

# 2018年 9月 第4週 新着論文サーベイ

9月24日(月曜日)

[1] [arxiv:1809.08210](#)

Title: "Dynamical evolution and stability maps of the Proxima Centauri system"

Author: Tong Meng, Jianghui Ji, Yao Dong

Comments: 11 pages, 11 figures, accepted for publication in MNRAS

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Proxima Centauri には地球質量の惑星の Proxima b が発見されているが、215 日の軌道周期を持っている惑星 c もいそう。なので系全体の軌道安定性を調べて見た。MEGNO 法を使うと、b と c の軌道面が同じだと Proxima b は 0.02–0.1AU の範囲で安定で、軌道離心率は 0.4 以下でなければならない。ベストフィットなパラメータだと、Proxima b は落下してしまう。軌道面が一致していない場合は軌道傾斜角の違いは  $50^\circ$  以下でないと安定でない。Proxima c の質量は 3.13 から 70.7 地球質量の範囲で、軌道傾斜角の違いが  $50^\circ$  以下なら 1.27 から 1.6 地球質量になる。

[2] [arxiv:1809.08166](#)

Title: "Planet-Planet Tides in the TRAPPIST-1 System"

Author: Jason T. Wright

Comments: 3 pp Research Note of the AAS. v.2 contains additional citation to prior art by Lingam & Loeb (2018) *Astrobiology* 18, 967

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

TRAPPIST-1 は 7 つの惑星を持っていて、地球型惑星は軌道共鳴を起こしているし、いくつかの惑星はハビタブルゾーンに居ると思われる。一般的に潮汐は主星と惑星の間でのやりとりを考えるけれど、惑星間の潮汐も考える。調べて見たところ、すべての惑星は他の惑星から潮汐的な影響を受けていて、特に、惑星 g に対する惑星 f の効果が、主星から惑星 g への潮汐よりも大きいことが分かった。ということで TRAPPIST-1 系では惑星間の潮汐は無視できない。特に惑星 g と惑星 f では。

[3] [arxiv:1809.08147](#)

Title: "High resolution millimetre imaging of the CI Tau protoplanetary disc - a massive ensemble of protoplanets from 0.1 - 100 au"

Author: Cathie J. Clarke, Marco Tazzari, Attila Juhász, Giovanni Rosotti, Richard Booth, Stefano Facchini, John D. Ilee, Christopher M. Johns-Krull, Mihkel Kama, Farzana Meru, Lisa Prato

Comments: Accepted on *Astrophysical Journal Letters*; 7 pages, 2 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Astrophysics of Galaxies (astro-ph.GA); Solar and Stellar Astrophysics (astro-ph.SR)

### [観測]

Cl Tau は原始惑星系円盤中にホットジュピター候補が発見された初めての天体で、それをミリ波で高分解能観測した。ギャップの半径は大体 13AU と 39AU、100AU にあった。3つのギャップは重たい惑星で生み出されていると考えられているが、4つ惑星があると思われるのに 2Myr の年齢。2つの新しい惑星は HL Tau の円盤と似たところにある。なので系の特徴が HL Tau に似ていそう。この系ではホットジュピターも、遠い軌道のガス惑星もあって、なかなか珍しい。

### [4] [arxiv:1809.08086](#)

Title: "The extraordinary composition of the "blue comet" C/2016 R2 (PanSTARRS)"

Author: N. Biver, D. Bockelée-Morvan, G. Paubert, R. Moreno, J. Crovisier, J. Boissier, E. Bertrand, H. Boussier, F. Kugel, A. McKay, N. Dello Russo, M. A. DiSanti

Comments: 14 pages, 16 figures. Accepted for publication in Astronomy & Astrophysics

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

### [観測]

C/2016 R2 (PanSTARRS) の多波長観測を行った。CO, CH<sub>3</sub>OH, H<sub>2</sub>CO, HCN の生成率を測って、N<sub>2</sub>/CO 比を調べた。いくつかの分子種、とくに OH はまったく検出出来なかった。硫黄も上限が分かっただけ、これは太陽から 2.8AU の時の数字になる。C/2016 R2 の組成は他の彗星と大きく異なっていて、N<sub>2</sub> と CO は豊富だが、ダストが少ない。これはこの彗星が N<sub>2</sub> の ice line の外側で形成された、ひじょうに稀なグループなのだと推定できる。

### [5] [arxiv:1809.08008](#)

Title: "Mass, radius, and composition of the transiting planet 55 Cnc e : using interferometry and correlations — A quick update"

Author: Aurélien Crida, Roxanne Ligi, Caroline Dorn, Francesco Borsa, Yveline Lebreton

Comments: 3 pages, 1 figure, published in Research Notes of the American Astronomical Society

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Solar and Stellar Astrophysics (astro-ph.SR)

### [観測]

自分たちの先行研究 (Crida+2018; 4月19日アクセプト) でトランジット惑星の 55 Cnc e の質量と半径と内部構造について報告した。その時に「もっと精度の高いトランジット観測が出来れば、惑星の密度に関してもっとハッキリとするのに」と書いたが、その3ヶ月後に Bourrier+2018 が出版されて新しいデータも増え、Gaia の DR2 も 4月25日にリリースされた。これらのデータで物理量を更新すると、 $1.947 \pm 0.038$  地球半径、 $8.59 \pm 0.43$  地球質量になった。密度は  $1.164 \pm 0.062$  地球密度になる。おそらくガス待機の厚さは  $0.03 \pm 0.02$  地球半径くらい

### [6] [arxiv:1809.07898](#)

Title: "MOA-2016-BLG-319Lb: Microlensing Planet Subject to Rare Minor-Image Perturbation Degeneracy in Determining Planet Parameter"

Author: Cheongho Han, Ian A. Bond, Andrew Gould, Michael D. Albrow, Sun-Ju Chung, Youn Kil Jung, Kyu-Ha Hwang, Chung-Uk Lee, Yoon-Hyun Ryu, In-Gu Shin, Yossi Shvartzvald, Jennifer C. Yee, Sang-Mok Cha, Dong-

Jin Kim, Hyoun-Woo Kim, Seung-Lee Kim, Dong-Joo Lee, Yongseok Lee, Byeong-Gon Park, Richard W. Pogge, Chun-Hwey Kim, Fumio Abe, Richard Barry, David P. Bennett, Aparna Bhattacharya, Martin Donachie, Akihiko Fukui, Yuki Hira, Yoshitaka Itow, Kohei Kawasaki, Iona Kondo, Naoki Koshimoto, Man Cheung Alex Li, Yutaka Matsubara, Yasushi Muraki, Shota Miyazaki, Masayuki Nagakane, Clément Ranc, Nicholas J. Rattenbury, Haruno Suematsu, Denis J. Sullivan, Takahiro Sumi, Daisuke Suzuki, Paul J. Tristram, Atsunori Yonehara

Comments: 9 pages, 8 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

### [観測]

MOA-2016-BLG-319 イベントの解析。minor-image perturbation が起こすようなアノマリーが確認できた。これで二通りの解が見つかってしまった。レンズ系を調べて見ると、惑星のコースティックの横切り方が2通り考えられて縮退してしまう。こうした縮退は major-image perturbation では厳しいが、minor-image perturbation では少しゆるくなることが知られていた。二つの先に発見されていた惑星イベントから考えられるレンズ系の状況と比較すると、同じ様な縮退になってしまうことが分かるが、恒星と惑星の軸に対して直角に近き航跡を通った場合にこの縮退が発生することが分かった。ベイズ解析をして、低質量な M 型星 ( $0.15_{-0.08}^{+0.28}$  太陽質量) を巨大ガス惑星 ( $0.62_{-0.33}^{+1.16}$  木星質量または  $0.65_{-0.35}^{+1.21}$  木星質量) が周回していることが分かった。惑星質量の違いは、縮退の解を入れた場合と抜いた場合。軌道長半径は投影で 0.95AU くらいか 1.05AU くらいで、これも解によって違う。今後の解析でも、minor-image perturbation の影響を考慮していく必要があるだろう。

## [7] [arxiv:1809.07963](https://arxiv.org/abs/1809.07963)

Title: "Complete bolometric treatment of irradiation effects"

Author: Martin Horvat, Kyle E. Conroy, David Jones, Andrej Prša

Comments: 28 pages, 5 figures, submitted to ApJS

Subjects: Solar and Stellar Astrophysics (astro-ph.SR); Earth and Planetary Astrophysics (astro-ph.EP)

### [理論]

照射されてる天体を統一的に記述するフレームワークを作ってみた。食連星や食を起こす天体 (トランジット惑星) にも適応できるよ。オープンソースなので利用して。

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## 9 月 25 日 (火曜日)

## [1] [arxiv:1809.09080](https://arxiv.org/abs/1809.09080)

Title: "Detecting Water In the atmosphere of HR 8799 c with L-band High Dispersion Spectroscopy Aided By Adaptive Optics"

Author: Ji Wang, Dimitri Mawet Jonathan J. Fortney, Callie Hood, Caroline V. Morley, Bjorn Benneke

Comments: 14 pages, 5 figures, 5 tables, accepted for publication on AJ, references updated

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Instrumentation and Methods for Astrophysics (astro-ph.IM)

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1809.09072](#)

Title: "Secular Resonance Between Iapetus and the Giant Planets"

Author: Matija Ćuk, Luke Dones, David Nesvorný, Kevin J. Walsh

Comments: Accepted for MNRAS

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1809.09009](#)

Title: "Plausible home stars of the interstellar object 'Oumuamua found in Gaia DR2"

Author: C.A.L. Bailer-Jones, D. Farnocchia, K.J. Meech, R. Brasser, M. Micheli, S. Chakrabarti, M.W. Buie, O.R. Hainaut

Comments: Accepted to The Astronomical Journal

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1809.08879](#)

Title: "EPIC 249451861b: an Eccentric Warm Saturn transiting a G-dwarf"

Author: Andrés Jordán, Rafael Brahm, Néstor Espinoza, Cristián Cortés, Matías Díaz, Holger Drass, Thomas Henning, James S. Jenkins, Matías I. Jones, Markus Rabus, Felipe Rojas, Paula Sarkis, Maja Vučković, Abner Zapata, Maritza G. Soto, Gáspár Á. Bakos, Daniel Bayliss, Waqas Bhatti, Zoltan Csubry, Régis Lachaume, Víctor Moraga, Blake Pantoja, David Osip, Avi Shporer, Vincent Suc, Sergio Vásquez

Comments: submitted to AAS journals. 8 figures, 3 tables

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1809.08869](#)

Title: "K2-265 b: A Transiting Rocky Super-Earth"

Author:K. W. F. Lam, A. Santerne, S. G. Sousa, A. Vigan, D. J. Armstrong, S. C. C. Barros, B. Brugger, V. Adibekyan, J.-M. Almenara, E. Delgado Mena, X. Dumusque, D. Barrado, D. Bayliss, A. S. Bonomo, F. Bouchy, D. J. A. Brown, D. Ciardi, M. Deleuil, O. Demangeon, F. Faedi, E. Foxell, J. A. G. Jackman, G. W. King, J. Kirk, R. Ligi, J. Lillo-Box, T. Lopez, C. Lovis, T. Louden, L. D. Nielsen, J. McCormac, O. Mousis, H. P. Osborn, D. Pollacco, N. C. Santos, S. Udry, P. J. Wheatley

Comments: 14 pages, 9 figures, Accepted for publication in A&A

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[6] [arxiv:1809.08844](https://arxiv.org/abs/1809.08844)

Title: "The Ophiuchus DIsc Survey Employing ALMA (ODISEA) - I : project description and continuum images at 28 au resolution"

Author:Lucas A. Cieza, Dary Ruíz-Rodríguez, Antonio Hales, Simon Casassus, Sebastian Pérez, Camilo Gonzalez-Ruilova, Hector Cánovas, Jonathan P. Williams, Alice Zurlo, Megan Ansdell, Henning Avenhaus, Amelia Bayo, Gesa H. -M. Bertrang, Valentin Christiaens, William Dent, Gabriel Ferrero, Roberto Gamen, Johan Olofsson, Santiago Orcajo, Karla Peña Ramírez, David Principe, Matthias R. Schreiber, Gerrit van der Plas

Comments: 19 pages, 13 figures. Accepted for publication by MNRAS

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Astrophysics of Galaxies (astro-ph.GA); Solar and Stellar Astrophysics (astro-ph.SR)

[理論/観測/実験 etc....]

Comment!!!!

[7] [arxiv:1809.08832](https://arxiv.org/abs/1809.08832)

Title: "The Vegetation Red Edge Biosignature Through Time on Earth and Exoplanets"

Author:Jack T. O'Malley-James, Lisa Kaltenegger

Comments: Published in Astrobiology (Free open access until October 2 2018: this https URL)

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!



[8] [arxiv:1809.08816](#)

Title: "Luminosity Function of Faint Sporadic Meteors measured with a Wide-Field CMOS mosaic camera Tomo-e PM"

Author: Ryou Ohsawa, Shigeyuki Sako, Yuki Sarugaku, Fumihiko Usui, Takafumi Ootsubo, Yasunori Fujiwara, Mikiya Sato, Toshihiro Kasuga, Ko Arimatsu, Jun-ichi Watanabe, Mamoru Doi, Naoto Kobayashi, Hidenori Takahashi, Kentaro Motohara, Tomoki Morokuma, Masahiro Konishi, Tsutomu Aoki, Takao Soyano, Ken'ichi Tarusawa, Yuki Mori, Yoshikazu Nakada, Makoto Ichiki, Noriaki Arima, Yuto Kojima, Masahiro Morita, Toshikazu Shigeyama, Yoshifusa Ita, Mitsuru Kokubo, Kazuma Mitsuda, Hiroyuki Maehara, Nozomu Tominaga, Takuya Yamashita, Shiro Ikeda, Mikio Morii, Seitaro Urakawa, Shin-ichiro Okumura, Makoto Yoshikawa

Comments: 18 pages, 13 figures, accepted for publication in Planetary and Space Science

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[9] [arxiv:1809.08501](#)

Title: "Col-OSSOS: The Colours of the Outer Solar System Origins Survey"

Author: Megan E. Schwamb, Wesley C. Fraser, Michele T. Bannister, Michael Marsset, Rosemary E. Pike, J. J. Kavelaars, Susan D. Benecchi, Matthew J. Lehner, Shiang-Yu Wang, Audrey Thirouin, Audrey Delsanti, Nuno Peixinho, Kathryn Volk, Mike Alexandersen, Ying-Tung Chen, Brett Gladman, Stephen D. J. Gwyn, Jean-Marc Petit

Comments: Submitted to ApJS

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[10] [arxiv:1809.08499](#)

Title: "Dynamical instability and its implications for planetary system architecture"

Author: Dong-Hong Wu, Rachel C. Zhang, Ji-Lin Zhou, Jason H. Steffen

Comments: 11 pages, 14 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[11] [arxiv:1809.08436](#)

Title: "Kepler-1656b: a Dense Sub-Saturn With an Extreme Eccentricity"

Author: Madison T. Brady, Erik A. Petigura, Heather A. Knutson, Evan Sinukoff, Howard Isaacson, Lea A. Hirsch, Benjamin J. Fulton, Molly R. Kosiarek, Andrew W. Howard

Comments: 10 pages, 6 figures, published in The Astronomical Journal

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[12] [arxiv:1809.08435](#)

Title: "Polarimetry of Water Ice Particles Providing Insights on Grain Size and Degree of Sintering on Icy Planetary Surfaces"

Author: Olivier Poch, Romain Cerubini, Antoine Pommerol, Bernhard Jost, Nicolas Thomas

Comments: 36 pages, 1 table, 11 figures, 2 data sets, accepted in Journal of Geophysical Research: Planets

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[13] [arxiv:1809.08385](#)

Title: "Properties and occurrence rates of *Kepler* exoplanet candidates as a function of host star metallicity from the DR25 catalog"

Author: M. Narang, P. Manoj, E. Furlan, C. Mordasini, T. Henning, B. Mathew, R. K. Banyal, T. Sivarani

Comments: 14 pages, 13 Figures, Accepted for publication in The Astronomical Journal

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Solar and Stellar Astrophysics (astro-ph.SR)

[理論/観測/実験 etc....]

Comment!!!!

[14] [arxiv:1809.08354](#)

Title: "beta Pictoris b post conjunction detection with VLT/SPHERE"

Author: A.-M. Lagrange, A. Boccaletti, M. Langlois, G. Chauvin, R. Gratton, H. Beust, S. Desidera, J. Milli, M. Bonnefoy, M. Feldt, M. Meyer, A. Vigan, B. Biller, M. Bonavita, J.-L. Baudino, F. Cantalloube, M. Cudel, S. Daemgen, P. Delorme, V. D'Orazi, J. Girard, C. Fontanive, J. Hagelberg,

M. Janson, M. Keppler, T. Koypitova, R. Galicher, J. Lannier, H. Le Coroller, R. Ligi, A.-L. Maire, D. Mesa, S. Messina, A. Mueller, S. Peretti, C. Perrot, D. Rouan, G. Salter, M. Samland, T. Schmidt, E. Sissa, A. Zurlo, J.-L. Beuzit, D. Mouillet, C. Dominik, T. Henning, E. Lagadec, F. Menard, H.-M. Schmid, S. Udry, SPHERE consortium

Comments: submitted to A&A

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Instrumentation and Methods for Astrophysics (astro-ph.IM)

[理論/観測/実験 etc....]

Comment!!!!

[15] [arXiv:1809.08266](#)

Title: "Paleo-Rock-Hosted Life on Earth and the Search on Mars: a Review and Strategy for Exploration"

Author: T.C. Onstott, B.L. Ehlmann, H. Sapers, M. Coleman, M. Ivarsson, J.J. Marlow, A. Neubeck, P. Niles

Comments: 55 pages, 5 figures, 2 tables

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[16] [arXiv:1809.08261](#)

Title: "A Bayesian Framework for Exoplanet Direct Detection and Non-Detection"

Author: Jean-Baptiste Ruffio, Dimitri Mawet, Ian Czekala, Bruce Macintosh, Robert J. De Rosa, Garreth Ruane, Michael Bottom, Laurent Pueyo, Jason J. Wang, Lea Hirsch, Zhaohuan Zhu, Eric L. Nielsen

Comments: AJ accepted

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Instrumentation and Methods for Astrophysics (astro-ph.IM)

[理論/観測/実験 etc....]

Comment!!!!

[17] [arXiv:1809.08230](#)

Title: "Observability of molecular species in a nitrogen dominated atmosphere for 55 Cancri e"

Author: Yamila Miguel

Comments: 9 pages, submitted to MNRAS



Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[18] [arXiv:1809.08789](#)

Title: "White dwarf collisions and the meteoritic Ne-E anomaly"

Author: Jordi Isern, Eduardo Bravo

Comments: Submitted to Proceedings of the 21st European Workshop on White Dwarfs (5 pages, 6 figures)

Subjects: Solar and Stellar Astrophysics (astro-ph.SR); Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[19] [arXiv:1809.08243](#)

Title: "First Resolution of Microlensed Images"

Author: Subo Dong, A. Mérand, F. Delplancke-Ströbele, Andrew Gould, Ping Chen, R. Post, C.S. Kochanek, K. Z. Stanek, G. W. Christie, Robert Mutel, T. Natusch, T. W.-S. Holoien, J. L. Prieto, B. J. Shappee, Todd A. Thompson

Subjects: Solar and Stellar Astrophysics (astro-ph.SR); Earth and Planetary Astrophysics (astro-ph.EP); Instrumentation and Methods for Astrophysics (astro-ph.IM)

[理論/観測/実験 etc....]

Comment!!!!

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## 9月26日(水曜日)

[1] [arXiv:1809.09185](#)

Title: "Submillimetre dust polarisation and opacity in the HD163296 protoplanetary ring system"

Author: W.R.F. Dent, C. Pinte, P.C. Cortes, F. Ménard, A. Hales, E. Fomalont, I. de Gregorio-Monsalvo

Comments: 5 pages +2 pages supplemental data. v2 - revised figures and final values; conclusions unchanged

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1809.09118](#)

Title: "Dependence of Biological Activity on the Surface Water Fraction of Plan-

ets”

Author: Manasvi Lingam, Abraham Loeb

Comments: 13 pages; 3 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1809.09099](#)

Title: "A Planetary Mass and Stellar Radius Relationship for Exoplanets Orbiting Red Giants"

Author: Jonathan H. Jiang, Sheldon Zhu

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Solar and Stellar Astrophysics (astro-ph.SR)

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1809.09181](#)

Title: "Extending Gaia DR2 with HST narrow-field astrometry: the WISE J154151.65-225024.9 test case"

Author: L. R. Bedin, C. Fontanive

Comments: 12 pages, 5 tables, 6 figures of which two in low-resolution [Figure 3 is the essence of the work]. Accepted for publication in MNRAS on 2018 September 24th

Subjects: Solar and Stellar Astrophysics (astro-ph.SR); Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

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9月27日(木曜日)

[1] [arXiv:1809.10042](#)

Title: "First-order mean motion resonances in two-planet systems: general analysis and observed systems"

Author: Caroline Terquem, John Papaloizou

Comments: Accepted for publication in MNRAS

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1809.09914](#)

Title: "Extrasolar planets and brown dwarfs around AF-type stars. X. The SOPHIE northern sample. Combining the SOPHIE and HARPS surveys to compute the close giant planet mass-period distribution around AF-type stars"

Author: S. Borgniet, A.-M. Lagrange, N. Meunier, F. Galland, L. Arnold, N. Astudillo-Defru, J.-L. Beuzit, I. Boisse, X. Bonfils, F. Bouchy, K. Debondt, M. Deleuil, X. Delfosse, M. Desort, R.F. Díaz, A. Eggenberger, D. Ehrenreich, T. Forveille, G. Hébrard, B. Loeillet, C. Lovis, G. Montagnier, C. Moutou, F. Pepe, C. Perrier, F. Pont, D. Queloz, A. Santerne, N.C. Santos, D. Ségransan, R. da Silva, J.P. Sivan, S. Udry, A. Vidal-Madjar

Comments: 32 pages, 21 figures. Accepted to Astronomy & Astrophysics on August 30, 2018

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1809.09779](#)

Title: "Meteoritic Abundances of Fatty Acids and Potential Reaction Pathways in Planetesimals"

Author: James C.-Y. Lai, Ben K. D. Pearce, Ralph E. Pudritz, Drake Lee

Comments: 21 pages, 13 figures, 5 tables, accepted for publication in Icarus

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1809.09736](#)

Title: "Jupiter's North Equatorial Belt and Jet: III, The 'great northern upheaval' in 2012"

Author: John H. Rogers, Gianluigi Adamoli

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1809.09719](#)

Title: "Jupiter's North Equatorial Belt and Jet, II, Acceleration of the jet and the NEB Fade in 2011-12"

Author:John H. Rogers

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1809.09663](#)

Title: "Follow-up Imaging of Disk Candidates from the Disk Detective Citizen Science Project: New Discoveries and False-Positives in WISE Circumstellar Disk Surveys"

Author:Steven M. Silverberg, Marc J. Kuchner, John P. Wisniewski, Alissa S. Bans, John H. Debes, Scott J. Kenyon, Christoph Baranec, Reed Riddle, Nicholas Law, Johanna K. Teske, Emily Burns-Kaurin, Milton K.D. Bosch, Tadeas Cernohous, Katharina Doll, Hugo A. Durantini Luca, Michiharu Hyogo, Joshua Hamilton, Johanna J.S. Finnemann, Lily Lau, Disk Detective Collaboration

Comments: 23 pages, eight figures. Accepted for publication in the Astrophysical Journal. SEDs and machine-readable tables will be available in the ApJ online version

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:1809.09638](#)

Title: "New HARPS and FEROS observations of GJ1046"

Author:Trifon Trifonov, Martin Kürster, Sabine Reffert, Mathias Zechmeister, Michael Endl, Florian Rodler, Davide Gandolfi, Oscar Barragán, Thomas Henning, Man Hoi Lee, Olga Zakhochay, Paula Sarkis, Paul Heeren, Marcelo Tala, Vera Wolthoff, Stefan S. Brems, Stephan Stock, Angela Hempel, Diana Kossakowski

Comments: 2 pages, 1 figure, 1 table with RV data (available only in the Astro-PH version of the paper), Accepted by RNAAS

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:1809.09629](#)

Title: "From cold to hot irradiated gaseous exoplanets: A classification scheme with four classes"

Author:Karan Molaverdikhani, Thomas Henning, Paul Mollie're

Comments: 25 pages, 13 figures, submitted to ApJ, comments are welcome

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[9] [arxiv:1809.09722](#)

Title: "TSARDI: a Machine Learning data rejection algorithm for transiting exoplanet light curves"

Author:D. Mislis, S. Pyrzas, K.A. Alsubai

Comments: 7 pages, 12 figures

Subjects: Instrumentation and Methods for Astrophysics (astro-ph.IM); Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

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9月28日(金曜日)

[1] [arxiv:1809.10424](#)

Title: "Models of Rosetta/OSIRIS 67P dust coma phase function"

Author:Fernando Moreno, Daniel Guirado, Olga Muñoz, Ivano Bertini, Cecilia Tubiana, Carsten Guttler, Marco Fulle, Alessandra Rotundi, Vincenzo Della Corte, Stavro Ivanovski, Giovanna Rinaldi, Dominique Bockelee-Morvan, Vladimir Zakharov, Jessica Agarwal, Stefano Mottola, Imre Toth, Elisa Frattin, Luisa Lara, Pedro Gutierrez, Zhong Yi Lin, Ludmilla Kolokolova, Holger Sierks, Giampiero Naletto, Philippe Lamy, Rafael Rodrigo, Detlef Koschny, Bjorn Davidsson, Maria Antonietta Barucci, Jean-Lup Bertaux, Dennis Bodewits, Gabriele Cremonese, Vania Da Deppo, Stefano Debei, Mariolino de Cecco, Jakob Deller, Sonia Fornasier, Wing Ip, Uwe Keller, Monica Lazzarin, Jose Juan Lopez-Moreno, Francesco Marzari, Xian Shi

Comments: Accepted by Astronomical Journal, September 26th, 2018. 21 pages, 5 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[観測]

Rosetta/OSIRISによる撮像から、67P彗星のダストコマの位相関数が位相角 $100^\circ$ で最小隣、また強い後方散乱が確認されている。観測波長サイズのランダムに集積したアグリゲイト粒子を用いた従来のダストモデルではこれらの特徴は再現できなかったが、様々なアスペクト比の長細い粒子の集合を考えることで再現できることを示した。

[2] [arxive:1809.10309](#)

Title: "The 2016 Reactivations of Main-Belt Comets 238P/Read and 288P/(300163) 2006 VW139"

Author: Henry H. Hsieh, Masateru Ishiguro, Yoonyoung Kim, Matthew M. Knight, Zhong-Yi Lin, Marco Micheli, Nicholas A. Moskovitz, Scott S. Sheppard, Audrey Thirouin, Chadwick A. Trujillo

Comments: 21 pages, 9 figures, accepted by AJ

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[観測]

メインベルトの小惑星 238P/Read と 288P/(300163) 2006 VW139 の活動を 2016-2017 年にかけて観測した。SDSS アーカイブデータと合わせて解析した結果、どちらの小惑星も近日点付近で少なくとも 3 回彗星活動をしていることが確認された。2 つの活動期で質量放出量が同じであることから、非活動期のマントル成長と氷の減少は最小限に抑えられていたことが示唆された。

[3] [arxive:1809.10230](#)

Title: "Microlensing path parametrization for Earth-like Exoplanet detection around solar mass stars"

Author: L. de Almeida, J.-D. do Nascimento Jr

Comments: 8 pages, 7 figures, accepted to be published in The Astronomical Journal

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Solar and Stellar Astrophysics (astro-ph.SR)

[観測手法]

太陽質量の恒星から 1AU の軌道を回る地球型系外惑星からなる系をマイクロレンズで検出した時の衝突パラメータ  $u_0$  と衝突角度  $\alpha$  をパラメタライズする新しい手法を提案した。地球型系外惑星の検出速度が 5 倍になったらしい。

[4] [arxive:1809.10211](#)

Title: "MOPSS II: Extreme Optical Scattering Slope for the Inflated Super-Neptune HATS-8b"

Author: E. M. May, T. Gardner, E. Rauscher, J. D. Monnier

Comments: 15 pages, 10 figures, 3 tables. Submitted to AJ

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[観測]

系外惑星の透過分光をする MOPSS というプログラムで観測された膨張したスーパーネプチューン HATS-8b の解析結果。2 夜の観測で、レイリー散乱よりも強い散乱勾配が見られ、中心星の黒点でも説明がつかなかった。0.01 $\mu$ m 未満の MnS 凝集物粒子による散乱の影響を調べたところ、惑星が平衡温度よりも温暖な場合は観測地の 80%、平行温度では 50% まで説明できることがわかった。

[5] [arxive:1809.10209](#)

Title: "Gap Formation in Planetesimal Disks Via Divergently Migrating Planets"



Author: Sarah J. Morrison, Kaitlin M. Kratter

Comments: 10 pages, 1 table, 8 figures. Accepted for publication in MNRAS on 2018 September 25

Subjects: Earth and Planetary Astrophysics (astro-ph.EP)

[理論]

観測されているギャップ構造を持つデブリ円盤では惑星の存在が示唆されているものが多いが、直接撮像でそのような系に大質量惑星はあまり見つかっていない。そこで若いデブリ円盤に撮像に受からないくらい小質量の惑星の軌道移動によってギャップができるかを調べた。結果、海王星より重い惑星のペアがあればそれらの軌道距離と同じ幅のギャップを 10Myr 以内に形成できることがわかった。スーパーアースのペアの軌道移動では観測に受かるほどのギャップは形成されなかった。

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Nature

ない

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Science

ない