 86.1 | 93   | 68    | 25 |
| 16 d   | 85   | 76   | 72   | 74   | 80   | 82   | 90   | 95   | 95   | 92   | 89   | 92   | 92   | 92   | 95   | 93   | 92   | 92   | 92   | 90   | 92   | 93   | 90   | 91   | 88.5 | 95   | 72   | 23    |    |
| 17 d   | 78   | 74   | 72   | 76   | 81   | 86   | 90   | 89   | 94   | 93   | 92   | 89   | 91   | 93   | 92   | 93   | 101  | 100  | 100  | 92   | 92   | 92   | 92   | 91   | 90   | 88.9 | 102  | 71    | 81 |
| 18     | 86   | 75   | 68   | 71   | 77   | 72   | 81   | 86   | 83   | 89   | 89   | 92   | 92   | 92   | 95   | 92   | 95   | 95   | 95   | 92   | 90   | 92   | 91   | 94   | 86.6 | 95   | 68   | 27    |    |
| 19 d   | 91   | 79   | 74   | 74   | 77   | 84   | 88   | 87   | 90   | 93   | 93   | 95   | 93   | 101  | 93   | 95   | 98   | 95   | 95   | 95   | 92   | 92   | 95   | 92   | 92   | 89.9 | 101  | 71    | 80 |
| 20     | 89   | 77   | 73   | 77   | 79   | 74   | 75   | 80   | 87   | 92   | 92   | 92   | 93   | 95   | 94   | 96   | 95   | 92   | 92   | 92   | 94   | 93   | 92   | 95   | 96   | 88.1 | 96   | 72    | 24 |
| 21     | 90   | 84   | 77   | 86   | 91   | 93   | 92   | 89   | 88   | 89   | 93   | 92   | 91   | 90   | 92   | 93   | 94   | 94   | 94   | 93   | 94   | 92   | 92   | 92   | 87   | 90.3 | 94   | 77    | 17 |
| 22     | 84   | 77   | 74   | 71   | 72   | 76   | 81   | 84   | 89   | 92   | 89   | 95   | 92   | 97   | 95   | 95   | 97   | 95   | 95   | 94   | 92   | 92   | 92   | 98   | 96   | 88.4 | 93   | 71    | 27 |
| 23     | 92   | 84   | 77   | 76   | 73   | 74   | 78   | 81   | 90   | 92   | 91   | 92   | 92   | 94   | 95   | 93   | 92   | 93   | 92   | 92   | 92   | 91   | 92   | 92   | 92   | 87.7 | 95   | 73    | 22 |
| 24     | 93   | 87   | 84   | 84   | 88   | 89   | 89   | 91   | 91   | 92   | 91   | 92   | 92   | 92   | 92   | 92   | 95   | 92   | 92   | 90   | 91   | 92   | 92   | 95   | 92   | 90.8 | 95   | 83    | 12 |
| 25     | 86   | 76   | 68   | 67   | 68   | 74   | 83   | 89   | 89   | 90   | 90   | 89   | 91   | 92   | 92   | 92   | 92   | 94   | 94   | 92   | 90   | 92   | 93   | 92   | 90   | 86.2 | 94   | 67    | 27 |
| 26     | 84   | 78   | 76   | 78   | 82   | 86   | 89   | 88   | 86   | 89   | —    | —    | —    | —    | 90   | 95   | 93   | 92   | 91   | 91   | —    | —    | 94   | 95   | 95   | —    | —    | —     | —  |
| 27     | 86   | 83   | 78   | 79   | 80   | 84   | 91   | 93   | 92   | 92   | 91   | 92   | 92   | 98   | 92   | 92   | 93   | 93   | 93   | 94   | 95   | 96   | 95   | 98   | 90.1 | 96   | 78   | 18    |    |
| 28 c   | 88   | 81   | 77   | 77   | 80   | 85   | 88   | 89   | 91   | 91   | 89   | 89   | 91   | 92   | 92   | 91   | 92   | 91   | 92   | 92   | 91   | 93   | 95   | 92   | 88.7 | 95   | 75   | 20    |    |
| 29 c   | 89   | 82   | 77   | 73   | 79   | 81   | 86   | 89   | 89   | 88   | 88   | 91   | 92   | 92   | 92   | 92   | 92   | 91   | 92   | 92   | 92   | 91   | 92   | 93   | 88.1 | 93   | 72   | 21    |    |
| 30 d   | 84   | 79   | 77   | 78   | 83   | 86   | 91   | 91   | 89   | 89   | 89   | 89   | 92   | 92   | 91   | 91   | 92   | 92   | 99   | 98   | 90   | 87   | 92   | 95   | 88.9 | 101  | 76   | 23    |    |
| 31     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     |    |
| mean   | 89.2 | 80.5 | 73.4 | 73.3 | 77.1 | 81.3 | 85.9 | 88.6 | 89.9 | 90.6 | 89.3 | 90.0 | 90.9 | 91.7 | 92.0 | 92.1 | 93.0 | 93.0 | 92.0 | 91.3 | 91.2 | 91.7 | 93.4 | 93.0 | 88.1 | —    | —    | —     | —  |
| γ c    | 90.6 | 82.0 | 74.4 | 73.2 | 79.8 | 84.8 | 89.0 | 91.0 | 90.8 | 89.2 | 87.8 | 89.2 | 90.0 | 90.2 | 90.6 | 90.4 | 90.6 | 91.0 | 91.0 | 90.8 | 90.2 | 91.8 | 94.0 | 94.6 | 88.2 | —    | —    | —     | —  |
| γ d    | 85.0 | 77.2 | 73.2 | 74.2 | 78.4 | 83.6 | 88.4 | 89.8 | 91.8 | 91.8 | 90.2 | 90.8 | 91.0 | 93.4 | 92.0 | 92.4 | 95.2 | 95.6 | 93.0 | 91.0 | 91.0 | 91.2 | 92.4 | 91.2 | 86.5 | —    | —    | —     | —  |
|        | 83.0 | 74.0 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —  |

May 1988.

Vertical Intensity 83900yr+.....Y

Table 88.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16    | 17    | 18    | 19   | 20   | 21    | 22   | 23   | Mean | Max. | Min. | Range |    |   |   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|------|------|-------|------|------|------|------|------|-------|----|---|---|
| Day    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |      |      |       |      |      |      |      |      |       |    |   |   |
| 1 d    | 77   | 68   | 70   | 74   | 75   | 82   | 89   | 88   | 91   | 90   | 92   | 92   | 95   | 100  | 90   | 90   | 98    | 95    | 93    | 95   | 97   | 92    | 93   | 86   | 88.1 | 106  | 67   | 39    |    |   |   |
| 2      | 78   | 63   | 73   | 79   | 84   | 92   | 93   | 94   | 95   | 95   | 98   | 97   | 96   | 97   | 98   | 98   | 98    | 99    | 98    | 97   | 96   | 95    | 96   | 98   | 92.0 | 99   | 62   | 36    |    |   |   |
| 3      | 98   | 80   | 84   | 84   | 86   | 86   | 92   | 92   | 92   | 96   | 95   | 95   | 95   | 95   | 96   | 96   | 96    | 96    | 95    | 96   | 95   | 100   | 98   | 98   | 93.5 | 100  | 82   | 17    |    |   |   |
| 4      | 86   | 81   | 78   | 78   | 83   | 82   | 92   | 93   | 90   | 92   | 90   | 92   | 95   | 96   | 95   | 95   | 96    | 95    | 97    | 97   | 95   | 98    | 94   | 89   | 90.5 | 98   | 77   | 21    |    |   |   |
| 5      | 88   | 82   | 88   | 88   | 89   | 90   | 86   | 89   | 92   | 92   | 92   | 93   | 96   | 96   | 99   | 99   | 99    | 99    | 99    | 96   | 96   | 97    | 99   | 100  | 98.1 | —    | —    | —     | —  |   |   |
| 6      | 98   | 98   | 90   | (82) | (85) | (85) | 89   | 88   | 92   | 95   | 93   | 94   | 99   | 97   | 100  | 97   | 98    | 99    | 100   | 98   | 98   | 101   | 99   | 97   | 94.6 | 103  | 87   | 16    |    |   |   |
| 7      | 88   | 85   | 88   | 91   | 91   | 91   | 87   | 88   | 94   | 97   | 98   | 98   | 98   | 98   | 98   | 99   | 98    | 98    | 98    | 98   | 99   | 101   | 102  | 99   | 95.1 | 102  | 82   | 19    |    |   |   |
| 8      | 93   | 86   | 82   | 82   | 86   | 87   | 90   | 93   | 95   | 93   | 93   | 92   | 95   | 96   | 97   | 96   | 98    | 98    | 99    | 98   | 98   | 100   | 102  | 95   | 93.5 | 102  | 81   | 21    |    |   |   |
| 9 c    | 87   | 83   | 81   | 84   | 90   | 92   | 89   | 90   | 92   | 92   | 93   | 95   | 96   | 95   | 97   | 96   | 98    | 98    | 96    | 97   | 98   | 101   | 100  | 93   | 93.0 | 101  | 80   | 21    |    |   |   |
| 10 c   | 81   | 71   | 69   | 77   | 86   | 92   | 91   | 92   | 90   | 92   | 94   | 94   | 96   | 96   | 98   | 96   | 95    | 95    | 96    | 96   | 96   | 99    | 99   | 94   | 90.8 | 100  | 69   | 31    |    |   |   |
| 11     | 88   | 80   | 75   | 80   | 84   | 87   | 87   | 92   | 95   | 98   | 94   | 95   | 96   | 95   | 96   | 98   | 96    | 95    | 96    | 95   | 96   | 99    | 99   | 96   | 91.8 | 99   | 74   | 25    |    |   |   |
| 12 c   | 92   | 87   | 77   | 77   | 79   | 86   | 87   | 88   | 89   | 92   | 94   | 93   | 93   | 91   | 92   | 94   | 94    | 94    | 94    | 94   | 94   | 96    | 97   | 94   | 90.3 | 97   | 75   | 22    |    |   |   |
| 13     | 85   | 81   | 74   | 67   | 65   | 70   | 79   | 85   | 88   | 88   | 90   | 90   | 93   | 95   | 97   | 96   | 96    | 96    | 97    | 97   | 94   | 94    | 96   | 95   | 87.8 | 99   | 65   | 34    |    |   |   |
| 14     | 87   | 83   | 81   | 85   | 82   | 86   | 93   | 96   | 93   | 92   | 90   | 91   | 95   | 95   | 97   | 96   | 97    | 97    | 97    | 97   | 97   | 98    | 97   | 95   | 92.4 | 99   | 80   | 19    |    |   |   |
| 15     | 95   | 91   | 88   | 91   | 90   | 93   | 103  | 104  | 101  | 100  | 97   | 97   | 100  | 101  | 101  | 101  | 101   | 101   | 100   | 100  | 100  | 100   | 99   | 98   | 98.0 | 106  | 87   | 19    |    |   |   |
| 16     | 96   | 95   | 92   | 93   | 92   | 96   | 99   | 99   | 100  | 98   | 95   | 96   | 97   | 101  | 99   | 99   | 99    | 99    | 100   | 98   | 99   | 100   | 101  | 101  | 97.6 | 102  | 91   | 11    |    |   |   |
| 17     | 96   | 92   | 86   | 87   | 89   | 92   | 97   | 98   | 95   | 98   | 98   | 98   | 98   | 98   | 98   | 101  | 99    | 100   | 100   | 99   | 97   | 98    | 93   | 91   | 95.9 | 101  | 85   | 16    |    |   |   |
| 18 d   | 86   | 84   | 89   | 87   | 90   | 87   | 94   | 92   | 98   | 101  | 101  | 100  | 100  | 98   | 101  | 103  | 102   | 102   | 101   | 100  | 101  | 101   | 100  | 96   | 96.4 | 105  | 83   | 22    |    |   |   |
| 19     | 94   | 90   | 86   | 93   | 85   | 85   | 91   | 93   | 92   | 94   | 95   | 97   | 96   | 96   | 97   | 94   | 96    | 97    | 98    | 96   | 97   | 99    | 96   | 90   | 93.2 | 99   | 82   | 17    |    |   |   |
| 20     | 81   | 72   | 68   | 69   | 72   | 82   | 90   | 95   | 96   | 97   | 94   | 94   | 95   | 97   | 98   | 99   | 100   | 101   | 98    | 97   | 98   | 101   | 97   | 91   | 90.9 | 102  | 66   | 36    |    |   |   |
| 21     | 90   | 88   | 85   | 85   | 83   | 91   | 92   | 95   | 96   | 94   | 96   | 97   | 98   | 98   | 96   | 96   | 96    | 96    | 96    | 98   | 98   | 101   | 102  | 97   | 87   | 93.9 | 103  | 82    | 21 |   |   |
| 22     | 82   | 78   | 76   | 80   | 83   | 90   | 93   | 95   | 95   | 94   | 94   | 96   | 97   | 98   | 97   | 98   | 97    | 98    | 96    | 97   | 98   | 101   | 101  | 96   | 93.0 | 102  | 76   | 26    |    |   |   |
| 23     | 86   | 77   | 77   | 82   | 89   | 93   | 95   | 96   | 96   | 96   | 95   | 96   | 97   | 97   | 98   | 98   | 98    | 97    | 98    | 98   | 98   | 103   | 102  | 95   | 94.0 | 104  | 76   | 28    |    |   |   |
| 24 c   | 87   | 82   | 86   | 86   | 87   | 92   | 96   | 99   | 99   | 96   | 96   | 96   | 97   | 96   | 97   | 99   | 100   | 102   | 100   | 100  | 100  | 102   | 98   | 85   | 95.1 | 102  | 81   | 21    |    |   |   |
| 25     | 73   | 60   | 61   | 70   | 76   | 79   | 87   | 93   | 96   | 96   | 96   | 96   | 97   | 96   | 96   | 97   | 98    | 99    | 100   | 99   | 101  | 99    | 96   | 89   | 89.6 | 102  | 59   | 43    |    |   |   |
| 26 c   | 79   | 67   | 64   | 68   | 77   | 89   | 97   | 97   | 95   | 95   | 94   | 95   | 95   | 95   | 95   | 95   | 95    | 96    | 96    | 95   | 96   | 99    | 102  | 102  | 96   | 90.9 | 104  | 62    | 42 |   |   |
| 27     | 92   | 81   | 79   | 77   | 85   | 93   | 98   | 101  | 102  | 99   | 95   | 96   | 97   | 96   | 96   | 99   | 99    | 96    | 96    | 99   | 96   | 101   | 96   | 87   | 94.0 | 102  | 77   | 23    |    |   |   |
| 28     | 81   | 71   | 62   | 61   | 67   | 77   | 92   | 96   | 98   | 98   | 98   | 98   | 98   | 97   | 95   | 98   | 98    | 99    | 99    | 99   | 98   | 102   | 101  | 96   | 90.8 | 102  | 61   | 41    |    |   |   |
| 29 d   | 89   | 87   | 89   | 89   | 94   | 95   | 95   | 99   | 100  | 100  | 98   | 95   | 97   | 97   | 95   | 97   | 96    | 95    | 98    | 98   | 97   | 101   | 96   | 94   | 95.5 | 102  | 86   | 16    |    |   |   |
| 30 d   | 90   | 81   | 80   | 80   | 86   | 90   | 95   | 97   | 95   | 95   | 97   | 101  | 102  | 101  | 104  | 104  | 105   | 113   | 107   | 102  | 101  | 103   | 98   | 90   | 96.5 | 113  | 77   | 36    |    |   |   |
| 31 d   | 84   | 86   | 81   | 81   | 80   | 83   | 89   | 95   | 98   | 99   | 99   | 96   | 101  | 101  | 101  | 102  | 102   | 102   | 102   | 101  | 102  | 104   | 100  | 92   | 96.0 | 105  | 80   | 25    |    |   |   |
| mean   | 87.0 | 81.1 | 79.2 | 80.6 | 83.4 | 87.7 | 91.9 | 92.9 | 95.0 | 95.1 | 95.0 | 95.4 | 96.7 | 96.9 | 96.9 | 97.6 | 97.9  | 98.3  | 98.0  | 97.5 | 97.9 | 99.5  | 98.4 | 93.6 | 98.1 | —    | —    | —     | —  |   |   |
| σ c    | 85.2 | 78.0 | 75.4 | 78.4 | 83.8 | 90.2 | 92.0 | 92.2 | 93.0 | 93.4 | 94.2 | 95.0 | 95.2 | 94.8 | 94.4 | 96.2 | 96.2  | 97.0  | 96.2  | 96.6 | 97.8 | 99.8  | 99.2 | 92.8 | 92.0 | —    | —    | —     | —  | — |   |
| σ d    | 85.2 | 81.2 | 81.8 | 82.2 | 85.0 | 87.4 | 92.4 | 94.2 | 96.4 | 97.0 | 97.4 | 97.0 | 99.0 | 99.4 | 98.2 | 99.2 | 100.6 | 101.4 | 100.2 | 99.2 | 99.6 | 100.2 | 97.4 | 92.0 | 94.8 | —    | —    | —     | —  | — | — |
|        | 86.4 | 80.2 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |      |      |       |      |      |      |      |      |       |    |   |   |



Table 39.

## Vertical Intensity

38900γ+.....γ

June 1938.

| G.M.T. | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23   | Mean  | Max. | Min. | Range |    |    |   |   |   |   |
|--------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|----|----|---|---|---|---|
| Day    | 86   | 81   | 79   | 74   | 80   | 90   | 90   | 95   | 99   | 102   | 101   | 99    | 100   | 101   | 101   | 101   | 101   | 103   | 100   | 99    | 96    | 102   | 101   | 91   | 94.7  | 104  | 74   | 30    |    |    |   |   |   |   |
| 1 d    | 83   | 80   | 77   | 83   | 88   | 89   | 90   | 95   | 99   | 101   | 96    | 98    | 101   | 101   | 99    | 98    | 99    | 99    | 101   | 101   | 100   | 102   | 102   | 95   | 94.9  | 104  | 77   | 27    |    |    |   |   |   |   |
| 2      | 89   | 86   | 86   | 83   | 80   | 80   | 86   | 89   | 89   | 96    | 96    | 98    | 101   | 99    | 99    | 99    | 102   | 100   | 101   | 100   | 101   | 104   | 96    | 80   | 98.4  | 104  | 78   | 21    |    |    |   |   |   |   |
| 3      | 74   | 73   | 74   | 83   | 89   | 90   | 88   | 89   | 93   | 95    | 95    | 96    | 99    | 99    | 97    | 97    | 96    | 98    | 99    | 98    | 101   | 102   | 99    | 92   | 92.4  | 102  | 70   | 32    |    |    |   |   |   |   |
| 4      | 81   | 83   | 81   | 89   | 94   | 98   | 101  | 101  | 100  | 100   | 96    | 95    | 99    | 98    | 97    | 98    | 98    | 99    | (102) | (102) | (104) | (107) | (104) | (96) | 97.2  | 102  | 81   | 21    |    |    |   |   |   |   |
| 5 c    | (86) | (82) | 87   | 88   | 90   | 93   | 96   | 100  | 100  | 97    | 96    | 96    | 100   | 97    | 100   | 99    | 98    | 98    | 100   | 100   | 103   | 103   | 100   | 86   | 96.3  | 104  | 79   | 25    |    |    |   |   |   |   |
| 6 c    | 80   | 81   | 90   | 97   | 101  | 108  | 103  | 100  | 96   | 97    | 98    | 100   | 101   | 100   | 101   | 101   | 101   | 100   | 100   | 103   | 106   | 99    | 94    | 86   | 97.4  | 106  | 80   | 26    |    |    |   |   |   |   |
| 7      | 88   | —    | —    | —    | —    | —    | —    | —    | 94   | 92    | 98    | 99    | 98    | 101   | 100   | 100   | 101   | 101   | 94    | 100   | 101   | 103   | 101   | 92   | —     | —    | —    | —     | —  |    |   |   |   |   |
| 8      | 90   | 87   | 88   | 95   | 96   | 94   | 96   | 98   | 101  | 98    | 103   | 104   | 102   | 103   | 101   | 103   | 104   | 102   | 103   | 102   | 103   | 104   | 99    | 94   | 98.8  | 104  | 87   | 17    | 17 |    |   |   |   |   |
| 9      | 89   | 88   | 82   | 91   | 97   | 100  | 99   | 100  | 100  | 99    | 100   | 99    | 101   | 101   | 102   | 102   | 101   | 101   | 100   | 100   | 100   | 100   | 101   | 98   | 97.5  | 102  | 82   | 21    | 21 |    |   |   |   |   |
| 10     | 88   | 82   | 88   | 89   | 94   | 94   | 94   | 96   | 96   | 96    | 98    | 100   | 99    | 98    | 99    | 99    | 98    | 98    | 97    | 98    | 100   | 102   | 105   | 101  | 96.2  | 105  | 81   | 24    | 24 |    |   |   |   |   |
| 11     | 92   | 81   | 81   | 81   | 80   | 85   | 87   | 92   | 97   | 99    | 100   | 100   | 99    | 96    | 97    | 96    | 98    | 98    | 99    | 98    | 98    | 98    | 104   | 101  | 96    | 94.0 | 104  | 80    | 24 | 24 |   |   |   |   |
| 12     | 90   | 81   | 71   | 65   | 68   | 86   | 99   | 98   | 96   | 98    | 99    | 101   | 101   | 104   | 101   | 103   | 101   | 101   | 100   | 99    | 101   | 99    | 98    | 92   | 93.8  | 104  | 64   | 40    | 40 |    |   |   |   |   |
| 13 d   | 90   | 86   | 84   | 90   | 88   | 90   | 90   | 93   | 95   | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     | 95   | 84   | 11    | —  | —  |   |   |   |   |
| 14 d   | —    | —    | —    | 68   | 75   | 86   | 86   | 91   | 94   | 98    | 99    | 97    | 98    | 100   | 99    | 97    | 99    | 99    | 99    | 99    | 99    | 98    | 101   | 99   | —     | —    | —    | —     | —  | —  | — |   |   |   |
| 15     | 87   | 84   | 86   | 87   | 84   | 84   | 86   | 92   | 97   | 98    | 96    | 97    | 98    | 98    | 98    | 99    | 99    | 99    | 98    | 98    | 100   | 102   | 102   | 98   | 94.2  | 104  | 83   | 21    | 21 |    |   |   |   |   |
| 16 c   | 91   | 82   | 74   | 87   | 95   | 100  | 96   | 97   | 101  | 102   | 101   | 99    | 101   | 99    | 100   | 100   | 101   | 101   | 99    | 100   | 102   | 104   | 102   | 96   | 97.1  | 105  | 74   | 31    | 31 |    |   |   |   |   |
| 17     | 89   | 87   | 86   | 86   | 92   | 93   | 95   | 99   | 100  | 101   | 102   | 101   | 101   | 101   | 101   | 101   | 101   | 101   | 99    | 99    | 101   | 105   | 102   | 93   | 97.3  | 106  | 85   | 21    | 21 |    |   |   |   |   |
| 18 c   | 84   | 76   | 73   | 71   | 77   | 84   | 92   | 97   | 98   | 99    | 99    | 100   | 101   | 100   | 101   | 101   | 103   | 103   | 102   | 100   | 103   | 106   | 108   | 102  | 95.1  | 108  | 68   | 40    | 40 |    |   |   |   |   |
| 19     | 88   | 84   | 81   | 85   | 81   | 81   | 92   | 95   | 99   | 102   | 102   | 105   | 109   | 109   | 108   | 106   | 106   | 107   | 106   | 107   | 109   | 102   | 98    | 92   | 98.6  | 110  | 80   | 30    | 30 |    |   |   |   |   |
| 20 d   | 86   | 80   | 79   | 81   | 81   | 86   | 89   | 94   | 97   | 96    | 96    | 99    | 98    | 96    | 101   | 105   | 107   | 105   | 103   | 101   | 105   | 105   | 104   | 101  | 95.6  | 107  | 80   | 27    | 27 |    |   |   |   |   |
| 21     | 96   | 88   | 81   | 85   | 83   | 92   | 98   | 98   | 100  | 101   | 101   | 99    | 101   | 99    | 101   | 101   | 102   | 100   | 98    | 99    | 102   | 100   | 100   | 98   | 96.6  | 102  | 80   | 22    | 22 |    |   |   |   |   |
| 22     | 88   | 82   | 75   | 79   | 79   | 82   | 88   | 92   | 93   | 95    | 96    | 97    | 97    | 97    | 98    | 99    | 97    | 98    | 96    | 98    | 99    | 100   | 100   | 98   | 96.8  | 102  | 74   | 25    | 25 |    |   |   |   |   |
| 23     | 81   | 81   | 72   | 72   | 82   | 81   | 79   | 87   | 92   | 96    | 97    | 97    | 96    | 97    | 100   | 98    | 98    | 96    | 97    | 98    | 99    | 99    | 95    | 90   | 91.4  | 102  | 70   | 32    | 32 |    |   |   |   |   |
| 24 c   | 89   | 89   | 89   | 84   | 83   | 84   | 91   | 98   | 99   | 99    | 98    | 104   | 103   | 100   | 100   | 99    | 99    | 97    | 96    | 98    | 101   | 102   | 103   | 93   | 95.8  | 105  | 80   | 25    | 25 |    |   |   |   |   |
| 25     | 84   | 74   | 68   | 80   | 87   | 86   | 86   | 86   | 82   | 92    | 99    | 97    | 99    | 102   | 101   | 101   | 101   | 101   | 100   | 100   | 103   | 106   | 106   | 100  | 94.3  | 107  | 82   | 40    | 40 |    |   |   |   |   |
| 26     | 92   | 86   | 88   | 84   | 85   | 89   | 91   | 92   | 95   | 97    | 97    | 99    | 99    | 99    | 104   | 104   | 105   | 104   | 104   | 104   | 105   | 107   | 102   | 95   | 96.7  | 108  | 87   | 26    | 26 |    |   |   |   |   |
| 27     | 91   | 82   | 80   | 84   | 86   | 91   | 93   | 98   | 99   | 99    | 99    | 102   | 103   | 103   | 104   | 103   | 104   | 103   | 104   | 106   | 106   | 105   | 103   | 96   | 97.7  | 108  | 80   | 28    | 28 |    |   |   |   |   |
| 28 d   | 85   | 87   | 92   | 91   | 89   | 98   | 101  | 99   | 100  | 102   | 102   | 102   | 103   | 98    | 103   | 108   | 104   | 104   | 105   | 105   | 105   | 105   | 102   | 99   | 98.9  | 108  | 82   | 23    | 23 |    |   |   |   |   |
| 29     | 80   | 90   | 92   | 91   | 89   | 98   | 98   | 98   | 100  | 100   | 100   | 102   | 102   | 108   | 108   | 108   | 106   | 106   | 104   | 104   | 105   | 105   | 102   | 102  | 101.0 | 109  | 89   | 20    | 20 |    |   |   |   |   |
| 30     | 91   | 87   | 92   | 99   | 96   | 95   | —    | —    | —    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     | —    | —    | —     | —  | —  | — |   |   |   |
| 31     | —    | —    | —    | —    | —    | —    | —    | —    | —    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     | —    | —    | —     | —  | —  | — | — |   |   |
| mean   | 88.4 | 88.1 | 81.4 | 84.1 | 86.7 | 89.7 | 92.4 | 95.6 | 97.3 | 98.6  | 98.6  | 99.5  | 100.7 | 99.9  | 100.7 | 100.7 | 101.1 | 100.6 | 100.6 | 100.7 | 102.1 | 103.2 | 101.3 | 94.6 | 95.9  | —    | —    | —     | —  | —  | — | — |   |   |
| γ c    | 91.2 | 84.8 | 82.4 | 84.4 | 88.4 | 89.8 | 91.2 | 95.8 | 97.8 | 98.2  | 97.4  | 97.2  | 98.8  | 98.2  | 99.4  | 99.0  | 98.8  | 97.4  | 99.2  | 99.4  | 101.4 | 103.2 | 100.6 | 94.4 | 95.3  | —    | —    | —     | —  | —  | — | — | — |   |
| γ d    | 90.2 | 83.0 | 78.5 | 76.0 | 79.7 | 87.0 | 93.5 | 96.5 | 98.2 | 100.2 | 100.2 | 101.7 | 103.2 | 104.2 | 108.5 | 103.2 | 103.0 | 108.5 | 102.5 | 102.7 | 102.7 | 102.0 | 100.0 | 96.2 | 96.2  | —    | —    | —     | —  | —  | — | — | — |   |
|        | 86.0 | 83.2 | —    | —    | —    | —    | —    | —    | —    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | 93.2 | 93.2  | —    | —    | —     | —  | —  | — | — | — | — |

Table 40.

Vertical Intensity 33900 $\gamma$ +..... $\gamma$ 

July 1933.

| G. M. T.   | 0    | 1    | 2    | 3    | 4    | 5    | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Mean  | Max.  | Min. | Range |    |   |
|------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|----|---|
| 1          | 95   | 94   | 87   | 87   | 88   | 92   | 92    | 93    | 96    | 99    | 100   | 100   | 101   | 102   | 104   | 103   | 104   | 103   | 103   | 102   | 102   | 103   | 100   | 96    | 97.8  | 104   | 86   | 18    |    |   |
| 2          | 94   | 90   | 85   | 87   | 82   | 84   | 85    | 96    | 100   | 100   | 100   | 100   | 101   | 101   | 101   | 101   | 101   | 102   | 100   | 100   | 100   | 100   | 100   | 100   | 100   | 101   | 82   | 19    |    |   |
| 3          | —    | 91   | 91   | 92   | 90   | 87   | 88    | 90    | 94    | 96    | 97    | 99    | 99    | 100   | 102   | 102   | 101   | 102   | 102   | 99    | 99    | 100   | 102   | 105   | 102   | —     | 106  | 85    | 20 |   |
| 4          | 96   | 87   | 84   | 78   | 81   | 90   | 97    | 100   | 103   | 102   | 103   | 104   | 102   | 99    | 99    | 100   | 100   | 100   | 102   | 102   | 102   | 105   | 102   | 97    | 97.4  | 106   | 78   | 28    |    |   |
| 5          | 91   | 89   | 87   | 91   | 91   | 95   | 93    | 99    | 102   | 102   | 102   | 102   | 102   | 105   | 104   | 103   | 102   | 100   | 100   | 100   | 102   | 108   | 105   | 100   | 98    | 98.4  | 106  | 87    | 18 |   |
| 6          | 90   | 91   | 93   | 91   | 87   | 94   | 100   | 102   | 102   | 102   | 99    | 97    | 102   | 105   | 103   | 101   | 100   | 100   | 100   | 100   | 101   | 102   | 106   | 105   | 99    | 107   | 86   | 21    |    |   |
| 7          | 94   | 91   | 81   | 82   | 91   | 97   | 100   | 101   | 98    | 99    | 100   | 100   | 100   | 101   | 99    | 102   | 102   | 102   | 102   | 102   | 100   | 100   | 103   | 99    | 95    | 103   | 81   | 22    |    |   |
| 8          | 91   | 89   | 82   | 83   | 83   | 89   | 91    | 93    | 100   | 100   | 99    | 99    | 102   | 102   | 102   | 103   | 103   | 103   | 103   | 100   | 101   | 102   | 103   | 98    | 96.7  | 103   | 81   | 22    |    |   |
| 9 d        | 73   | 69   | 69   | 75   | 84   | 88   | 96    | 97    | 94    | 100   | 103   | 104   | 105   | 107   | 105   | 105   | 105   | 105   | 106   | 106   | 104   | 103   | 109   | 106   | 96.6  | 109   | 73   | 37    |    |   |
| 10         | 97   | 85   | 73   | 71   | 70   | 69   | 79    | 95    | 104   | 106   | 101   | 101   | 105   | 105   | 106   | 105   | 105   | 105   | 104   | 103   | 104   | 104   | 101   | 100   | 95.3  | 107   | 69   | 38    |    |   |
| 11         | 96   | 89   | 84   | 77   | 74   | 74   | 82    | 91    | 99    | 101   | 103   | 103   | 107   | 107   | 107   | 107   | 106   | 104   | 102   | 102   | 102   | 104   | 107   | 103   | 97.3  | 109   | 73   | 36    |    |   |
| 12         | 89   | 86   | 83   | 80   | 80   | 82   | 91    | 98    | 101   | 101   | 102   | 102   | 104   | 104   | 105   | 102   | 103   | 102   | 101   | 101   | 103   | 107   | 107   | 102   | 97.3  | 108   | 79   | 29    |    |   |
| 13 c       | 95   | 87   | 84   | 87   | 83   | 85   | 98    | 104   | 104   | 104   | 104   | 102   | 104   | 105   | 103   | 102   | 103   | 102   | 102   | 102   | 104   | 107   | 109   | 105   | 93.5  | 110   | 82   | 28    |    |   |
| 14 c       | 96   | 83   | 72   | 77   | 83   | 86   | 89    | 94    | 99    | 101   | 99    | 101   | 103   | 103   | 103   | 102   | 103   | 103   | 103   | 103   | 103   | 103   | 107   | 105   | 99    | 96.5  | 107  | 72    | 35 |   |
| 15 c       | 92   | 84   | 77   | 81   | 83   | 85   | 88    | 100   | 102   | 102   | 99    | 101   | 102   | 104   | 106   | 106   | 106   | 104   | 106   | 106   | 106   | 106   | 109   | 107   | 101   | 98.2  | 109  | 77    | 32 |   |
| 16         | 97   | 86   | 85   | 90   | 90   | 90   | 100   | 104   | 104   | 105   | 103   | 103   | 105   | 105   | 104   | 103   | 106   | 106   | 106   | 106   | 106   | 106   | 104   | 100   | 100.6 | 107   | 85   | 22    |    |   |
| 17 d       | 91   | 85   | 79   | 84   | 100  | 103  | 100   | 102   | 103   | 102   | 103   | 103   | 104   | 103   | 103   | 107   | 110   | 109   | 109   | 109   | 110   | 112   | 113   | 109   | 101   | 101.9 | 114  | 78    | 36 |   |
| 18         | 94   | 82   | 81   | 95   | 94   | 95   | 100   | 103   | 104   | 103   | 103   | 105   | 105   | 106   | 106   | 108   | 109   | 109   | 106   | 108   | 109   | 112   | 109   | 104   | 102.1 | 112   | 79   | 33    |    |   |
| 19         | 100  | 95   | 92   | 97   | 101  | 96   | 100   | 106   | 107   | 106   | 104   | 103   | 106   | 107   | 106   | 106   | 107   | 106   | 106   | 106   | 106   | 107   | 109   | 106   | 100   | 103.3 | 109  | 90    | 19 |   |
| 20         | 97   | 83   | 85   | 86   | 86   | 92   | 99    | 104   | 106   | 104   | 101   | 104   | 107   | 106   | 106   | 107   | 108   | 108   | 107   | 107   | 107   | 108   | 110   | 110   | 107   | 101.8 | 111  | 85    | 26 |   |
| 21 c       | 105  | 95   | 95   | 92   | 98   | 102  | 107   | 103   | 108   | 108   | 105   | 106   | 108   | 108   | 108   | 109   | 109   | 109   | 109   | 109   | 109   | 108   | 109   | 111   | 105   | 108.5 | 118  | 92    | 21 |   |
| 22         | 103  | 94   | 95   | 92   | 94   | 102  | 105   | 103   | 102   | 103   | 106   | 105   | 106   | 106   | 106   | 108   | 109   | 109   | 108   | 108   | 109   | 110   | 110   | 100   | 93    | 103.3 | 112  | 85    | 27 |   |
| 23 d       | 85   | 82   | 84   | 93   | 95   | 102  | 109   | 113   | 111   | 110   | 107   | 106   | 108   | 108   | 111   | 106   | 111   | 115   | 112   | 112   | 112   | 116   | 114   | 114   | 106   | 106.8 | 118  | 81    | 37 |   |
| 24 d       | 94   | 94   | 101  | 100  | 95   | 106  | 112   | 111   | 105   | 109   | 111   | 111   | 112   | 112   | 111   | 115   | 117   | 112   | 111   | 111   | 111   | 113   | 111   | 105   | 106   | 107.2 | 118  | 92    | 26 |   |
| 25         | 100  | 91   | 87   | 93   | 97   | 102  | 102   | 103   | 114   | 112   | 110   | 109   | 110   | 111   | 110   | 110   | 111   | 110   | 110   | 105   | 111   | 112   | 115   | 112   | 102   | 106.0 | 116  | 87    | 29 |   |
| 26         | 97   | 99   | 94   | 93   | 97   | 102  | 111   | 111   | 107   | 103   | 103   | 108   | 109   | 111   | 110   | 108   | 108   | 109   | 111   | 111   | 111   | 112   | 114   | 112   | 106   | 106.4 | 114  | 98    | 21 |   |
| 27 d       | 100  | 99   | 102  | 98   | 99   | 100  | 105   | 109   | 109   | 108   | 105   | 108   | 112   | 111   | 112   | 113   | 113   | 113   | 113   | 113   | 113   | 113   | 118   | 118   | 101   | 107.8 | 119  | 91    | 23 |   |
| 28         | 99   | 86   | 81   | 90   | 95   | 101  | 106   | 109   | 113   | 114   | 112   | 112   | 112   | 114   | 112   | 112   | 113   | 113   | 113   | 113   | 113   | 114   | 114   | 109   | 107.0 | 115   | 81   | 34    |    |   |
| 29         | 103  | 91   | 79   | 87   | 91   | 95   | 99    | 105   | 110   | 110   | 109   | 109   | 107   | 108   | 105   | 108   | 111   | 111   | 111   | 111   | 111   | 112   | 114   | 114   | 106   | 104.5 | 114  | 78    | 36 |   |
| 30 c       | 100  | 95   | 93   | 96   | 94   | 96   | 101   | 105   | 109   | 108   | 106   | 106   | 107   | 109   | 109   | 109   | 108   | 109   | 111   | 111   | 111   | 111   | 111   | 112   | 111   | 106.3 | 113  | 92    | 21 |   |
| 31         | 106  | 100  | 90   | 90   | 90   | 96   | 103   | 109   | 109   | 107   | 107   | 108   | 111   | 112   | 113   | 110   | 109   | 110   | 111   | 112   | 112   | 115   | 114   | 112   | 106.5 | 115   | 90   | 25    |    |   |
| mean       | 95.4 | 89.2 | 85.7 | 87.6 | 89.3 | 93.0 | 98.0  | 102.2 | 104.1 | 104.0 | 103.6 | 104.1 | 105.4 | 106.2 | 105.9 | 106.0 | 106.6 | 106.5 | 106.0 | 106.3 | 107.1 | 109.0 | 107.4 | 102.0 | 101.3 | —     | —    | —     | —  |   |
| $\sigma$ c | 97.6 | 88.8 | 84.2 | 86.6 | 88.2 | 91.6 | 96.6  | 102.2 | 104.4 | 104.6 | 102.6 | 103.2 | 104.8 | 105.8 | 105.8 | 105.6 | 105.8 | 105.4 | 105.2 | 106.2 | 106.4 | 108.6 | 108.8 | 104.2 | 101.0 | —     | —    | —     | —  |   |
| $\gamma$ d | 88.6 | 89.4 | 87.0 | 90.0 | 95.2 | 99.8 | 104.4 | 106.4 | 104.4 | 104.0 | 105.4 | 106.4 | 107.2 | 108.2 | 108.4 | 109.2 | 111.2 | 110.8 | 110.2 | 110.4 | 111.8 | 111.8 | 111.0 | 111.0 | 99.6  | 103.8 | —    | —     | —  | — |
|            | 96.3 | 87.6 | —    | —    | —    | —    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     | —  |   |

Table 41.

Vertical Intensity 88900 $\gamma$ +..... $\gamma$

August 1938.

| Ch. M.T.   | 0     | 1    | 2    | 3    | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Mean  | Max.  | Min. | Range |    |
|------------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|----|
| Dxy        | 102   | 98   | 91   | 89   | 89    | 95    | 101   | 108   | 107   | 107   | 106   | 107   | 107   | 107   | 107   | 107   | 107   | 108   | 107   | 107   | 107   | 109   | 109   | 106   | 108.5 | 110   | 88   | 22    |    |
| 1 c        | 101   | 89   | 82   | 85   | 94    | 101   | 106   | 106   | 107   | 106   | 106   | 105   | 107   | 107   | 108   | 110   | 109   | 110   | 110   | 110   | 110   | 111   | 111   | 107   | 104.2 | 112   | 80   | 33    |    |
| 2          | 107   | 108  | 98   | 94   | 89    | 90    | 100   | 110   | 111   | 107   | 107   | 107   | 107   | 108   | 108   | 108   | 110   | 108   | 109   | 108   | 108   | 111   | 111   | 104   | 105.1 | 118   | 89   | 23    |    |
| 3          | 104   | 98   | 98   | 106  | 97    | 92    | 101   | 107   | 107   | 105   | 105   | 107   | 108   | 108   | 108   | 108   | 108   | 107   | 107   | 108   | 108   | 114   | 113   | 105   | 105.4 | 115   | 93   | 22    |    |
| 4          | 102   | 98   | 92   | 96   | 98    | 98    | 108   | 104   | 102   | 102   | 107   | 116   | 116   | 110   | 107   | 107   | 125   | 127   | 117   | 117   | 111   | 114   | 107   | 102   | 107.4 | 129   | 82   | 57    |    |
| 5 d        | 93    | 92   | 96   | 91   | 109   | 114   | 119   | 123   | 122   | 117   | 116   | 117   | 115   | 118   | 118   | 114   | 118   | 116   | 115   | 115   | 115   | 119   | 116   | 109   | 111.9 | 122   | 89   | 34    |    |
| 6 d        | 104   | 96   | 92   | 89   | 93    | 100   | 112   | 118   | 115   | 97    | 109   | 110   | 113   | 113   | 113   | 114   | 113   | 114   | 116   | 113   | 113   | 116   | 114   | 107   | 107.9 | 119   | 88   | 31    |    |
| 7          | 95    | 86   | 89   | 89   | 90    | 102   | 107   | 110   | 110   | 110   | 109   | 110   | 111   | 113   | 113   | 111   | 113   | 113   | 113   | 110   | 113   | 115   | 113   | 107   | 106.3 | 115   | 86   | 29    |    |
| 8          | 103   | 98   | 94   | 92   | 95    | 102   | 107   | 112   | 111   | 111   | 111   | 111   | 112   | 112   | 110   | 112   | 112   | 112   | 113   | 113   | 115   | 118   | 116   | 112   | 108.6 | —     | —    | —     |    |
| 9 c        | 103   | 94   | 88   | 89   | 90    | 96    | (102) | (107) | 108   | 110   | 111   | 113   | 113   | 114   | 110   | 111   | 113   | 114   | 113   | 113   | 114   | 117   | 117   | 111   | 107.2 | —     | —    | —     |    |
| 10 c       | 108   | 94   | 88   | 89   | 90    | 96    | (102) | (107) | 108   | 110   | 111   | 113   | 113   | 114   | 110   | 111   | 113   | 114   | 113   | 113   | 114   | 117   | 117   | 111   | 107.2 | —     | —    | —     |    |
| 11 c       | 108   | 98   | 90   | 84   | 84    | 91    | 99    | 106   | 113   | 113   | 112   | 113   | 113   | 112   | 113   | 115   | 114   | 114   | 118   | 112   | 112   | 113   | 115   | 110   | 106.6 | 115   | 84   | 31    |    |
| 12         | 103   | 85   | 82   | 82   | 83    | 87    | 98    | 106   | 109   | 109   | 109   | 110   | 112   | 112   | 112   | 118   | 113   | 112   | 112   | 112   | 113   | 115   | 112   | 108   | 104.6 | 115   | 80   | 35    |    |
| 13 d       | 97    | 89   | 85   | 93   | 97    | 99    | 104   | 113   | 112   | 109   | 104   | 102   | 106   | 113   | 115   | 119   | 119   | 113   | 115   | 118   | 118   | 116   | 115   | 109   | 107.2 | 121   | 86   | 36    |    |
| 14         | 98    | 86   | 82   | 88   | 98    | 103   | 106   | 110   | 113   | 113   | 115   | 115   | 115   | 113   | 114   | 110   | 113   | 116   | 115   | 116   | 116   | 116   | 113   | 109   | 107.8 | 118   | 80   | 33    |    |
| 15         | 100   | 93   | 89   | 93   | 92    | 96    | 103   | 111   | 113   | 112   | 112   | 112   | 113   | 115   | 117   | 117   | 119   | 119   | 118   | 119   | 119   | 120   | 116   | 108   | 109.4 | —     | —    | —     |    |
| 16         | 103   | 104  | 102  | 104  | 108   | 118   | 124   | 122   | 122   | 119   | 117   | 119   | 120   | 119   | 117   | 117   | 117   | 117   | 117   | 119   | 119   | 122   | 117   | 112   | 115.7 | —     | —    | —     |    |
| 17         | 102   | 95   | 91   | 90   | 95    | 100   | 112   | 111   | 108   | 110   | 115   | 117   | 116   | 116   | 114   | 115   | 117   | 120   | 121   | 121   | 118   | 123   | 117   | 110   | 110.6 | —     | —    | —     |    |
| 18 d       | 106   | 99   | 102  | 106  | 111   | 117   | 115   | 113   | 117   | 115   | 115   | 118   | 123   | 116   | 120   | 118   | 118   | 118   | 118   | 118   | 117   | 119   | 120   | 117   | 109   | 114.5 | 123  | 96    | 28 |
| 19         | 95    | 86   | 85   | 90   | 95    | 102   | 105   | 113   | 113   | 112   | 112   | 114   | 112   | 117   | 115   | 117   | —     | —     | —     | —     | —     | 117   | 119   | 114   | 113   | —     | —    | —     |    |
| 20         | 108   | 106  | 105  | 105  | 105   | 111   | 114   | 119   | 118   | 115   | 112   | 117   | 116   | 118   | 117   | 119   | 120   | 121   | 119   | 119   | 119   | 121   | 116   | 115   | 114.7 | 124   | 103  | 21    |    |
| 21 d       | 107   | 103  | 106  | 107  | 110   | 112   | 115   | 114   | 112   | 114   | 114   | 116   | 117   | 117   | 116   | 117   | 119   | 118   | 118   | 117   | 117   | 118   | 114   | 107   | 113.5 | 119   | 102  | 17    |    |
| 22         | 99    | —    | —    | —    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     |    |
| 23         | 100   | 95   | 92   | 96   | 103   | 107   | 112   | 117   | 114   | 109   | 111   | 117   | 118   | 118   | 119   | 121   | 120   | 122   | 122   | 120   | 119   | 119   | 116   | 109   | 112.3 | 122   | 91   | 31    |    |
| 24         | 100   | 95   | 92   | 96   | 103   | 107   | 112   | 117   | 114   | 109   | 111   | 117   | 118   | 118   | 119   | 121   | 120   | 122   | 122   | 120   | 119   | 119   | 116   | 109   | 112.3 | 122   | 93   | 31    |    |
| 25         | 104   | 92   | 90   | 99   | 109   | 114   | 120   | 116   | 115   | 114   | 114   | 115   | 115   | 118   | 118   | 119   | 119   | 119   | 120   | 119   | 118   | 122   | 119   | 115   | 113.5 | 122   | 89   | 33    |    |
| 26         | 105   | 97   | 94   | 101  | 101   | 110   | 115   | 117   | 116   | 113   | 115   | 117   | 117   | 117   | 116   | 116   | 116   | 117   | 118   | 119   | 119   | 120   | 118   | 110   | 112.7 | 120   | 93   | 27    |    |
| 27         | 106   | 94   | 92   | 92   | 99    | 105   | 110   | 111   | 114   | 114   | 113   | 114   | 115   | 114   | 115   | 117   | 115   | 116   | 116   | 116   | 115   | 115   | 115   | 112   | 110.2 | 118   | 90   | 28    |    |
| 28         | 99    | 97   | 100  | 98   | 100   | 106   | 106   | 109   | 112   | 112   | 114   | 116   | 114   | 114   | 115   | 117   | 117   | 117   | 117   | 116   | 117   | 117   | 113   | 112   | 110.6 | 118   | 90   | 21    |    |
| 29         | 109   | 105  | 106  | 106  | 101   | 106   | 110   | 110   | 112   | 113   | 113   | 113   | 113   | 115   | 116   | 116   | 116   | 115   | 115   | 115   | 116   | 116   | 116   | 116   | 116   | 112.2 | 117  | 98    | 19 |
| 30         | 114   | 106  | 108  | 102  | 105   | 108   | 108   | 109   | 110   | 109   | 111   | 112   | 113   | 114   | 114   | 114   | 115   | 115   | 116   | 116   | 115   | 116   | 118   | 112   | 111   | 111.3 | 116  | 102   | 14 |
| 31 c       | 102.6 | 95.8 | 98.7 | 95.0 | 97.9  | 102.9 | 108.6 | 112.0 | 112.6 | 110.8 | 111.4 | 113.0 | 113.5 | 114.0 | 113.7 | 114.3 | 115.2 | 115.6 | 115.4 | 115.5 | 115.2 | 117.2 | 114.6 | 109.1 | 109.6 | —     | —    | —     |    |
| mean       | 105.0 | 97.8 | 98.2 | 91.2 | 92.6  | 98.4  | 103.4 | 108.4 | 109.8 | 110.0 | 110.2 | 111.2 | 111.0 | 111.8 | 110.8 | 112.0 | 112.2 | 112.8 | 112.4 | 112.4 | 112.8 | 115.0 | 113.8 | 111.6 | 107.4 | —     | —    | —     |    |
| $\gamma$ c | 102.3 | 91.5 | —    | —    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     |    |
| $\gamma$ d | 100.0 | 95.0 | 94.5 | 96.2 | 102.2 | 105.5 | 110.0 | 114.7 | 114.0 | 110.7 | 109.7 | 113.0 | 113.2 | 114.7 | 113.0 | 114.7 | 119.2 | 119.5 | 116.8 | 117.7 | 115.5 | 117.5 | 113.5 | 107.0 | 110.3 | —     | —    | —     |    |
| 99.2       | 94.2  | —    | —    | —    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —    | —     |    |

Table 42.

## Character Figures

| Month/Day | 32<br>Aug. | Sep. | Oct. | Nov. | Dec. | 38<br>Jan. | Feb. | Mar. | April | May | June | July | Aug. |
|-----------|------------|------|------|------|------|------------|------|------|-------|-----|------|------|------|
| 1         | 0          | 1    | 0    | 1    | 0    | 0          | 0    | 0    | 0     | 2   | 1    | 0    | 0    |
| 2         | —          | 1    | 0    | 0    | 0    | 0          | 0    | 0    | 0     | 1   | 0    | 0    | 0    |
| 3         | —          | 0    | 1    | 0    | 0    | 0          | 0    | 0    | 1     | 0   | 0    | 0    | 0    |
| 4         | —          | 0    | 1    | 0    | 0    | 0          | 0    | 0    | 1     | 1   | 0    | 0    | 0    |
| 5         | 0          | 1    | 0    | 0    | 0    | 0          | —    | 0    | —     | 1   | 0    | 0    | 2    |
| 6         | 0          | 2    | 0    | 0    | 0    | 1          | 0    | 0    | 0     | 1   | 0    | 0    | 1    |
| 7         | 0          | 1    | 0    | 0    | 0    | 0          | 0    | 0    | 1     | 1   | 0    | 0    | 1    |
| 8         | 0          | 1    | 0    | 0    | 1    | 0          | 0    | 0    | 0     | 0   | 1    | 1    | 0    |
| 9         | 0          | 1    | 0    | 0    | 1    | 0          | 0    | 0    | 0     | 0   | 0    | 2    | 0    |
| 10        | 0          | 0    | 0    | 0    | 0    | 0          | 0    | 0    | 1     | 0   | 0    | 1    | 0    |
| 11        | 1          | 0    | 0    | 0    | 0    | 0          | 0    | 1    | 0     | 0   | 0    | 0    | 0    |
| 12        | 1          | 0    | 0    | 1    | 0    | 0          | 0    | 0    | 0     | 0   | 0    | 0    | 0    |
| 13        | 1          | 0    | 0    | 1    | 1    | 0          | 0    | 0    | 0     | 1   | 1    | 0    | 2    |
| 14        | 0          | 1    | 0    | 1    | 2    | 0          | 0    | 0    | 0     | 1   | 0    | 0    | 1    |
| 15        | 0          | 1    | 2    | 1    | 2    | 1          | 0    | 0    | 0     | 1   | 0    | 0    | 1    |
| 16        | 0          | 0    | 1    | 2    | 1    | 0          | 0    | 0    | 1     | 0   | 0    | 0    | 0    |
| 17        | 0          | 0    | 1    | 1    | 1    | 0          | 0    | 0    | 1     | 1   | 0    | 1    | 1    |
| 18        | 0          | 1    | —    | 0    | 1    | 0          | 0    | 1    | 1     | 1   | 0    | 1    | —    |
| 19        | 0          | 1    | 0    | 0    | 1    | 1          | 2    | 1    | 1     | 0   | 0    | 0    | 1    |
| 20        | 1          | 1    | 1    | 0    | 0    | 1          | 1    | 2    | 1     | 0   | 1    | 0    | 1    |
| 21        | 1          | 0    | 1    | 0    | 0    | 0          | 1    | 1    | 1     | 0   | 0    | 0    | 1    |
| 22        | 1          | 1    | 0    | 0    | 0    | 1          | 2    | 1    | 1     | 0   | 0    | 0    | 0    |
| 23        | 1          | 1    | 0    | 0    | 0    | 1          | 1    | 1    | 1     | 0   | 0    | 1    | 1    |
| 24        | 1          | 1    | 1    | 0    | 0    | 1          | 0    | 1    | 0     | 0   | 0    | 2    | 1    |
| 25        | 0          | 2    | 0    | 1    | 1    | 0          | 0    | 0    | 0     | 0   | 0    | 0    | 1    |
| 26        | 1          | 1    | 0    | 0    | 0    | 0          | 0    | 1    | 1     | 0   | 0    | 0    | 1    |
| 27        | 2          | 1    | 0    | 0    | 0    | 2          | 0    | 0    | 0     | 1   | 0    | 1    | 0    |
| 28        | 2          | 0    | 0    | 1    | 0    | 1          | 0    | 0    | 0     | 0   | 1    | 0    | 0    |
| 29        | 2          | 1    | 0    | 0    | 0    | 0          | —    | 0    | 0     | 1   | 0    | 0    | 0    |
| 30        | 2          | 0    | 1    | 0    | 0    | 0          | —    | 0    | 2     | 1   | 0    | 0    | 0    |
| 31        | 1          | —    | 0    | —    | 0    | 0          | —    | 0    | —     | 1   | —    | 0    | 0    |

Numerical Character Numbers

Table 48.

| Month/Day | 82<br>Aug. | Sep. | Oct. | Nov. | Dec. | 83<br>Jan. | Feb. | Mar. | April | May | June | July | Aug.  |
|-----------|------------|------|------|------|------|------------|------|------|-------|-----|------|------|-------|
| 1         | 339        | 251  | 197  | 338  | 175  | 172        | 153  | 147  | 168   | 578 | 234  | 94   | 169   |
| 2         | —          | 259  | 283  | 169  | 143  | 174        | 245  | 152  | 178   | 856 | 193  | 123  | 202   |
| 3         | —          | 249  | 177  | 168  | 143  | 144        | 192  | 174  | 249   | 193 | 197  | 203  | 187   |
| 4         | —          | 207  | 244  | 175  | 139  | 121        | 208  | 159  | 231   | 181 | 181  | 177  | 139   |
| 5         | 278        | 272  | 222  | 165  | 111  | 151        | —    | 138  | —     | 189 | 120  | 162  | 419   |
| 6         | 211        | 529  | 173  | 147  | 156  | 283        | —    | 173  | 192   | 223 | 130  | 198  | 357   |
| 7         | 142        | 208  | 176  | 120  | 91   | 188        | —    | 119  | 196   | 245 | 132  | 168  | 288   |
| 8         | 200        | 340  | 149  | 128  | 276  | 162        | —    | 174  | 181   | 180 | —    | 163  | 239-  |
| 9         | 252        | 214  | 139  | 102  | 270  | 139        | —    | 166  | 266   | 160 | 167  | 322  | (204) |
| 10        | 152        | 152  | 148  | 142  | 129  | 129        | —    | 219  | 208   | 211 | 192  | 224  | (22£) |
| 11        | 220        | 135  | 150  | 145  | 112  | 196        | —    | 242  | 209   | 169 | 200  | 277  | 203   |
| 12        | 234        | 134  | 133  | 216  | 153  | 128        | —    | 137  | 170   | 172 | 216  | 176  | 226   |
| 13        | 297        | 160  | 182  | 155  | 196  | 127        | —    | 164  | 223   | 277 | 327  | 186  | 385   |
| 14        | 225        | 266  | 219  | 287  | 382  | 138        | —    | 179  | 233   | 227 | 193  | 214  | 201   |
| 15        | 254        | 218  | 629  | 219  | 192  | 388        | 197  | 161  | 198   | 207 | 223  | 173  | 207   |
| 16        | 195        | 200  | 260  | 304  | 251  | 163        | 131  | 166  | 239   | 153 | 136  | 179  | 183   |
| 17        | 224        | 276  | 173  | 205  | 247  | 164        | 169  | 179  | 298   | 190 | 208  | 308  | 296   |
| 18        | 240        | 238  | —    | 151  | 128  | 128        | 185  | 328  | 194   | 310 | —    | 277  | —     |
| 19        | 286        | 258  | 164  | 172  | 164  | 802        | 390  | 262  | 253   | 152 | —    | 148  | 271   |
| 20        | 274        | 252  | 238  | 173  | 141  | 246        | 174  | 360  | 260   | 201 | —    | 199  | (204) |
| 21        | 331        | 142  | 283  | 114  | 105  | 129        | 238  | 291  | 224   | 190 | 204  | 181  | 240   |
| 22        | 237        | 305  | 134  | 122  | 101  | 227        | 226  | 236  | 249   | 277 | 154  | 179  | 146   |
| 23        | 198        | 365  | 349  | 133  | 155  | 245        | 239  | 277  | 196   | 228 | 167  | 311  | —     |
| 24        | —          | 220  | 217  | 127  | 100  | 206        | —    | 262  | 142   | 206 | —    | 362  | 204   |
| 25        | 222        | 295  | 202  | 234  | 198  | 154        | —    | 247  | 199   | 230 | 236  | 161  | 260   |
| 26        | 182        | 167  | 123  | 131  | 97   | 142        | —    | 243  | 133   | 204 | 237  | 191  | 318   |
| 27        | 361        | 297  | 255  | 129  | 180  | 157        | 226  | 344  | 156   | 227 | 272  | 265  | 181   |
| 28        | —          | 172  | 137  | 223  | 175  | 162        | 160  | 235  | 124   | 268 | —    | 235  | 197   |
| 29        | 258        | 245  | 170  | 208  | 113  | 146        | —    | 297  | 172   | 211 | 192  | 256  | 144   |
| 30        | 221        | 190  | 302  | 133  | 97   | 162        | —    | 204  | 324   | 361 | 126  | 173  | 142   |
| 31        | 206        | —    | 182  | —    | —    | 168        | —    | 235  | —     | 172 | —    | 183  | 153   |

Numerical character Numbers

Table 44.

| Month/Day | 32<br>Aug. | Sep. | Oct. | Nov. | Dec. | 33<br>Jan. | Feb.  | Mar. | April | May | June | July | Aug.  |
|-----------|------------|------|------|------|------|------------|-------|------|-------|-----|------|------|-------|
| 1         | 120        | 159  | 145  | 256  | 106  | 120        | 98    | 44   | 78    | 445 | 182  | 63   | 98    |
| 2         | —          | 141  | 219  | 106  | 78   | 111        | 137   | 64   | 80    | 233 | 101  | 57   | 92    |
| 3         | —          | 117  | 106  | 97   | 87   | 85         | 129   | 89   | 180   | 186 | 90   | 126  | 79    |
| 4         | —          | 86   | 182  | 92   | 80   | 72         | (120) | 82   | 144   | 123 | 72   | 82   | 63    |
| 5         | 173        | 172  | 189  | 91   | 44   | 87         | —     | 41   | —     | 77  | 53   | 101  | 291   |
| 6         | 100        | 385  | 107  | 86   | 110  | 217        | —     | 77   | 113   | 174 | 50   | 120  | 242   |
| 7         | 78         | 192  | 96   | 72   | 57   | 85         | —     | 40   | 122   | 186 | 64   | 88   | 156   |
| 8         | 93         | 245  | 72   | 70   | 223  | 92         | —     | 63   | 70    | —   | —    | 198  | 140   |
| 9         | 180        | 144  | 129  | 48   | 210  | 99         | —     | 70   | 166   | 88  | 109  | 180  | (122) |
| 10        | 78         | 106  | 95   | 92   | 93   | 65         | —     | 108  | 121   | 106 | 119  | 96   | (132) |
| 11        | 115        | 81   | 93   | 76   | 64   | 136        | —     | 127  | 116   | 84  | 113  | 154  | 90    |
| 12        | 153        | 91   | 114  | 163  | 97   | 55         | —     | 61   | 85    | 92  | 130  | 79   | 105   |
| 13        | 206        | 93   | 106  | 89   | 143  | 62         | —     | 90   | 141   | 157 | 189  | 91   | 262   |
| 14        | 127        | 185  | 150  | 201  | 238  | 97         | —     | 83   | 141   | 166 | (88) | 99   | 73    |
| 15        | 165        | 123  | 512  | 162  | 134  | 314        | 137   | 91   | 114   | 143 | 106  | 66   | 108   |
| 16        | 90         | 144  | 168  | 204  | 182  | 122        | 77    | 71   | 158   | 113 | 64   | 106  | 109   |
| 17        | 143        | 188  | 128  | 128  | 182  | 77         | 104   | 92   | 194   | 136 | 106  | 133  | 179   |
| 18        | 137        | 165  | 47   | 85   | 144  | 64         | 108   | 174  | 102   | 232 | —    | 166  | —     |
| 19        | 172        | 163  | 134  | 105  | 134  | 224        | 304   | 130  | 150   | 91  | —    | 84   | 176   |
| 20        | 156        | 160  | 168  | 99   | 105  | 184        | 139   | 244  | 176   | 84  | —    | 113  | (88)  |
| 21        | 186        | 87   | 197  | 54   | 72   | 79         | 165   | 175  | 167   | 123 | 112  | 114  | 170   |
| 22        | 193        | 221  | 93   | 60   | 75   | 157        | 164   | 153  | 157   | 190 | 79   | 86   | 89    |
| 23        | 113        | 255  | 278  | 90   | 104  | 175        | 164   | 184  | 119   | 132 | 69   | 135  | —     |
| 24        | —          | 170  | 166  | 65   | 58   | 134        | —     | 130  | 100   | 138 | —    | 271  | 101   |
| 25        | 136        | 204  | 125  | 182  | 145  | 84         | —     | 144  | 105   | 79  | 155  | 64   | 159   |
| 26        | 99         | 117  | 56   | 88   | (72) | 99         | —     | 147  | 67    | 62  | 128  | 119  | 207   |
| 27        | 270        | 214  | 182  | 70   | 106  | 111        | 119   | 222  | 98    | 143 | 189  | 176  | 89    |
| 28        | —          | 107  | 78   | 168  | 114  | 126        | 84    | 148  | 66    | 128 | —    | 118  | 99    |
| 29        | 169        | 194  | 83   | 127  | 67   | 96         | —     | 152  | 99    | 158 | 114  | 123  | 72    |
| 30        | 230        | 137  | 212  | 92   | 64   | 108        | —     | 124  | 238   | 240 | 59   | 101  | 77    |
| 31        | (135)      | —    | 119  | —    | —    | 79         | —     | 188  | —     | 88  | —    | 101  | 97    |

Numerical character Numbers

Table 45.

| Month/Day | 82<br>Aug | Sep. | Oct. | Nov. | Dec. | 83<br>Jan. | Feb. | Mar. | April | May | June | July | Aug.  |
|-----------|-----------|------|------|------|------|------------|------|------|-------|-----|------|------|-------|
| 1         | 219       | 92   | 52   | (82) | 69   | 52         | 60   | 108  | 95    | 153 | 102  | 94   | 76    |
| 2         | —         | 118  | 64   | 63   | 65   | 63         | 108  | 88   | 98    | 123 | 102  | 123  | 110   |
| 3         | —         | 132  | 71   | 56   | 56   | 59         | 63   | 85   | 69    | 57  | 107  | 203  | 78    |
| 4         | —         | 121  | 62   | 83   | 59   | 49         | 88   | 77   | 87    | 72  | 103  | 177  | 76    |
| 5         | 105       | 100  | 63   | 74   | 67   | 64         | —    | 92   | —     | 52  | 67   | 162  | 123   |
| 6         | 111       | 144  | 66   | 61   | 46   | 66         | —    | 96   | 70    | 49  | 80   | 193  | 115   |
| 7         | 69        | 76   | 80   | 48   | 34   | 53         | —    | 79   | 74    | 59  | 88   | 163  | 102   |
| 8         | 107       | 95   | 77   | 58   | 53   | 70         | —    | 111  | 111   | 72  | —    | 323  | 99    |
| 9         | 72        | 70   | 60   | 54   | 60   | 40         | —    | 96   | 100   | 72  | 58   | 224  | (81)  |
| 10        | 79        | 46   | 53   | 50   | 36   | 64         | —    | 111  | 87    | 105 | 73   | 224  | (11)  |
| 11        | 105       | 54   | 57   | 69   | 48   | 60         | —    | 115  | 93    | 85  | 87   | 277  | 113   |
| 12        | 101       | 43   | 39   | (53) | 56   | 73         | —    | 76   | 85    | 80  | 86   | 176  | 121   |
| 13        | 91        | 67   | 76   | 66   | 53   | 66         | —    | 74   | 82    | 120 | 138  | 186  | 123   |
| 14        | 98        | 81   | 69   | 86   | 84   | 41         | —    | 96   | 92    | 61  | (89) | 214  | 128   |
| 15        | 89        | 95   | 117  | 57   | 58   | 74         | 60   | 70   | 84    | 64  | 117  | 173  | 99    |
| 16        | 105       | 56   | 92   | 100  | 69   | 41         | 54   | 95   | 81    | 40  | 72   | 179  | 71    |
| 17        | 76        | 88   | 45   | 77   | 65   | 87         | 65   | 87   | 104   | 54  | 102  | 208  | 117   |
| 18        | 103       | 73   | —    | 66   | 51   | 64         | 77   | 154  | 92    | 78  | —    | 277  | —     |
| 19        | 114       | 95   | 67   | 67   | 30   | 78         | 86   | 112  | 103   | 61  | —    | 148  | 95    |
| 20        | 118       | 92   | 70   | 74   | 36   | 62         | 35   | 116  | 84    | 117 | —    | 199  | (116) |
| 21        | 145       | 55   | 86   | 60   | 33   | 50         | 93   | 116  | 57    | 67  | 92   | 181  | 70    |
| 22        | 104       | 84   | 41   | 62   | 26   | 70         | 62   | 83   | 92    | 87  | 75   | 179  | 57    |
| 23        | 85        | 110  | 71   | 43   | 51   | 70         | 75   | 93   | 77    | 96  | 98   | 311  | —     |
| 24        | —         | 60   | 51   | 62   | 42   | 72         | 53   | 112  | 42    | 68  | —    | 362  | 103   |
| 25        | 86        | 91   | 77   | 52   | 53   | 70         | 59   | 103  | 94    | 151 | 81   | 161  | 101   |
| 26        | 83        | 50   | 67   | 43   | 24   | 43         | —    | 96   | 66    | 142 | 184  | 191  | 111   |
| 27        | 91        | 88   | 73   | 59   | 74   | 46         | 107  | 122  | 63    | 84  | 83   | 265  | 92    |
| 28        | —         | 65   | 59   | 55   | 61   | 66         | 76   | 87   | 68    | 140 | —    | 235  | 98    |
| 29        | 89        | 51   | 87   | 81   | 46   | 50         | —    | 145  | 73    | 53  | 78   | 256  | 72    |
| 30        | 91        | 53   | 90   | 41   | 33   | 54         | —    | 80   | 86    | 121 | 67   | 173  | 65    |
| 31        | 71        | —    | 63   | —    | —    | 89         | —    | 97   | —     | 84  | —    | 183  | 56    |