

2020年 11月 第3週 新着論文サーベイ

11月 16日 (月曜日)

[1] [arxiv:2011.07042](#)

Title: "Binary Planetesimal Formation from Gravitationally Collapsing Pebble Clouds"

Author: David Nesvorny, Rixin Li, Jacob B. Simon, Andrew N. Youdin, Derek C. Richardson, Raphael Marschall, William M. Grundy

Comments: Planetary Space Journal

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

[理論/観測/実験 etc....]

ペブル降着で連微惑星が形成される様子を調べた。ペブル雲から微惑星になるのは早いですが、そのもとの雲の密度が低いと密着した連微惑星とシングルの微惑星ができる。カイパーベルトでの連微惑星によく似たパラメータを持ちそう。

[2] [arxiv:2011.06943](#)

Title: "The Coma Dust of Comet C2013 US10 (Catalina) A Window into Carbon in the Solar System"

Author: Charles E. Woodward, Diane H. Wooden, David E. Harker, Michael S. P. Kelley, Ray W. Russell, Daryl L. Kim

Comments: 33 pages, 10 figures, 9 Tables; To be published in the Planetary Science Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxiv:2011.06805](#)

Title: "Luminous efficiency based on FRIPON meteors"

Author: Esther Drolshagen, Theresa Ott, Detlef Koschny, Gerhard Drolshagen, Jeremie Vaubaillon, Francois Colas, Josep Maria Trigo-Rodriguez, Brigitte Zanda, Sylvain Bouley, Simon Jeanne, Adrien Malgoyre, Mirel Birlan, Pierre Vernazza, Daniele Gardiol, Dan Alin Nedelcu, Jim Rowe, Mathieu Forcier, Eloy Peña Asensio, Herve Lamy, Ludovic Ferrière, Dario Barghini, Albino Carbognani, Mario Di Martino, Stefania Rasetti, Giovanni Battista Valsecchi, Cosimo Antonio Volpicelli, Matteo Di Carlo, Cristina Knapic, Giovanni Pratesi, Walter Riva, Giovanna M. Stirpe,

Sonia Zorba, Olivier Hernandez, Emmanuel Jehin, Marc Jobin, Ashley King, Agustin Sanchez-Lavega, Andrea Toni, Björn Poppe

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:2011.06774](#)

Title: "The TW Hya Rosetta Stone Project I: Radial and vertical distributions of DCN and DCO+"

Author: Karin I. Oberg, L. Ilseidore Cleaves, Jennifer B. Bergner, Joseph Cavanaro, Richard Teague, Jane Huang, Ryan A. Loomis, Edwin A. Bergin, Geoffrey A. Blake, Jenny Calahan, Paolo Cazzoletti, Viviana Veloso Guzman, Michiel R. Hogerheijde, Mihkel Kama, Jeroen Terwisscha van Scheltinga, Chunhua Qi, Ewine van Dishoeck, Catherine Walsh, David J. Wilner

Comments: 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!!!!

[5] [arxiv:2011.06608](#)

Title: "Spectral appearance of the planetary surface accretion shock: Global spectra and hydrogen line profiles and fluxes"

Author: Yuhiko Aoyama, Gabriel-Dominique Marleau, Christoph Mordasini, Masahiro Ikoma

Comments: 29 pages, 15 figures including appendices, submitted to ApJ. Comments and inquiries welcome

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

[理論/観測/実験 etc....]

惑星表面での降着のショックで生じる水素の放射がどう見えるかを調べた。

[6] [arxiv:2011.06843](#)

Title: "In search of radio emission from exoplanets: GMRT observations of the binary system HD 41004"

Author: Mayank Narang, Manoj P, C. H. Ishwara Chandra, Joseph Lazio, Thomas Henning, Motohide Tamura, Blesson Mathew, Nitish Ujwal, Pritha Mandal

Comments: 11 pages, 5 figures, accepted for publication in MNRAS

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

[理論/観測/実験 etc....]

GMRT というメートル波の望遠鏡を使って HD41004 という連星系の探査をした。それぞれ K1V と M2V の恒星で、その周囲に惑星がいる模様。HD41004Bb は 150MHz で一番強いフラックスを持っているそう。

[7] [arXiv:2011.06647](#)

Title: "Captured Small Solar System Bodies in the Ice Giant Region"

Author: Timothy R. Holt, Bonnie Buratti, Julie Castillo-Rogez, Bjorn J. R. Davidsson, Tilmann Denk, Jonti Horner, Bryan J Holler, Devanshu Jha, Alice Lucchetti, David Nesvorny, Maurizio Pajola, Simon Porter, Alyssa Rhoden, Steven Rappolee, Rebecca Schindhelm, Linda Spilker, Anne Verbiscer

Comments: Community Science White Paper for the Planetary and Astrobiology Decadal Survey, 2023-2032

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:2011.06621](#)

Title: "Gaia-based Isochronal, Kinematic, and Spatial Analysis of the ϵ Cha Association"

Author: D. Annie Dickson-Vandervelde, Emily C. Wilson, Joel H. Kastner

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

[理論/観測/実験 etc....]

η Cha 星団のメンバについて、Gaia の DR2 を使って解析。どれくらいの距離にいて年齢や連星系か、円盤を持つ割合などの統計を得た。新しいメンバも増えた。

11 月 17 日 (火曜日)

[1] [arXiv:2011.08176](#)

Title: "Re-analysis of Phosphine in Venus' Clouds"

Author: Jane S. Greaves, Anita M. S. Richards, William Bains, Paul B. Rimmer, David L. Clements, Sara Seager, Janusz J. Petkowski, Clara Sousa-Silva, Sukrit Ranjan, Helen J. Fraser

Comments: Response to the Matters Arising: "No phosphine in the atmosphere of Venus" by G. Villanueva et al., preprint at arXiv:2010.14305

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

[理論/観測/実験 etc....]

金星で見つかった PH₃ が誤検出だったという論文 (Villanueva et al. 2020) への回答。JCMT で捉えた PH₃ の p ス

ペクトルは、SO₂ よりもライン幅が広く、また解析モデルとも整合的なことが再解析で確かめられた。

[2] [arXiv:2011.08043](#)

Title: "Searching for proto-planets with MUSE"

Author: C. Xie, S. Y. Haffert, J. de Boer, M. A. Kenworthy, J. Brinchmann, J. Girard, I. A. G. Snellen, C. U. Keller

Comments: 14 pages, 15 figures, 4 tables. Accepted for publication in A&A

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

[理論/観測/実験 etc....]

高解像度スペクトル分光撮像装置 MUSE で原始惑星系円盤中の原始惑星を検出したい。SPHERE/ZIMPOL の約 5 倍暗いシグナルまで検出できるが、まだ強い点光源があるとコントラストが制限されてしまう問題があるらしい。

[3] [arXiv:2011.07984](#)

Title: "1D photochemical model of the ionosphere and the stratosphere of Neptune"

Author: M. Dobrijevic, J.C. Loison, V. Hue, T. Cavalié, K.M. Hickson

Comments: 40 pages, 1 table, 20 figures. Published in Icarus

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

[理論/観測/実験 etc....]

海王星大気の高電離-中世大気 1 次元光化学モデルを構築して、炭化水素と酸素の起源と進化を調べた。海王星大気で、比較的多くの芳香族が合成されることがわかり、観測とも整合的な結果が得られた。10⁻⁵mbar と 10⁻³mbar の高度に電離層のピークが存在し、このイオンの集中は海王星大気上層への酸素流入が影響しているらしい。

[4] [arXiv:2011.07888](#)

Title: "Detection of the hydrogen Balmer lines in the ultra-hot Jupiter WASP-33b"

Author: F. Yan, A. Wyttenbach, N. Casasayas-Barris, A. Reiners, E. Pallé, Th. Henning, P. Mollière, S. Czesla, L. Nortmann, K. Molaverdikhani, G. Chen, I. A. G. Snellen, M. Zechmeister, C. Huang, I. Ribas, A. Quirrenbach, J. A. Caballero, P. J. Amado, D. Cont, S. Khalafinejad, J. Khaimova, M. López-Puertas, D. Montes, E. Nagel, M. Oshagh, S. Pedraz, M. Stangret

Comments: 12 pages, 11 figures, 3 tables; accepted for publication in A&A

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

[理論/観測/実験 etc....]

ウルトラホットジュピター (UHJs) は恒星からの強い輻射で炙られて、昼半球では大気分子が熱分解するため、UHJs の上層大気では中性水素が増加すると考えられる。今回、UHJ WASP-33b のトランジットを CARMENES で

4回観測して、中性水素の存在を示す水素バルマー線を検出した。惑星の熱圏温度は 12200_{-1000}^{+1300} K で、質量損失率は $\dot{M} = 10^{11.8_{-0.5}^{+0.6}}$ g/s だった。この質量損失率は"バルマー駆動"大気散逸シナリオと整合的だった。

[5] [arxiv:2011.07849](#)

Title: "Testing the Jeans, Toomre and Bonnor-Ebert concepts for planetesimal formation: 3D streaming instability simulations of diffusion regulated formation of planetesimals"

Author: Hubert Klahr, Andreas Schreiber

Comments: 28 pages, 7 figures, ApJ in press

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

[理論/観測/実験 etc....]

Hill 密度 (ペブルの雲が中心星の潮汐力でシアーを受けなくなる密度) 以上でのストリーミング不安定性を 3次元でシミュレートした結果、ペブルが Hill 密度を超えても微惑星が形成できないことを示した。

[6] [arxiv:2011.07775](#)

Title: "Velocity distribution of larger meteoroids and small asteroids impacting Earth"

Author: Esther Drolshagen, Theresa Ott, Detlef Koschny, Gerhard Drolshagen, Anna Kristiane Schmidt, Björn Poppe

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

[理論/観測/実験 etc....]

隕石や火球の観測ネットワークは主に地上ベースの観測で、大きくて侵入速度の速い隕石に観測バイアスがかかる。この研究では、速度バイアスのかかっていないデータセットを用いて宇宙空間の天体の速度分布を求めた。

[7] [arxiv:2011.07263](#)

Title: "Deep convection-driven vortex formation on Jupiter and Saturn"

Author: Rakesh Kumar Yadav, Moritz Heimpel, Jeremy Bloxham

Comments: 16 Pages, 3 main and 7 supplementary figures, 2 animations on youtube

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Atmospheric and Oceanic Physics (physics.ao-ph); Fluid Dynamics (physics.flu-dyn); Geophysics (physics.geo-ph)

[理論/観測/実験 etc....]

木星と土星の表面の渦状の嵐の駆動機構について、3次元シミュレーションを行った結果、惑星深部の対流によって説明できることがわかった。回転乱流対流によって軸方向に整列した順行/逆行の流れが形成され、惑星深部ダイナモによってさらに木星の大赤斑の様な逆行渦が形成できる。

[8] [arxiv:2011.07169](#)

Title: "Multi-color photometry and parameters estimation of Jupiter-sized exoplanets; TRES-3b, WASP-2b and HATP-30b"

Author: M. I. Saeed, S. N. Goderya, F. A. Chishtie

Comments: 16 pages, 8 figures, LaTeX

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arxiv:2011.07123](#)

Title: "Seeing the Bigger Picture: The Rosetta Mission Amateur Observing Campaign and Lessons for the Future"

Author: Helen Usher, Colin Snodgrass, Simon F. Green, Andrew Norton, Paul Roche

Comments: 32 pages, 8 figures To be published in The AAS Planetary Science Journal A'Hearn Symposium Focus Issue

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

[理論/観測/実験 etc....]

彗星研究にアマチュア天文家にもっと参入してもらおうという話。

[10] [arxiv:2011.07121](#)

Title: "Compositional study of trans-Neptunian objects at $\lambda > 2.2 \mu\text{m}$ "

Author: E. Fernández-Valenzuela, N. Pinilla-Alonso, J. Stansberry, J. P. Emery, W. Perkins, C. Van Laerhoven, B. J. Gladman, W. Fraser, D. Cruikshank, E. Lellouch, T. G. Müller, W. M. Grundy, D. Trilling, Y. Fernandez, C. Dalle-Ore

Comments: Accepted for publication in PSJ on October 13, 2020

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

[理論/観測/実験 etc....]

Spitzer 宇宙望遠鏡の赤外線撮像データから 2.2 μm 以上の TNOs を 100 個選んで表面組成を調べた。結果、サンプルの 86% はある程度の水氷を含み、水氷とアモルファスシリケートと有機物の混合物が最も多かった。またサンプルの 23% は CO, CO₂, CH₄ などの他の氷を含む可能性があることがわかった。

[11] [arxiv:2011.07103](#)

Title: "The Stationary Points of the Hierarchical Three Body Problem"

Author: Bradley M. S. Hansen, Smadar Naoz

Comments: 27 pages, 36 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Chaotic Dynamics (nlin.CD)

[理論/観測/実験 etc....]

階層 3 体問題の平衡点を 4 次と 8 次のオーダーまで拡張した。

[12] [arXiv:2011.07075](#)

Title: "Direct imaging of sub-Jupiter mass exoplanets with James Webb Space Telescope coronagraphy"

Author: Aarynn L. Carter, Sasha Hinkley, Mariangela Bonavita, Mark W. Phillips, Julien H. Girard, Marshall Perrin, Laurent Pueyo, Arthur Vigan, Jonathan Gagné, Andrew J. I. Skemer

Comments: Accepted for publication in MNRAS. 18 pages, 10 figures, and 2 tables

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

[理論/観測/実験 etc....]

JWST で系外惑星の直接撮像する際のコロナグラフの性能評価を行った。木星質量程度なら 30au まで、土星質量程度なら 50au、そして 100au 以遠なら 0.1Mj までの惑星の直接撮像が可能になると予想される。

[13] [arXiv:2011.07865](#)

Title: "Viscous Heating and Boundary Layer Accretion in the Disk of Outbursting Star FU Orionis"

Author: Aaron Labdon, Stefan Kraus, Claire L Davies, Alexander Kreplin, John D Monnier, Jean-Baptiste Le Bouquin, Narsireddy Anugu, Theo Brummelaar, Benjamin Setterholm, Tyler Gardener, Jacob Ennis, Cyprien Lanthemann, Gail Schaefer, Anna Laws

Comments: 10 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!!!!

[14] [arXiv:2011.07459](#)

Title: "Three-dimensional Supernova Models Provide New Insights into the Origins of Stardust"

Author: Jack Schulte, Maitrayee Bose, Patrick A. Young, Gregory S. Vance

Comments: 18 pages and 7 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[15] [arXiv:2011.07083](#)

Title:

”The Age of the Carina Young Association and Potential Membership of HD 95086”

Author: Mark Booth, Carlos del Burgo, Valeri V. Hambaryan

Comments: 10 pages, 5 figures, accepted for publication in MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[16] [arxiv:2011.07073](#)

Title: ”The TW Hya Rosetta Stone Project II: Spatially resolved emission of formaldehyde hints at low-temperature gas-phase formation”

Author: Jeroen Terwisscha van Scheltinga, Michiel R. Hogerheijde, L. Ilsedore Cleeves, Ryan A. Loomis, Catherine Walsh, Karin I. Öberg, Edwin A. Bergin, Jennifer B. Bergner, Geoffrey A. Blake, Jenny K. Calahan, Paolo Cazzoletti, Ewine F. van Dishoeck, Viviana V. Guzmán, Jane Huang, Mihkel Kama, Chunhua Qi, Richard Teague, David J. Wilner

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

[理論/観測/実験 etc....]

ホルムアルデヒドはメタノールの元になる重要な prebiotic 分子である。ホルムアルデヒドの形成系路にはガス状態と固体状態があり、紫外線で形成するラジカルや CO 氷、冷たい (20K くらい) ダスト粒子などが関係する。ガス状ホルムアルデヒドのオルソ/パラ比を用いてどちらの経路が支配的かを TW Hya の ALMA 観測データから調べた。結果、TW Hya の原始惑星系円盤で観測されているホルムアルデヒドはガスが支配的であることがわかった。

11 月 18 日 (水曜日)

[1] [arxiv:2011.08815](#)

Title: ”Hubble WFC3 Spectroscopy of the Habitable-zone Super-Earth LHS 1140 b”

Author: Billy Edwards, Quentin Changeat, Mayuko Mori, Lara O. Anisman, Mario Morvan, Kai Hou Yip, Angelos Tsiaras, Ahmed Al-Refaie, Ingo Waldmann, Giovanna Tinetti

Comments: Accepted for publication in AJ on 30th October 2020

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

[観測]

ハビタブルであると期待される super Earth の LHS1140b(235K, $1.7R_{earth}$) を対象に、HST で透過分光観測を行った。解析に使用する恒星のスペクトルモデルによっては、水分子の存在が示唆されたりされなかったりした。JWST での観測に期待。

[2] [arXiv:2011.08650](#)

Title: "Irradiation dose affects the composition of organic refractory materials in space: Results from laboratory analogues"

Author: R. G. Urso, V. Vuitton, G. Danger, L. Le Sergeant d'Hendecourt, L. Flandinet, Z. Djouadi, O. Mivumbi, F. R. Orthous-Daunay, A. Ruf, V. Vinogradoff, C. Wolters, R. Brunetto

Comments: in publication on Astronomy & Astrophysics, sect. Planets and planetary systems

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Instrumentation and Methods for Astrophysics (astro-ph.IM); Chemical Physics (physics.chem-ph); Space Physics (physics.space-ph)

[実験/太陽系小天体]

Comment!!!!

[3] [arXiv:2011.08631](#)

Title: "Dust delivery and entrainment in photoevaporative winds"

Author: Mark A. Hutchison, Cathie J. Clarke

Comments: 16 pages, 6 figures, Accepted for publication in MNRAS

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

[理論]

光蒸発が起きている円盤の中でのダストの分布などを調べるために、半解析的な方法で計算を行った。負荷の大きい流体シミュレーションに頼らずに計算が行えた。

[4] [arXiv:2011.08515](#)

Title: "Kepler-90: Giant transit-timing variations reveal a super-puff"

Author: Yan Liang, Jakob Robnik, Uros Seljak

Comments: 12 pages, 5 figures

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

[観測]

Kepler-90g と Kepler-90h について、transit timing variation (TTV) に着目することで質量と軌道パラメータを決定した。その結果、Kepler-90g の密度は 0.15 g cm^{-3} となり、super-puff な惑星であることが分かった。

[5] [arXiv:2011.08479](#)

Title: "Stability and Evolution of Fallen Particles Around the Surface of Asteroid (101955) Bennu"

Author: A. Amarante, O. C. Winter, R. Sfair

Comments: 33 pages, 13 figures and 4 tables. Accepted for publication by "Exploration of the Activity of Asteroid (101955) Bennu", a special edition of the Journal of Geophysical Research: Planets. Simulation codes available on this [https URL](#) Animated movies of simulation results available from this [https URL](#)

Subjects:

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:2011.08219](#)

Title: "Transition region from turbulent to dead zone in protoplanetary disks:
local shearing box simulations"

Author: Fulvia Pucci, Kengo Tomida, James Stone, Shinsuke Takasao, Hantao Ji,
Shoichi Okamura

Comments: 11 pages 12 figures

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

[理論/観測/実験 etc....]

Comment!!!!

11 月 19 日 (木曜日)

[1] [arXiv:2011.09391](#)

Title: "Efficiency characterization of the V-shape asteroid family detection
method"

Author: Rogerio Deienno, Kevin J. Walsh, Marco Delbo

Comments: 21 pages, 16 figures, Accepted for publication in Icarus

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:2011.09339](#)

Title: "Phase reddening on asteroid Bennu from visible and near-infrared spec-
troscopy"

Author: S. Fornasier, P. H. Hasselmann, J. D. P. Deshapriya, M. A. Barucci, B.
E. Clark, A. Praet, V. E. Hamilton, A. Simon, J-Y. Li, E. A. Cloutis, F.
Merlin, X-D. Zou, D. S. Lauretta

Comments: 17 pages, 12 figures, Astron. and Astroph., in press

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:2011.09271](#)

Title: "Brightness modulations of our nearest terrestrial planet Venus reveal atmospheric super-rotation rather than surface features"

Author: Y. J. Lee, A. García Muñoz, T. Imamura, M. Yamada, T. Satoh, A. Yamazaki, S. Watanabe

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:2011.09178](#)

Title: "Growing and Trapping Pebbles with Fragile Collisions of Particles in Protoplanetary Disks"

Author: Paola Pinilla, Christian T. Lenz

Comments: Accepted for publication in A&A

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:2011.09146](#)

Title: "Probing the impact of varied migration and gas accretion rates for the formation of giant planets in the pebble accretion scenario"

Author: Nelson Ndugu, Bertram Bitsch, Alessandro Morbidelli, Aurélien Crida, Edward Jurua

Comments: 13 pages, 8 figures, Accepted in Monthly Notices of the Royal Astronomical Society (MNRAS)

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:2011.09074](#)

Title: "Eccentricity Driven Climate Effects in the Kepler-1649 System"

Author: Stephen R. Kane, Zhexing Li, Eric T. Wolf, Colby Ostberg, Michelle L. Hill

Comments: 12 pages, 6 figures, accepted for publication in the Astronomical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:2011.08996](#)

Title: "Aerosols and tides in the martian tropics during southern hemisphere spring equinox from Mars Climate Sounder data"

Author: Liam Steele, Armin Kleinboehl, David Kass, Richard Zurek

Comments: 27 pages, 11 Figures

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:2011.08893](#)

Title: "The Probability that a Rocky Planet's Composition Reflects its Host Star"

Author: J.G. Schulze, Ji Wang, J.A. Johnson, C.T. Unterborn, W.R. Panero

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:2011.08867](#)

Title: "A collage of small planets from the Lick Carnegie Exoplanet Survey : Exploring the super-Earth and sub-Neptune mass regime"

Author: Jennifer A. Burt, Fabo Feng, Bradford Holden, Eric E. Mamajek, Chelsea X. Huang, Mickey M. Rosenthal, Songhu Wang, R. Paul Butler, Steven S. Vogt, Gregory Laughlin, Gregory W. Henry, Johanna K. Teske, Sharon W. Wang, Jeffrey D. Crane, Steve A. Shectman

Comments: 33 pages, 26 figures. Accepted for publication in the Astronomical Journal. Full RV data sets will be released as MRTs with AJ publication

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:2011.09409](#)

Title: "The Volume-Complete Sample of M Dwarfs with Masses $0.1 \leq M/M_{sol} \leq 0.3$ within 15 Parsecs"

Author: Jennifer G. Winters, David Charbonneau, Todd J. Henry, Jonathan M. Irwin, Wei-Chun Jao, Adric R. Riedel, Kenneth Slatten

Comments: Accepted for publication in the Astronomical Journal. 22 pages, 8 figures, 4 tables. Tables 3 & 4 available at www.cfa.harvard.edu/~jwinters

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:2011.09252](#)

Title: "Effects of the COVID-19 lockdown on urban light emissions: ground and satellite comparison"

Author: Máximo Bustamante-Calabria, Alejandro Sánchez de Miguel, Susana Martín-Ruiz, Jose-Luis Ortiz, J.M. Vílchez, Alicia Pelegrina, Antonio García, Jaime Zamorano, Jonathan Bennie, Kevin J. Gaston

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arXiv:2011.09231](#)

Title: "A modified Kwee - van Woerden method for eclipse minimum timing with reliable error estimates"

Author: Hans J. Deeg

Comments: Submitted to 'galaxies' special issue on 'Astrophysics of Eclipsing Binaries in the Era of Space-Borne Telescopes'

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!!!!

[13] [arXiv:2011.09151](#)

Title: "Triadic resonances driven by thermal convection in a rotating sphere"

Author: Yufeng Lin

Subjects: Fluid Dynamics (physics.flu-dyn); Earth and Planetary Astrophysics (astro-ph.EP); Pattern Formation and Solitons (nlin.PS); Atmospheric and Oceanic Physics (physics.ao-ph)

[理論/観測/実験 etc....]

Comment!!!!

[14] [arXiv:2011.08871](#)

Title: "A wide planetary-mass companion to a young low-mass brown dwarf in Ophiuchus"

Author: Clemence Fontanive, Katelyn N. Allers, Blake Pantoja, Beth Biller, Sophie Dubber, Zhoujian Zhang, Trent Dupuy, Michael C. Liu, Loic Albert

Comments: Accepted for publication in ApJL. 4 figures, 2 tables

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

[理論/観測/実験 etc....]

Comment!!!!

[15] [arxiv:2011.08855](#)

Title: "SCEXAO/CHARIS Direct Imaging Discovery of a 20 au Separation, Low-Mass Ratio Brown Dwarf Companion to an Accelerating Sun-like Star"

Author:Thayne Currie, Timothy D. Brandt, Masayuki Kuzuhara, Jeffery Chilcote, Olivier Guyon, Christian Marois, Tyler Groff, Julien Lozi, Sebastien Vievard, Ananya Sahoo, Vincent Deo, Nemanja Jovanovic, Frantz Martinache, Kevin Wagner, Trent J. Dupuy, Matthew Wahl, Michael Letawsky, Yiting Li, Yunlin Zeng, G. Mirek Brandt, Daniel Michalik, Carol Grady, Markus Janson, Gillian R. Knapp, Jungmi Kwon, Kellen D. Lawson, Michael McElwain, Taichi Uyama, John P. Wisniewski, Motohide Tamura

Comments:11 pages, 3 figures, 2 tables; ApJ Letters in press. First discovery from SCEXAO/CHARIS; first substellar companion discovered through direct imaging using Gaia for target selection

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!!!!

[16] [arxiv:2011.08849](#)

Title: "Europa Exploration Philosophy"

Author:Philip Horzempa

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

[理論/観測/実験 etc....]

Comment!!!!

11 月 20 日 (金曜日)

[1] [arxiv:2011.10002](#)

Title: "Strong H α emission in the young planetary mass companion 2MASS J0249-0557 c"

Author:P. Chinchilla, V.J.S. Béjar, N. Lodieu, M.R. Zapatero Osorio, B. Gauza

Comments: 10 pages, 9 figures. Accepted for publication in A&A

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:2011.09993](#)

Title: "Contemporaneous Multi-Wavelength and Precovery Observations of Active Centaur P/2019 LD2 (ATLAS)"

Author: Theodore Kareta, Laura M. Woodney, Charles Schambeau, Yanga Fernandez, Olga Harrington Pinto, Kacper Wierzchos, M. Womack, S.J. Bus, Jordan Steckloff, Gal Sarid, Kathryn Volk, Walter M. Harris, Vishnu Reddy

Comments: 23 pages, 5 figures, submitted to AAS Journals

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:2011.09971](#)

Title: "Observational constraints on the likelihood of ^{26}Al in planet-forming environments"

Author: Megan Reiter

Comments: accepted to A&A Letters

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:2011.09894](#)

Title: "Small Planet Sizes Evolve Over Billions of Years"

Author: Trevor J. David, Gabriella Contardo, Angeli Sandoval, Ruth Angus, Yuxi, Megan Bedell, Jason L. Curtis, Daniel Foreman-Mackey, Benjamin J. Fulton, Samuel K. Grunblatt, Erik A. Petigura

Comments: Submitted to AAS Journals. Comments welcome. 39 pages, 23 figures

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:2011.09564](#)

Title:

”A Closer Look at Exoplanet Occurrence Rates: Considering the Multiplicity of Stars Without Detected Planets”

Author: Arjun B. Savel, Courtney D. Dressing, Lea A. Hirsch, David R. Ciardi, Jordan P.C. Fleming, Steven A. Giacalone, Andrew W. Mayo, Jessie L. Christiansen

Comments: 29 pages, 13 figures. Accepted for publication in AJ

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

[理論/観測/実験 etc....]

Comment!!!!

Nature

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Science

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