

2019年 3月 第2週 新着論文サーベイ

3月4日(月曜日)

[1] [arXiv:1903.00393](#)

Title: "Analytical Estimation of the Width of Hadley Cells in the Solar System"

Author: Karlie N. Rees, Timothy J. Garrett

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Atmospheric and Oceanic Physics (physics.ao-ph)

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1903.00320](#)

Title: "Using Deep Neural Networks to compute the mass of forming planets"

Author: Yann Alibert, Julia Venturini

Comments: accepted in A&A. Animations visible at this [http URL](#) and code available at this [https URL](#)

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1903.00310](#)

Title: "Interstellar Dust in the Solar System: Model versus In-Situ Spacecraft Data"

Author: Harald Krüger, Peter Strub, Nicolas Altobelli, Veerle Sterken, Ralf Srama, Eberhard Grün

Comments: 24 pages, 7 figures, 1 table

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Space Physics (physics.space-ph)

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1903.00234](#)

Title: "Exoplanet host-star properties: the active environment of exoplanets"

Author: John P. Pye, David Barrado, Rafael A. Garcia, Manuel Guedel, Jonathan Nichols, Simon Joyce, Nuria Huelamo, Maria Morales-Calderon, Mauro Lopez, Enrique Solano, Pierre-Olivier Lagage, Colin P. Johnstone, Allan Sacha Brun, Antoine Strugarek, Jeremy Ahuir

Comments:

To appear in the Proceedings of IAU Symposium No. 345 - Origins: from the Protosun to the First Steps of Life

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1903.00210](#)

Title: "Use of a Night-Tracking Camera for Characterization and Orbit improvement of Defunct Spacecraft"

Author: E. Cordelli, P. Schlatter, P. Lauber, T. Schildknecht

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1903.00174](#)

Title: "A Spectroscopic Analysis of the California-Kepler Survey Sample: I. Stellar Parameters, Planetary Radii and a Slope in the Radius Gap"

Author: Cintia F. Martinez, Katia Cunha, Luan Ghezzi, Verne V. Smith

Comments: 33 pages, 13 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:1903.00096](#)

Title: "Detection of Rotational Acceleration of Bennu using HST Lightcurve Observations"

Author: Michael C. Nolan, Ellen S. Howell, Daniel J. Scheeres, Jay W. McMahon, Oleksiy Golubov, Carl W. Hergenrother, Joshua P. Emery, Keith S. Noll, Steven R. Chesley, Dante S. LaRetta

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Geophysics (physics.geo-ph)

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:1903.00042](#)

Title: "Mass-Radius relationship for M dwarf exoplanets: Comparing nonparametric and parametric methods"

Author:

Shubham Kanodia, Angie Wolfgang, Gudmundur K. Stefansson, Bo Ning,
Suvrath Mahadevan

Comments: Submitted to ApJ on 21st February 2019. GitHub repository will be made public on a later date.

Suggestions/comments are welcome

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:1903.00031](#)

Title: "KELT-23b: A Hot Jupiter Transiting a Near-Solar Twin Close to the TESS
and JWST Continuous Viewing Zones"

Author: Daniel Johns, Phillip Reed, Joseph Rodriguez, Joshua Pepper, Keivan
Stassun, Kaloyan Penev, B. Scott Gaudi, Jonathan Labadie-Bartz, Ben-
jamin Fulton, Samuel Quinn, Jason Eastman, David Ciardi, Lea Hirsch,
Daniel Stevens, Catherine Stevens, Thomas Oberst, David Cohen, Eric
Jensen, Paul Benni, Steven Villanueva, Gabriel Murawski, Allyson
Bieryla, David Latham, Siegfried Vanaverbeke, Franky Dubois, Steve
Rau, Ludwig Logie, Ryan Rauenzahn, Robert Wittenmyer, Roberto
Zambelli, Daniel Bayliss, Thomas Beatty, Karen Collins, Knicole Colon,
Ivan Curtis, Phil Evans, Joao Gregorio, David James, Darren DePoy,
Marshall Johnson, Michael Joner, David Kasper, John Kielkopf, Rudolf
Kuhn, Michael Lund, Mark Manner, Jennifer Marshall, Kim McLeod,
Matthew Penny, Howard M. Relles, Robert Siverd, Denise Stephens

Comments: 16 pages, 10 figures, Submitted to AAS Journals

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:1809.07252](#)

Title: "How Much SETI Has Been Done? Finding Needles in the n-Dimensional
Cosmic Haystack"

Author: Jason T. Wright, Shubham Kanodia, Emily G. Lubar

Comments: 20 pages, 4 figures. Submitted to The Astronomical Journal on 17th August 2018, Accepted on 11th
September 2018. Published on 14th November 2018

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

[理論/観測/実験 etc....]

Comment!!!!

3月5日(火曜日)

[1] [arXiv:1903.01386](#)

Title: "Obliquity-Driven Sculpting of Exoplanetary Systems"

Author: Sarah Millholland, Gregory Laughlin

Comments: Published in Nature Astronomy on March 4, 2019. 38 pages and 14 figures including the methods and supplementary information

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1903.01300](#)

Title: "3D analysis of spatial resolution of MIRO/Rosetta measurements at 67P/CG"

Author: L. Rezac, Y. Zhao, P. Hartogh, J. Ji, D. Marshall, X. Shi

Comments: 16 pages, 9 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1903.01206](#)

Title: "Flattened loose particles from numerical simulations compared to Rosetta collected particles"

Author: Jeremie Lasue, Isabelle Maroger, Robert Botet, Philippe Garnier, Sihane Merouane, Thurid Mannel, Anny-Chantal Levasseur-Regourd, Mark Bentley

Comments: 9 pages, 10 figures, accepted for publication in Astronomy and Astrophysics

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1903.01019](#)

Title: "Theoretical model of HD 163296 presently forming in-situ planets and comparison with the models of AS 209, HL Tau, and TW Hya"

Author: Dimitris M. Christodoulou, Demosthenes Kazanas

Comments:

Part 10 and the final part (HD 163296)

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1903.00908](#)

Title: "Atmospheres on Nonsynchronized Eccentric-tilted Exoplanets II: Thermal Light Curves"

Author: Kazumasa Ohno, Xi Zhang

Comments: 22 pages, 12 figures, Accepted for publication in ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1903.00907](#)

Title: "Atmospheres on Nonsynchronized Eccentric-tilted Exoplanets I: Dynamical Regimes"

Author: Kazumasa Ohno, Xi Zhang

Comments: 19 pages, 12 figures, Accepted for publication in ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:1903.00749](#)

Title: "Tesseral harmonics of Jupiter from static tidal response"

Author: Nadine Nettelmann

Comments: Accepted to ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:1903.00723](#)

Title: "The future of stellar occultations by distant solar system bodies: perspectives from the Gaia astrometry and the deep sky surveys"

Author: Julio Camargo, Josselin Desmars, Felipe Braga-Ribas, Roberto Vieira-Martins, Marcelo Assafin, Bruno Sicardy, Diane Bérard, Gustavo Benedetti-Rossi

Comments:

10 pages, 3 figures, ACM2017

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:1903.00474](#)

Title: "Catalog of New K2 Exoplanet Candidates from Citizen Scientists"

Author: Jon K. Zink, Kevin K. Hardegree-Ullman, Jessie L. Christiansen, Ian J. M. Crossfield, Erik A. Petigura, Chris J. Lintott, John H. Livingston, David R. Ciardi, Geert Barentsen, Courtney D. Dressing, Alexander Ye, Joshua E. Schlieder, Kevin Acres, Peter Ansorge, Dario Arienti, Elisabeth Baeten, Victoriano Canales Cerd, Itayi Chitsiga, Maxwell Daly, James Damboiu, Martin Ende, Adnan Erdag, Stiliyan Evstatiev, Joseph Henderson, David Hine, Tony Hoffman, Emmanuel Lambrou, Gabriel Murawski, Mark Nicholson, Mason Russell, Hans Martin Schwengeler, Alton Spencer, Aaron Tagliabue, Christopher Tanner, Melina Thévenot, Christine Unsworth, Jouni Uusi-Simola

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:1903.01141](#)

Title: "Connecting substellar and stellar formation. The role of the host star's metallicity"

Author: J. Maldonado, E. Villaver, C. Eiroa, G. Micela

Comments: Accepted by A&A

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

[理論/観測/実験 etc....]

Comment!!!!

[11] [arXiv:1903.00657](#)

Title: "Filtering solar-like oscillations for exoplanet detection in radial velocity observations"

Author: William J. Chaplin, Heather M. Cegla, Christopher A. Watson, Guy R. Davies, Warrick H. Ball

Comments: 22 pages, 6 figures; accepted for publication in Astronomical Journal (AAS Journals)

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

[理論/観測/実験 etc....]

Comment!!!!

3月6日(水曜日)

[1] [arxiv:1903.01922](#)

Title: "The Case for a Deep Search for Earth's Trojan Asteroids"

Author: Renu Malhotra

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

[Nature Astronomy]

地球のトロヤ群小惑星をしっかりと調べて見ると、科学的にも人間的にも面白いことが見つかりそう。

[2] [arxiv:1903.01890](#)

Title: "Effect of dust size and structure on scattered light images of protoplanetary discs"

Author: Ryo Tazaki, Hidekazu Tanaka, Takayuki Muto, Akimasa Kataoka, Satoshi Okuzumi

Comments: Accepted for publication in MNRAS, 18 pages, 19 figures

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

[理論/観測/実験 etc....]

田崎さん。

ダスト構造が変わる場合に、円盤の偏光成分がどう変わるかを調べた。波長よりもダストサイズが大きくなると円盤の散乱光はダストの空げき率が高いほど偏光度が上がる。反対にダストサイズが小さくなると偏光度が下がる。一つのモノマーのサイズとフラクタル次元が散乱光のカラーに与える影響を調べて見ると、レイリー散乱の範囲外では、モノマーサイズが大きくなるか、フラクタル次元が上がるほど近赤外でのカラーは青から赤に変わっていく。近赤外で観測するのなら、サブミクロンくらいのサイズのモノマーの集合について、考えることがで切る。

[3] [arxiv:1903.01873](#)

Title: "Planet migration in wind-fed accretion disks in binaries"

Author: O. Kulikova, S.B. Popov, V.V. Zhuravlev

Comments: 10 pages, 6 figures; Subm. to MNRAS

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

[理論]

原始惑星系円盤でおこるマイグレーションと同じように、連星の降着円盤でも惑星がマイグレーション起こすか調べる。 α 円盤モデルで定常な恒星風環境下で、円盤の温度と表面密度のプロファイルを調べた。惑星のタイプ I/II のマイグレーションと似ている。

[4] [arxiv:1903.01591](#)

Title: "The Curious Case of KOI 4: Confirming Kepler's First Exoplanet"

Author: Ashley Chontos, Daniel Huber, David W. Latham, Allyson Bieryla, Vincent Van Eylen, Timothy R. Bedding, Travis Berger, Lars A. Buchhave, Tiago L. Campante, William J. Chaplin, Isabel L. Colman, Jeff L. Coughlin, Guy Davies, Teruyuki Hirano, Andrew W. Howard, Howard Isaacson

Comments: 18 pages, 11 figures, 5 tables; accepted for publication in AJ

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

[理論/観測]

KOI4 は最初に Kepler 惑星の候補であるが、謎が多い。RV 観測や星震学で調べて見る。KOI4(いまは Kepler-1658) は重たいサブジャイアントを軌道周期 3.85 日程度で周回しているホットジュピター。4 年間の観測で、周期の崩壊率が -0.42 秒/年。主星の有効温度は 6200K くらいで、自転公転のミスアラインの境界である 6250K に近い。

[5] [arxiv:1903.01584](#)

Title: "Self-Assembling Ice Membranes on Europa: Brinicle Properties, Field Examples, and Possible Energetic Systems in Icy Ocean Worlds"

Author: Steven D. Vance, Laura M. Barge, Silvana S.S. Cardoso, Julyan H.E. Cartwright

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

[理論]

地球上では氷の厚さは大体極地の cm から m オーダーの話になっている。こういう氷の下での化学反応や生物が出てこられるかなどを考えてみる。エウロパとエンケラダスの氷では無い成分の熱力学的、力学的な振る舞いを調べる。それぞれの衛星の硫酸塩の起源を調べたが、エウロパの表面で検出されている硫酸塩はエウロパの海起源でも問題ない。

[6] [arxiv:1903.01501](#)

Title: "From cosmic explosions to terrestrial fires?"

Author: Adrian L. Melott, Brian C. Thomas

Comments: 20 pages, 3 figures. To be published in the Journal of Geology

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); High Energy Astrophysical Phenomena (astro-ph.HE); Atmospheric and Oceanic Physics (physics.ao-ph); Geophysics (physics.geo-ph); Populations and Evolution (q-bio.PE)

[理論]

色んな証拠から、260 万年前に 1 つ以上の超新星爆発が近傍で起こったことはたしかっぽい。先行研究を調べて見て、前史的な硝酸塩の大きな減少があった可能性が浮上した。これは北東アフリカの大森林がサバンナに移っていく原因になった山火事がある、これによってヒト族の二足歩行へ進化したのではないかとされている。

[7] [arxiv:1903.01478](#)

Title: "Spitzer Detection of the Transiting Jupiter-analog Exoplanet Kepler-167e"

Author: Paul A. Dalba, Patrick Tamburo

Comments: 8 pages, 4 figures, 1 table. Accepted to ApJ Letters

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

[観測]

Spitzer で Kepler-167e という 1071 日周期の惑星が起こすトランジットの一部を観測。数時間から数日の TTV を起こすものは無さそう。3.6 ミクロンのトランジット深さから木星に似てるっぽい。

[8] [arxiv:1903.01809](#)

Title: "MOVES II. Tuning in to the radio environment of HD189733b"

Author: R. D. Kavanagh, A. A. Vidotto, D. Ó Fionnagáin, V. Bourrier, R. Fares, M. Jardine, Ch. Helling, C. Moutou, J. Llama, P. J. Wheatley

Comments: 11 pages, 10 figures. Accepted for publication in MNRAS. This paper is the second in a series. Paper I: "MOVES I. The evolving magnetic field of the planet-hosting star HD189733" (Fares et al. 2017)

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

[理論]

ホットジュピター HD189733b の恒星風からの影響と磁場の強さの関係を調べる。恒星風は 10MHz から 100GHz の範囲ではフラックスの大きさが高々 $10^3 - 5\mu\text{Jy}$ で、10GHz 以上では光学的に薄くなる。惑星の磁場が 1-10G だと 2-25MHz の電波はピークが 100mJy 位で放射されてる。この範囲では光学的に厚いので、10G の磁場を持っていても 67% くらいしか観測者に届かない。これはトランジット深さに影響しそう。

3 月 7 日 (木曜日)

[1] [arxiv:1903.02525](#)

Title: "Multiple Impact Origin for the Moon"

Author: Raluca Rufu, Oded Aharonson, Hagai B. Perets

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:1903.02520](#)

Title: "Enceladus's crust as a non-uniform thin shell: II tidal dissipation"

Author: Mikael Beuthe

Comments: 56 pages, 16 figures, 9 tables. Submitted to Icarus

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxiv:1903.02488](#)

Title: "Rocky super-Earths or waterworlds: the interplay of planet migration,

pebble accretion and disc evolution”

Author:Bertram Bitsch, Sean N. Raymond, Andre Izidoro

Comments:accepted by A&A, 12 pages

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:1903.02336](#)

Title: ”Visual Analysis and Demographics of Kepler Transit Timing Variations”

Author:Mackenzie Kane, Darin Ragozzine, Xzavier Flowers, Tomer Holczer, Tsevi Mazeh, Howard M. Relles

Comments: 21 pages, 4 figures; accepted to AAS Journals; TTV plots and other data available at this [https](https://www.aas-journals.org/doi/10.1093/aas/aiaa/000/000/000) URL

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arxiv:1903.02332](#)

Title: ”A high binary fraction for the most massive close-in giant planets and brown dwarf desert members”

Author:C. Fontanive, K. Rice, M. Bonavita, E. Lopez, K. Muzic, B. Biller

Comments: Accepted for publication in MNRAS. 30 pages, 20 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arxiv:1903.02324](#)

Title: ”A catalog of stereo anaglyphs of the nucleus of comet 67P/Churyumov-Gerasimenko”

Author:Philippe Lamy, Guillaume Faury, David Romeuf, Olivier Groussin, Joelle Durand, Laurent Beigbeder, Kea Khum

Comments: 9 pages with 12 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arxiv:1903.02316](#)

Title: ”On the survivability of planets in young massive clusters”

Author:Maxwell Xu Cai, S. Portegies Zwart, M.B.N. Kouwenhoven, Rainer

Spurzem

Comments: 10 pages, 9 figures, 2 tables, submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:1903.02315](#)

Title: "Pluto's lower atmosphere and pressure evolution from ground-based stellar occultations, 1988-2016"

Author: E. Meza, B. Sicardy, M. Assafin, J. L. Ortiz, T. Bertrand, E. Lellouch, J. Desmars, F. Forget, D. Bérard, A. Doressoundiram, J. Lecacheux, J. Marques Oliveira, F. Roques, T. Widemann, F. Colas, F. Vachier, S. Renner, R. Leiva, F. Braga-Ribas, G. Benedetti-Rossi, J. I. B. Camargo, A. Dias-Oliveira, B. Morgado, A. R. Gomes-Júnior, R. Vieira-Martins, R. Behrend, A. Castro Tirado, R. Duffard, N. Morales, P. Santos-Sanz, M. Jelínek, R. Cunniffe, R. Querel, M. Harnisch, R. Jansen, A. Pennell, S. Todd, V. D. Ivanov, C. Opitom, M. Gillon, E. Jehin, J. Manfroid, J. Pollock, D. E. Reichart, J. B. Haislip, K. M. Ivarsen, A. P. LaCluyze, A. Maury, R. Gil-Hutton, V. Dhillon, S. Littlefair, T. Marsh, C. Veillet, K.-L. Bath, W. Beisker, H.-J. Bode, M. Kretlow, D. Herald, D. Gault, S. Kerr

Comments: 21 pages, 11 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:1903.02303](#)

Title: "Transit Ly- α signatures of terrestrial planets in the habitable zones of M dwarfs"

Author: K.G. Kislyakova, M. Holmström, P. Odert, H. Lammer, N.V. Erkaev, M.L. Khodachenko, I.F. Shaikhislamov, E. Dorfi, M. Güdel

Comments: 17 pages, 12 figures, accepted for publication in Astronomy & Astrophysics

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:1903.02260](#)

Title: "C/2010 U3 (Boattini): A Bizarre Comet Active at Record Heliocentric Distance"

Author: Man-To Hui, Davide Farnocchia, Marco Micheli

Comments: Accepted by AJ

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

[理論/観測/実験 etc....]

Comment!!!!

[11] [arXiv:1903.02096](#)

Title: "The CH₄ cycles on Pluto over seasonal and astronomical timescales"

Author: T. Bertrand, F. Forget, O.M. Umurhan, J.M. Moore, L.A. Young, S. Protopapa, W.M. Grundy, B. Schmitt, R.D. Dhingra, R.P. Binzel, A.M. Earle, D.P. Cruikshank, S.A. Stern, H.A. Weaver, K. Ennico, C.B. Olkin

Comments: Accepted in Icarus

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arXiv:1903.02004](#)

Title: "Formation of short-period planets by disk migration"

Author: Daniel Carrera, Eric B. Ford, Andre Izidoro

Comments: 12 pages, 11 figures, submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[13] [arXiv:1903.01995](#)

Title: "Enlarging habitable zones around binary stars in hostile environments"

Author: Bethany A. Wootton, Richard J. Parker

Comments: 6 pages, 2 figures, accepted for publication in MNRAS Letters. Press release including artist's impression at: [this https URL](#)

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:1903.02277](#)

Title: "Theory of Stochastic Shock Drift Acceleration for Electrons in the Shock

Transition Region”

Author:T. Katou, T. Amano

Comments: 15 pages, 6 figures, Accepted for the publication in ApJ

Subjects: High Energy Astrophysical Phenomena (astro-ph.HE); Earth and Planetary Astrophysics (astro-ph.EP);
Plasma Physics (physics.plasm-ph); Space Physics (physics.space-ph)

[理論/観測/実験 etc....]

Comment!!!!

[15] [arxive:1903.02192](#)

Title: ”ALMA observations of layered structures due to CO selective dissociation in the ρ Ophiuchi A plane-parallel PDR”

Author:M. Yamagishi, C. Hara, R. Kawabe, F. Nakamura, T. Kamazaki, T. Takekoshi, Y. Shimajiri, H. Nomura, S. Takakuwa, J. Di Francesco

Comments: 14 pages, 6 figures, ApJ accepted

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

[理論/観測/実験 etc....]

Comment!!!!

3月8日(金曜日)

[1] [arxive:1903.03041](#)

Title: ”Studying the Evolution of Warm Dust Encircling BD +20 307 Using SOFIA”

Author:Maggie A. Thompson, Alycia J. Weinberger, Luke Keller, Jessica A. Arnold, Christopher Stark

Comments: 13 pages, 7 Figures, Accepted to ApJ

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

[理論/観測/実験 etc....]

BD +20 307 周りの円盤は非常に dusty で小さい半径のため、衝突タイムスケールが短く、ダストの量や組成の進化を調べるのに良いターゲットである。先行研究の地上観測と Spitzer のデータと今回得た SOFIA での測光と分光データを比較した。系の 8.8-12.5 μ m の赤外放射は 10% ほど増加しており、特に長波長側より短波長側で大きなフラックスの増加があることが示唆された。このような短期間でのフラックスの増加は定常状態の衝突カスケードモデルでは説明できない。何か天体レベルのでかい衝突が起きたのか？

[2] [arxive:1903.02883](#)

Title: ”Morphology and dynamics of Venus’s middle clouds with Akatsuki/IR1”

Author:J. Peralta, N. Iwagami, Sánchez-Lavega, Y. J. Lee, R. Hueso, M. Narita, T. Imamura, P. Miles, A. Wesley, E. Kardasis, S. Takagi

Comments: 18 pages, 4 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Atmospheric and Oceanic Physics (physics.ao-ph)

[理論/観測/実験 etc....]

金星の比較的低高度にある中間層の雲について Akatsuki で近赤外撮像した。昼側に可視で見える表面の上層と違って、中間層はコントラストが非常に小さく難しかったらしい。

[3] [arXiv:1903.02804](#)

Title: "WASP-92, WASP-93 and WASP-118: Transit timing variations and long-term stability of the systems"

Author: Pavol Gajdoš, Martin Vaňko, Phil Evans, Marc Bretton, David Molina, Stéphane Ferratfiat, Eric Girardin, Snævarr Guðmundsson, Francesco Scaggiante, Štefan Parimucha

Comments: 9 pages, 7 figures + 6 supplementary figures included, MNRAS accepted

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

[理論/観測/実験 etc....]

系外惑星系 3 つの測光データを用いて TTVs の解析を行ったが、惑星質量の上限を加えたに過ぎなかった。

[4] [arXiv:1903.02800](#)

Title: "Physical properties and transmission spectrum of the WASP-74 planetary system from multi-band photometry"

Author: L. Mancini, J. Southworth, P. Molliere, J. Tregloan-Reed, I. G. Juvan, G. Chen, P. Sarkis, I. Bruni, S. Ciceri, M. I. Andersen, V. Bozza, D. M. Bramich, M. Burgdorf, G. D'Ago, M. Dominik, D. F. Evans, R. Figuera Jaimes, L. Fossati, Th. Henning, T. C. Hinse, M. Hundertmark, U. G. Jorgensen, E. Kerins, H. Korhonen, M. Kuffmeier, P. Longa, N. Peixinho, A. Popovas, M. Rabus, S. Rahvar, J. Skottfelt, C. Snodgrass, R. Tronsgaard, Y. Wang, O. Wertz

Comments: 12 pages, 9 figures, accepted for publication in Monthly Notices of the Royal Astronomical Society

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

[理論/観測/実験 etc....]

WASP-74 の惑星系のトランジットについて broad-band な測光を行った。主星の高解像度なスペクトルも得て、惑星系の軌道や物理パラメータを改めて得た。結果 hot-Jupiter も主星も以前見積もられていたより質量が小さいことがわかった。

[5] [arXiv:1903.02576](#)

Title: "Helium Absorption at 1083 nm from Extended Exoplanet Atmospheres: Dependence on Stellar Radiation"

Author: Antonija Oklopčić

Comments: submitted to AAS Journals

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

[理論/観測/実験 etc....]

close-in な系外惑星の透過光スペクトルでは、1083nm でのヘリウムの強い吸収が見られる。ヘリウムがある励起状態にあることが原因らしい。惑星の広がった大気でヘリウムがそういった状態になるためには、どのような恒星環境がふさわしいか調べた。K 型星あたりがふさわしいらしい (観測からしきされた?)

[6] [arxiv:1903.02573](https://arxiv.org/abs/1903.02573)

Title: "WASP-4b Arrived Early for the TESS Mission"

Author: L. G. Bouma, J. N. Winn, C. Baxter, W. Bhatti, F. Dai, T. Daylan, J.-M. Désert, M. L. Hill, S. R. Kane, K. G. Stassun, J. Villaseñor, G. R. Ricker, R. Vanderspek, D. W. Latham, S. Seager, J. M. Jenkins, Z. Berta-Thompson, K. Colón, M. Fausnaugh, Ana Glidden, N. Guerrero, J. E. Rodriguez, J. D. Twicken, B. Wohler

Comments: AJ submitted & revised after referee comments. Additional comments welcome!

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

[理論/観測/実験 etc....]

TESS で hot Jupiter WASP-4b の 18 回のトランジットを観測したが、2007 年のデータからの見積もりより 81.6 ± 11.7 秒早くトランジットが起こることがわかった。TESS でみた他の系ではしっかり一定の周期でトランジットしているので、時間の計測間違えではないらしい。原因は潮汐による軌道衰退や近点の歳差が考えられるが、説明には不十分である。もしかしたら第三天体が存在して影響しているのかも。

[7] [arxiv:1903.02564](https://arxiv.org/abs/1903.02564)

Title: "Planet-planet scattering as the source of the highest eccentricity exoplanets"

Author: Daniel Carrera, Sean R. Raymond, Melvyn B. Davies

Comments: 5 pages, 5 figures, submitted to MNRAS Letters

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

[理論/観測/実験 etc....]

RV で見つかる巨大惑星の多くは太陽系惑星に比べて大きな離心率を持つ。planet-planet scattering は広くまたがる離心率分布を説明できるが、非常に高い離心率の惑星に対しては Kozai-Lidov 振動がよく持ち出される。非常に高い離心率も含めて planet-planet scattering で説明できるかどうか、packed な巨大惑星系の N 体計算を使って調べた。結果 planet-planet scattering ですべての離心率を再現できることがわかった。さらに観測された $e > 0.3$ の系外巨大惑星の離心率分布は散乱により生まれる分布とコンシステントであった。高離心率の惑星はすべて Kozai-Lidov 振動によるものではないと思われる。

[8] [arxiv:1903.02574](https://arxiv.org/abs/1903.02574)

Title: "X-rays Studies of the Solar System"

Author: Bradford Snios, William R. Dunn, Carey M. Lisse, Graziella Branduardi-

Raymont, Konrad Dennerl, Anil Bhardwaj, G. Randall Gladstone, Susan Nulsen, Dennis Bodewits, Caitriona M. Jackman, Julián D. Alvarado-Gómez, Emma J. Bunce, Michael R. Combi, Thomas E. Cravens, Renata S. Cumbee, Jeremy J. Drake, Ronald F. Elsner, Denis Grodent, Jae Sub Hong, Vasili Kharchenko, Ralph P. Kraft, Joan P. Marler, Sofia P. Moschou, Patrick D. Mullen, Scott J. Wolk, Zhonghua Yao

Comments: White paper submitted to Astro2020, the Astronomy and Astrophysics Decadal Survey

Subjects: High Energy Astrophysical Phenomena (astro-ph.HE); Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Astro2020 の white paper。太陽系内のターゲットに対して X 線を用いていろいろできる。

Nature

ない

Science

ない