

11 研究成果報告

著者の所属先

(1) 京都大学・理・附属天文台, (2) 茨城大学, (3) 宇宙航空研究開発機構, (4) 北見工業大学, (5) 京都女子大学, (6) 京都大学・宇宙総合学研究ユニット, (7) 京都大学・生存圏研究所, (8) 京都大学・総合生存学館, (9) 京都大学・総合博物館, (10) 京都大学・文, (11) 京都大学・理・宇宙物理学教室, (12) 京都大学・理・地磁気世界資料解析センター, (13) 九州大学・宇宙環境研究センター, (14) 国立極地研究所, (15) 国立天文台, (16) 国立天文台(岡山), (17) 東京大学, (18) 東北大学・理・惑星プラズマ・大気研究センター, (19) 名古屋大学・太陽地球環境研究所, (20) 兵庫県立大学西はりま天文台, (21) 仏教大学, (22) 室蘭工業大学, (23) 京都市教育委員会, (24) LLP 京都虹光房, (25) California 大学(アメリカ), (26) Cambridge 大学(イギリス), (27) George Mason 大学(アメリカ), (28) High Altitude 観測所(アメリカ), (29) Ica 国立大学(ペルー), (30) King Saud 大学(サウジアラビア), (31) Köln 大学(ドイツ), (32) Lockheed Martin 太陽天体物理研究所(アメリカ), (33) Mullard Space Science Laboratory(イギリス), (34) München 大学(ドイツ), (35) 中国国家天文台(中国), (36) NASA Goddard Space Flight Center(アメリカ), (37) Peru 地球物理学研究所(ペルー), (38) Queen's 大学 Belfast(イギリス)

11.1 出版

2015 年に出版された査読論文

- (1) Ando, H.³, Shiota, D.¹⁹, Imamura, T.³, Tokumaru, M.¹⁹, Asai, A.⁶, Isobe, H.⁸, Pätzold, M.³¹, Häusler, B.³⁴, Nakamura, M.³
Internal structure of a coronal mass ejection revealed by Akatsuki radio occultation observations, 2015/07, JGR, 120, 5318-5328.
- (2) Hayakawa, H.¹⁰, Tamazawa, H.¹, Kawamura, A.¹, Isobe, H⁶
Records of Sunspots and Auroras during CE 960-1279 in the Chinese chronicle of the Song dynasty, 2015/12, Earth, Planets and Space, 67, 82.
- (3) Honda, S.²⁰, Notsu, Y.¹, Maehara, H.¹⁶, Notsu, S.¹¹, Shibayama T.¹⁹, Nogami, D.¹¹, Shibata, K.¹
High dispersion spectroscopy of solar-type superflare stars. III. Lithium abundances, 2015/10, PASJ, 67, 85.
- (4) Maehara, H.¹⁶, Shibayama T.¹⁹, Notsu, Y.¹, Notsu, S.¹¹, Honda, S.²⁰, Nogami, D.¹¹, Shibata, K.¹
Statistical properties of superflares on solar-type stars based on 1-min cadence data, 2015/12, Earth, Planets, and Space, 67, 59.

- (5) Miura, N.⁴, Ohishi, A.⁴, Kuwamura, S.⁴, Baba, N.²², Ueno, S.¹, Nakatani, Y.¹, and Ichimoto, K.¹
 Solar image improvement based on deconvolution using additional wavefront sensor, 2015/, Imaging and Applied Optics, OSA Technical Digest, paper JT5A.29.
- (6) Notsu, Y.¹, Honda, S.²⁰, Maehara, H.¹⁶, Notsu, S.¹¹, Shibayama T.¹⁹, Nogami, D.¹¹, Shibata, K.¹
 High dispersion spectroscopy of solar-type superflare stars. I. Temperature, surface gravity, metallicity, and $v\sin i$, 2015/06, PASJ, 67, 32.
- (7) Notsu, Y.¹, Honda, S.²⁰, Maehara, H.¹⁶, Notsu, S.¹¹, Shibayama T.¹⁹, Nogami, D.¹¹, Shibata, K.¹
 High dispersion spectroscopy of solar-type superflare stars. II. Stellar rotation, starspots, and chromospheric activities, 2015/06, PASJ, 67, 33.
- (8) Shaltout, A.M.K, Ichimoto, K.¹
 Coupling of the magnetic field and gas flows inferred from the net circular polarization in a sunspot penumbra, 2015/04 , PASJ, 67, 27.
- (9) Shing, K.A.P, Hillier, A.²⁶, Isobe, H.⁶, Shibata, K.⁶
 Nonlinear instability and intermittent nature of magnetic reconnection in solar chromosphere, 2015/10, PASJ, 67, 96.
- (10) Takahashi, T.¹, Asai, A.⁶, Shibata, K.¹
 Prominence Activation by Coronal Fast Mode Shock, 2015/03, ApJ, 801, 37.
- (11) Takasao, S.¹, Matsumoto, T.³, Nakamura, N.¹, Shibata, K.¹
 Magnetohydrodynamic Shocks in and above Post-Flare Loops: Two-dimensional Simulation and a Simplified Model, 2015/06, ApJ, 805, 135.
- (12) Takasao, S.¹, Fan, Y.²⁸, Cheung, M.C.M³², Shibata, K.¹
 Numerical Study on Emergence of Kinked Flux Tube for Understanding of Possible Origin of δ -spot Regions, 2015/11, ApJ, 813, 112.
- (13) Takeshige, S.¹, Takasao, S.¹, Shibata, K.¹
 A Theoretical Model of a Thinning Current Sheet in the low- β plasmas, 2015/07, ApJ, 807, 159.
- (14) Yatagai, A.¹⁹, Sato, Y¹⁴, Shinbori, A.⁷, Abe, S.¹³, UeNo, S.¹
 The capacity-building and science-enabling activities of the IUGONET for the solar-terrestrial research community, 2015/??, Earth, Planets and Space, Volume 67, article id.2, 9 pp.

2015 年に受理された査読論文

- (1) Kimura, M.¹¹, Isogai, K.¹¹, Kato T.¹¹, Ueda, Y.¹¹ and 64 coauthors including Imada, A.¹

Repetitive Patterns in Rapid Optical Variations in the Nearby Black-hole Binary V404 Cygni 2016, Nature, in press

- (2) Kimura, M.¹¹, Kato, T.¹¹, Imada, A.¹, and 10 coauthors

Unexpected Superoutburst and Rebrightening of AL Comae Berenices in 2015 2016, PASJ, in press

2015 年に出版された国際会議集録や技報など

- (1) Sakaue, T.¹, Tamazawa, H.¹, Kawamura, A. D.¹, Nakano, F.⁶

SpaceShipTwo Will Change Private Space Industry in Japan, 2015/5, ISTS 2015-u-07

- (2) Schrijver, C. J.³², Fletcher, L., van Driel-Gesztelyi, L.³³, Asai, A.⁶, Cally, P. S., Charbonneau, P.²⁸, Gibson, S. E.²⁸, Gomez, D., Hasan, S. S., Veronig, A. M., Yan, Yihua³⁵

IAU commission 10 "Solar Activity": Legacy report and triennial report for 2012-2015 To be published in the Transactions of the IAU, by the International Astronomical

- (3) Shibata, K.¹, Takasao, S.¹

Fractal Reconnection in Solar and Stellar Environments,
a chapter of the book "Magnetic Reconnection - Concepts and Applications",
editors W. Gonzalez, E. N. Parker (Springer, 2015)

- (4) 大井 瑛仁¹、阿南 徹¹、佐野 聖典¹、一本 潔¹、永田 伸一¹

飛騨天文台太陽観測用カメラのノイズ特性評価及び比較,
京都大学大学院理学研究科附属天文台技報, Vol.3, No.1, 2015-Aug-28,
<http://repository.kulib.kyoto-u.ac.jp/dspace/handle/2433/200694>