

2020年 12月 第1週 新着論文サーベイ

11月30日(月曜日)

[1] [arxiv:2011.13810](#)

Title: "Spectrophotometric analysis of the Ryugu rock seen by MASCOT: Searching for a carbonaceous chondrite analog"

Author: Stefan Schröder, Katharina Otto, Hannah Scharf, Klaus-Dieter Matz, Nicole Schmitz, Frank Scholten, Stefano Mottola, Frank Trauthan, Alexander Koncz, Harald Michaelis, Ralf Jaumann, Tra-Mi Ho, Hikaru Yabuta, Seiji Sugita

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:2011.13795](#)

Title: "The GAPS Programme at TNG XXVIII – A pair of hot-Neptunes orbiting the young star TOI-942"

Author: Ilaria Carleo, Silvano Desidera, Domenico Nardiello, Luca Malavolta, Antonino F. Lanza, John Livingston, Daniele Locci, Francesco Marzari, Sergio Messina, Diego Turrini, Martina Baratella, Francesco Borsa, Valentina D'Orazi, Valerio Nascimbeni, Matteo Pinamonti, Monica Rainer, Eleonora Alei, Andrea Bignamini, Raffaele Gratton, Giuseppina Micela, Marco Montalto, Alessandro Sozzetti, Vito Squicciarini, Laura Affer, Serena Benatti, Katia Biazzo, Aldo S. Bonomo, Riccardo Claudi, Rosario Cosentino, Elvira Covino, Mario Damasso, Massimiliano Esposito, Aldo Fiorenzano, Giuseppe Frustagli, Paolo Giacobbe, Avet Harutyunyan, Giuseppe Leto, Antonio Magazzú, Antonio Maggio, Giovanni Mainella, Jesus Maldonado, Matthias Mallonn, Luigi Mancini, Emilio Molinari, Marco Molinaro, Isabella Pagano

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

[理論/観測/実験 etc....]

TESS による TOI-942 の惑星系発見。

[3] [arXiv:2011.13686](#)

Title: "Are the Moon's nearside-farside asymmetries the result of a giant impact?"

Author: Meng-Hua Zhu, Kai Wunnemann, Ross W. K. Potter, Thorsten Kleine,
Alessandro Morbidelli

Comments: 45 pages, 12 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:2011.13682](#)

Title: "Reconstructing the late accretion history of the Moon"

Author: Meng-Hua Zhu, Natalia Artemieva, Alessandro Morbidelli, Qing-Zhu Yin,
Harry Becker, Kai Wunnemann

Comments: 31 pages, 3 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:2011.13632](#)

Title: "Impact Probability Under Aleatory And Epistemic Uncertainties"

Author: C. Tardioli, D. Farnocchia, M. Vasile, S. R. Chesley

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Optimization and Control (math.OC)

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:2011.13444](#)

Title: "WASP-107b's density is even lower: a case study for the physics of planetary gas envelope accretion and orbital migration"

Author: Caroline Piaulet, Björn Benneke, Ryan A. Rubenzahl, Andrew W. Howard, Eve J. Lee, Daniel Thorngren, Ruth Angus, Merrin Peterson, Joshua E. Schlieder, Michael Werner, Laura Kreidberg, Tareq Jaouni, Ian J. M. Crossfield, David R. Ciardi, Erik A. Petigura, John Livingston, Courtney D. Dressing, Benjamin J. Fulton, Charles Beichman, Jessie L. Christiansen, Varoujan Gorjian, Kevin K. Hardegree-Ullman, Jessica Krick, Evan Sinukoff

Comments: Accepted for publication in AJ, 16 pages, 7 figures

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

ph.IM)

[理論/観測/実験 etc....]

WASP-107b は海王星くらいの質量で木星なみの半径なので、非常に密度が低いと思われる。形成としては、ダストがない状態で形成されていて、そこから 0.056AU の現在の位置に落ちいたと思われる。外側には質量が大きな他の惑星もありそう。それが WASP-107 b の自転軸のズレなどに影響していそう。

[7] [arxiv:2011.13376](#)

Title: "On the Estimation of Circumbinary Orbital Properties"

Author: Benjamin C. Bromley, Scott J. Kenyon

Comments: 24 pages with 7 figures and 3 tables, AJ, in press

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arxiv:2011.13357](#)

Title: "Investigating the young AU Mic system with SPIRou: large-scale stellar magnetic field and close-in planet mass"

Author: Baptiste Klein, Jean-François Donati, Claire Moutou, Xavier Delfosse, Xavier Bonfils, Eder Martioli, Pascal Fouqué, Ryan Cloutier, Étienne Artigau, René Doyon, Guillaume Hébrard, Julien Morin, Julien Rameau, Peter Plavchan, Eric Gaidos

Comments: 19 pages, 20 figures, MNRAS, in press

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

[理論/観測/実験 etc....]

AU Mic の 2019 年 9 月から 11 月までの SPIRou での分光偏光データの解析。RV を測ると 45m/s のゆらが見られて、これが惑星だと 17 木星質量だと思われる (アブストには太陽質量と書いてあるが)。ドップラーイメージングをして、表面の不均一性がわかってきた。回転軸に対して 19 度傾いた磁場を持っていそう。もっと RV 観測が必要。

[9] [arxiv:2011.13349](#)

Title: "Two young planetary systems around field stars with ages between 20-320 Myr from TESS"

Author: George Zhou, Samuel N. Quinn, Jonathan Irwin, Chelsea X. Huang, Karen A. Collins, Luke G. Bouma, Lamisha Khan, Anaka Landrigan, Andrew M. Vanderburg, Joseph E. Rodriguez, David W. Latham, Guillermo Torres, Stephanie T. Douglas, Allyson Bieryla, Gilbert A. Esquerdo, Perry Berlind, Michael L. Calkins, Lars A. Buchhave, David Charbonneau, Kevin I. Collins, John F. Kielkopf, Eric L. N. Jensen, Thiam-Guan Tan, Rhodes Hart, Brad Carter, Christopher Stockdale, Carl Ziegler, Nicholas

Law, Andrew W. Mann, Steve B. Howell, Rachel A. Matson, Nicholas J. Scott, Elise Furlan, Russel J. White, Coel Hellier, David R. Anderson, Richard G. West, George Ricker, Roland Vanderspek, Sara Seager, Jon M. Jenkins, Joshua N. Winn, Ismael Mireles, Pamela Rowden, Daniel A. Yahalomi, Bill Wohler, Clara. E. Brasseur

Comments: 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....]

TESS を使って TOI-251 と TOI-942 の 2 つの惑星系を発見。前者はミニ海王星を持っていて 4000 万-3 億年位の年齢。周期は 4.94 日。後者は海王星サイズで、2000 万-1 億 6 千万年位の年齢。周期は 4.32 日。年齢をいろいろな方法で推定してみると、星団に属していそう。

[10] [arXiv:2011.13338](#)

Title: "Correction of the VIR-visible data set from the Dawn mission at Vesta"

Author: B. Rousseau, M.C De Sanctis, A. Raponi, M. Ciarniello, E. Ammannito, P. Scarica, S. Fonte, A. Frigeri, F.G Carrozzo, F. Tosi

Comments: 6 pages, 5 figures and 1 table excluding supplementary material

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

[理論/観測/実験 etc....]

Vesta の可視、赤外 2 次元分光器のデータの補正について。検出器温度が重要。

[11] [arXiv:2011.13286](#)

Title: "Higher-order effects in the dynamics of hierarchical triple systems. Quadrupole-squared terms"

Author: Clifford M. Will

Comments: 16 pages, 7 figures

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Astrophysics of Galaxies (astro-ph.GA); Solar and Stellar Astrophysics (astro-ph.SR); General Relativity and Quantum Cosmology (gr-qc)

[理論/観測/実験 etc....]

Comment!!!!

[12] [arXiv:2011.13247](#)

Title: "Study of the physical properties of selected active objects in the main belt and surrounding regions by broadband photometry"

Author: Serhii Borysenko, Alexander Baransky, Ekkehard Kuehrt, Stephan Hellmich, Stefano Mottola, Karen Meech

Comments: 10 pages, 3 figures, 4 tables. Accepted for publication in Astronomische Nachrichten

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

[理論/観測/実験 etc....]

Comment!!!!

[13] [arXiv:2011.13229](#)

Title: "Rapid CO gas dispersal from NO Lup's class III circumstellar disc"

Author: J. B. Lovell, G. M. Kennedy, S. Marino, M. C. Wyatt, M. Ansdell, M. Kama, C. F. Manara, L. Matrà, G. Rosotti, M. Tazzari, L. Testi, J. P. Williams

Comments: 6 pages, 4 figures. Accepted for publication in MNRAS following peer review (this is a pre-copyedited, author-produced PDF version)

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:2011.13197](#)

Title: "Stability analysis of three exoplanet systems"

Author: J. P. Marshall, J. Horner, R. A. Wittenmyer, J. T. Clark, M. W. Mangel

Comments: 9 pages, 5 figures, 3 tables. Accepted for publication in MNRAS

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

[理論/観測/実験 etc....]

惑星系の安定性について、 n 体の数値計算でしらべた。3つの系を調べて、HD110014 と HD133131A は長期に安定、HD67087 は早い段階で不安定になることがわかった。

[15] [arXiv:2011.13168](#)

Title: "Polarimetric and radiative transfer modelling of HD 172555"

Author: Jonathan P. Marshall, Daniel V. Cotton, Peter Scicluna, Jeremy Bailey, Lucyna Kedziora-Chudczer, Kimberly Bott

Comments: 17 pages, 7 figures, 12 tables. (incl. appendices); accepted for publication in MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[16] [arXiv:2011.13164](#)

Title: "Planetesimal formation around the snow line: I. Monte Carlo simulations of silicate dust pile-up in a turbulent disk"

Author: Shigeru Ida, Tristan Guillot, Ryuki Hyodo, Satoshi Okuzumi, Andrew N. Youdin

Comments: 15 pages, accepted for publication in Astronomy & Astrophysics

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

[理論/観測/実験 etc....]

岩石惑星の形成について、snow line より外側で、珪酸塩のダストが重力的不安定を起こして岩石惑星になるという説もある。珪酸塩が動径方向に移動するときの進化を計算するコードを開発。赤道面でのダストガス比とシリケイトのスケールハイト進化、ペブルとガスの流入質量比が半解析的に計算できた。ペブルとガスの流入比がある値よりも大きくなると、シリケイトが暴走的に集積することがわかった。

[17] [arXiv:2011.13134](#)

Title: "Variable refractory lithophile element compositions of planetary building blocks"

Author: Takashi Yoshizaki, Richard D. Ash, Marc D. Lipella, Tetsuya Yokoyama, William F. McDonough

Comments: 39 pages, 8 figures, 3 tables

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

[理論/観測/実験 etc....]

Comment!!!!

[18] [arXiv:2011.13078](#)

Title: "Taurid Complex Smoking Gun: Detection of Cometary Activity"

Author: Ignacio Ferrin, Vincenzo Orfino

Comments: 45 pages, 16 Figures, 9 Tables

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

[理論/観測/実験 etc....]

Comment!!!!

[19] [arXiv:2011.13053](#)

Title: "Non-tidal Coupling of the Orbital and Rotational Motions of Extended Bodies"

Author: James H Shirley

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

[理論/観測/実験 etc....]

Comment!!!!

[20] [arXiv:2011.13873](#)

Title: "The Y dwarf population with HST: unlocking the secrets of our coolest neighbours – I. Overview & First astrometric results"

Author: Clemence Fontanive, Luigi R. Bedin, Daniella C. Bardalez Gagliuffi

Comments: Accepted for publication in MNRAS. 6 pages, 2 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!!!!

[21] [arXiv:2011.13833](#)

Title: "Gravity Gradient Noise from Asteroids"

Author: Michael A. Fedderke, Peter W. Graham, Surjeet Rajendran

Comments: 23 pages, 7 figures

Subjects: General Relativity and Quantum Cosmology (gr-qc); Earth and Planetary Astrophysics (astro-ph.EP);

High Energy Astrophysical Phenomena (astro-ph.HE); Instrumentation and Methods for Astrophysics

(astro-ph.IM); High Energy Physics - Phenomenology (hep-ph)

[理論/観測/実験 etc....]

Comment!!!!

[22] [arXiv:2011.13472](#)

Title: "Evolution and Mass Loss of Cool Ageing Stars: a Daedalean Story"

Author: Leen Decin

Comments: preprint of invited review article to be published in the Annual Review of Astronomy and Astrophysics

(2021) - 71 pages, Main Paper 58 pages, Supplemental Material 13 pages, 10 figures of which Figure 8 is also a movie. Movie does not display properly in all pdf file readers; therefore the movie has been uploaded separately or can be obtained via request to the author

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

and Molecular Clusters (physics.atm-clus); Chemical Physics (physics.chem-ph); Computational Physics

(physics.comp-ph)

[理論/観測/実験 etc....]

Comment!!!!

[23] [arXiv:2011.13285](#)

Title: "On stable H-C-N-O compounds at high pressure"

Author: Lewis J. Conway, Chris J. Pickard, Andreas Hermann

Subjects: Materials Science (cond-mat.mtrl-sci); Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[24] [arXiv:2011.13239](#)

Title: "Smoke-charged vortices in the stratosphere generated by wildfires and their behaviour in both hemispheres : comparing Australia 2020 to Canada 2017"

Author: Hugo Lestrelin, Bernard Legras, Aurélien Podglajen, Mikail Salihoglu

Comments: Submitted to Atmospheric Chemistry and Physics

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

[理論/観測/実験 etc....]

Comment!!!!

12月1日(火曜日)

[1] [arXiv:2011.15097](#)

Title: "Isostasy with Love: I Elastic equilibrium"

Author: Mikael Beuthe

Comments: 65 pages, 12 figures, 5 tables

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:2011.15066](#)

Title: "Mercury's crustal thickness correlates with lateral variations in mantle melt production"

Author: Mikael Beuthe, Bernard Charlier, Olivier Namur, Attilio Rivoldini, Tim Van Hoolst

Comments: 11 pages of main text, 37 pages with supplements; 3+12 figures, 1+1 tables

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:2011.14957](#)

Title: "Transits close to the Lagrangian solutions L_1 , L_2 in the Elliptic Restricted Three-body Problem"

Author: Rocío Isabel Páez, Massimiliano Guzzo

Comments: 36 pages, 8 figures. Submitted for publication

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Mathematical Physics (math-ph)

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:2011.14900](#)

Title: "Interstellar Objects Outnumber Solar System Objects in the Oort Cloud"

Author: Amir Siraj, Abraham Loeb

Comments: 4 pages, 4 figures; submitted for publication

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:2011.14800](#)

Title: "Comment on 'Heating of Enceladus due to the dissipation of ocean tides' by R. Tyler"

Author: Mikael Beuthe

Comments: 12 pages, 2 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:2011.14545](#)

Title: "Lifetime of a transient atmosphere produced by Lunar Volcanism"

Author: Orenthal J. Tucker, Rosemary M. Killen, Robert E. Johnson, Prabal Saxena

Comments: Submitted to Icarus

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:2011.14431](#)

Title: "Gone with the headwind : planetesimals on eccentric orbits erode rapidly"

Author: Lukas Cedenblad, Noemi Schaffer, Anders Johansen, B. Mehlig, Dhruvadya Mitra

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Fluid Dynamics (physics.flu-dyn)

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:2011.14147](#)

Title: "Demography of galactic technosignatures"

Author: Claudio Grimaldi

Comments: 12 pages, 8 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:2011.14135](#)

Title: "Exoplanet Detection using Machine Learning"

Author: Abhishek Malik, Ben Moster, Christian Obermeier

Comments: 9 pages, 8 figures, 4 tables, to be submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:2011.14030](#)

Title: "Formation, Composition, and History of the Pluto System: A Post-New-Horizons Synthesis"

Author: William B. McKinnon, Christopher R. Glein, Tanguy Bertrand, Alyssa R. Rhoden

Comments: 94 pages, 13 figures; will appear as a chapter/conference proceedings in the Space Science Series volume "The Pluto System After New Horizons," S.A. Stern et al., University of Arizona Press, Tucson, AZ

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

[理論/観測/実験 etc....]

Comment!!!!

[11] [arXiv:2011.14022](#)

Title: "3D simulations of photochemical hazes in the atmosphere of hot Jupiter HD 189733b"

Author: Maria E Steinrueck, Adam P. Showman, Panayotis Lavvas, Tommi Koskinen, Xianyu Tan, Xi Zhang

Comments: Submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arXiv:2011.13944](#)

Title: "Planet Hunters TESS II: Findings from the first two years of TESS"

Author: Nora L. Eisner, Oscar Barragán, Chris Lintott, Suzanne Aigrain, Belinda Nicholson, Tabettha S. Boyajian, Steve B. Howell, Cole Johnston, Ben Lakeland, Grant Miller, Adam McMaster, Hannu Parviainen, Emily J.

Safron, Megan E. Schwamb, Laura Trouille, Sophia Vaughan, Norbert Zicher, Campbell Allen, Sarah Allen, Mark Bouslog, Cliff Johnson, Molly N. Simon, Zach Wolfenbarger, Elisabeth M. L. Baeten, David M. Bundy, Tony Hoffman

Comments: Accepted for publication in MNRAS (22 pages, 12 figures, 3 tables)

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....]

Comment!!!!

[13] [arXiv:2011.14905](#)

Title: "The scattering order problem in Monte Carlo radiative transfer"

Author: A. Krieger, S. Wolf

Comments: accepted by A&A, 18 pages, 11 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[14] [arXiv:2011.14839](#)

Title: "Natural radioactive environments as sources of local disequilibrium for the emergence of life"

Author: Thiago Altair, Larissa M. Sartori, Fabio Rodrigues, Marcio G. B. de Avelar, Douglas Galante

Comments: 51 pages, 9 figures, supplementary material included. Astrobiology

Subjects: Chemical Physics (physics.chem-ph); Earth and Planetary Astrophysics (astro-ph.EP); Geophysics (physics.geo-ph); Populations and Evolution (q-bio.PE)

[理論/観測/実験 etc....]

Comment!!!!

[15] [arXiv:2011.14553](#)

Title: "Phase Shift of Planetary Waves and Wave–Jet Resonance on Tidally Locked Planets"

Author: Shuang Wang, Jun Yang

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

[理論/観測/実験 etc....]

Comment!!!!

[16] [arxiv:2011.14521](#)

Title: "Characterization of M dwarfs Using Optical Mid-Resolution Spectra for Exploration of Small Exoplanets"

Author: Yohei Koizumi, Masayuki Kuzuhara, Masashi Omiya, Teruyuki Hirano, John Wisniewski, Wako Aoki, Bun'ei Sato

Comments: 24 pages, 17 figures, 11 tables. Accepted to be published in Publications of the Astronomical Society of Japan. Please contact us if you need complete version of long tables

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

[理論/観測/実験 etc....]

Comment!!!!

12月2日(水曜日)

[1] [arxiv:2012.00568](#)

Title: "Modeling Solar Proton Event-induced Martian Surface Radiation Dose"

Author: Dimitra Atri, Caitlin MacArthur, Ian Dobbs-Dixon

Comments: Submitted

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:2012.00189](#)

Title: "The Ophiuchus DIsc Survey Employing ALMA (ODISEA)-III: the evolution of substructures in massive discs at 3-5 au resolution"

Author: Lucas A. Cieza, Camilo González-Ruilova, Antonio S. Hales, Paola Pinilla, Dary Ruíz-Rodríguez, Alice Zurlo, Simón Casassus, Sebastián Pérez, Hector Cánovas, Carla Arce-Tord, Mario Flock, Nicolas Kurtovic, Sebastian Marino, Pedro H. Nogueira, Laura Perez, Daniel J. Price, David A. Principe, Jonathan P. Williams

Comments: 21 pages, 10 figures. Appendix with 3 additional figures. Version 2, identical to previous one, but now accepted for publication (in MNRAS)

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:2012.00100](#)

Title: "Distribution and habitability of (meta)stable brines on present-day Mars"

Author:Edgard G. Rivera-Valentín, Vincent F. Chevrier, Alejandro Soto, Germán Martínez

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

[実験/火星表面の塩水]

火星の表面の一部領域には液体の水があると考えられる。惑星の環境を守るという観点からは、将来の火星探査の際に、そのようなハビタブルな領域に地球由来の生物を持ち込むことを避けたい。そのために、液体の水が存在する場所や条件を知っておきたい。そこで、火星表面にどのような条件下で水が存在しうるのかを実験で確かめた。純粋な水は液体として存在できないが、塩水なら低温でも metastable liquid として存在できた。ただしその温度は 225K であった。この温度では地球の生物は生存できない。したがって、火星表面を汚染する心配は減った。

[4] [arXiv:2012.00080](#)

Title: "Phase Modeling of the TRAPPIST-1 Planetary Atmospheres"

Author:Stephen R. Kane, Tiffany Jansen, Thomas Fauchez, Franck Selsis, Alma Y. Ceja

Comments: 14 pages, 6 figures, 2 tables, accepted for publication in the Astronomical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:2012.00005](#)

Title: "Encounter of Parker Solar Probe and a Comet-like Object During Their Perihelia: Model Predictions and Measurements"

Author:Jiansen He, Bo Cui, Liping Yang, Chuanpeng Hou, Lei Zhang, Wing-Huen Ip, Yingdong Jia, Chuanfei Dong, Die Duan, Qiugang Zong, Stuart D. Bale, Marc Pulupa, John W. Bonnell, Thierry Dudok de Wit, Keith Goetz, Peter R. Harvey, Robert J. MacDowall, David M. Malaspina

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:2012.00655](#)

Title: "A Kinetic Study of the $N(2D) + C_2H_4$ Reaction at Low Temperature"

Author:Kevin M. Hickson, Cédric Bray, Jean-Christophe Loison, Michel Dobrijevic

Comments: 21 pages, 5 figures, 2 tables

Subjects: Chemical Physics (physics.chem-ph); Earth and Planetary Astrophysics (astro-ph.EP); Atomic Physics (physics.atom-ph)

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:2012.00616](#)

Title: "FRIPON: A worldwide network to track incoming meteoroids"

Author: F. Colas, B. Zanda, S. Bouley, S. Jeanne, A. Malyre, M. Birlan, C. Blanpain, J. Gattacceca, L. Jorda, J. Lecubin, C. Marmo, J.L. Rault, J. Vaubaillon, P. Vernazza, C. Yohia, D. Gardiol, A. Nedelcu plus 300 co-authors

Comments: 54 pages, 14 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!!!!

[8] [arXiv:2012.00475](#)

Title: "Calibration of the instrumental polarization effects of SCExAO-CHARIS' spectropolarimetric mode"

Author: Rob G. van Holstein, Steven P. Bos, Jasper Ruigrok, Julien Lozi, Olivier Guyon, Barnaby Norris, Frans Snik, Jeffrey Chilcote, Thayne Currie, Tyler D. Groff, Joost 't Hart, Nemanja Jovanovic, Jeremy Kasdin, Tomoyuki Kudo, Frantz Martinache, Ben Mazin, Ananya Sahoo, Motohide Tamura, Sébastien Vievard, Alex Walter, Jin Zhang

Comments: 14 pages, 7 figures, submitted to SPIE Astronomical Telescopes + Instrumentation 2020

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:2012.00182](#)

Title: "Ghosts of NEID's Past"

Author: Shubham Kanodia, Joe P. Ninan, Andrew J. Monson, Suvrath Mahadevan, Colin Nitroy, Chris Schwab, Samuel Halverson, Chad F. Bender, Ryan Terrien, Frederick R. Hearty, Emily Lubar, Michael W. McElwain, Lawrence W. Ramsey, Paul M. Robertson, Arpita Roy, Gudmundur Ste

fansson, Daniel J. Stevens

Comments: Conference Proceeding from SPIE Astronomical Telescopes + Instrumentation (2020): 12 pages

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arxiv:2012.00035](#)

Title: "I Spy Transits and Pulsations: Empirical Variability in White Dwarfs Using Gaia and the Zwicky Transient Facility"

Author: Joseph A. Guidry, Zachary P. Vanderbosch, J. J. Hermes, Brad N. Barlow, Isaac D. Lopez, Thomas M. Boudreaux, Kyle A. Corcoran, Bart H. Dunlap, Keaton J. Bell, M. H. Montgomery, Tyler M. Heintz, D. E. Winget, Karen I. Winget, J. W. Kuehne

Comments: 27 pages, 14 figures, submitted to ApJ

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!!!!

[11] [arxiv:2012.00016](#)

Title: "High-Resolution Mid-Infrared Spectroscopy of GV Tau N: Surface Accretion and Detection of Ammonia in a Young Protoplanetary Disk"

Author: Joan R. Najita, John S. Carr, Sean D. Brittain, John H. Lacy, Matthew J. Richter, Greg W. Doppmann

Comments: 55 pages, 18 figures, accepted for publication in the Astrophysical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

12月3日(木曜日)

[1] [arxiv:2012.01291](#)

Title: "Narrowband Observations of Comet 46P/Wirtanen During Its Exceptional Apparition of 2018/19 I: Apparent Rotation Period and Outbursts"

Author: Tony L. Farnham, Matthew M. Knight, David G. Schleicher, Lori M. Feaga, Dennis Bodewits, Brian A. Skiff, Josephine Schindler

Comments: 25 pages, 11 figures, 4 tables. Accepted for publication in the Planetary Science Journal, A'Hearn
Focus Issue

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:2012.01152](#)

Title: "Recurrent galactic cosmic-ray flux modulation in L1 and geomagnetic activity during the declining phase of the solar cycle 24"

Author: Catia Grimani, Andrea Cesarini, Michele Fabi, Federico Sabbatini, Daniele Telloni, Mattia Villani

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxiv:2012.00819](#)

Title: "Carbonate-Silicate Cycle Predictions of Earth-like Planetary Climates and Testing the Habitable Zone Concept"

Author: Owen R. Lehmer, David C. Catling, Joshua Krissansen-Totton

Comments: Published 12/1/2020 in Nature Communications. The supplemental data and code referenced in this work are available from the Nature Communications website (see DOI below) or by email from the authors

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:2012.00776](#)

Title: "Hot Stars With Kepler Planets Have High Obliquities"

Author: Emma M. Louden, Joshua N. Winn, Erik A. Petigura, Howard Isaacson, Andrew W. Howard, Kento Masuda, Simon Albrecht, Molly R. Kosiarek

Comments: AJ, in press [15 pages]

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:2012.00764](#)

Title: "The Exomoon Corridor: Half of all exomoons exhibit TTV frequencies

within a narrow window due to aliasing”

Author:David Kipping

Comments:Published in MNRAS

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:2012.00976](#)

Title: ”Cometary records revise Eastern Mediterranean chronology around 1240 CE”

Author:Koji Murata, Kohei Ichikawa, Yuri I. Fujii, Hisashi Hayakawa, Yongchao Cheng, Yukiko Kawamoto, Hidetoshi Sano

Comments:14 pages, 3 figures, accepted for publication in PASJ

Subjects: History and Philosophy of Physics (physics.hist-ph); Earth and Planetary Astrophysics (astro-ph.EP); Popular Physics (physics.pop-ph)

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:2012.00795](#)

Title: ”The Exoplanet Transmission Spectroscopy Imager (ETSI)”

Author:Mary Anne Limbach, Luke M. Schmidt, D. L. DePoy, Jeffrey C. Mason, Mike Scobey, Pat Brown, Chelsea Taylor, Jennifer L. Marshall

Comments:14 pages, 9 figures, Proc. of SPIE 11447-100

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:2012.00792](#)

Title: ”GPI 2.0: Upgrades to the IFS including new spectral modes”

Author:Mary Anne Limbach, Jeffrey Chilcote, Quinn Konopacky, Robert De Rosa, Randall Hamper, Bruce Macintosh, Christian Marois, Marshall Perrin, Dmitry Savransky, Jean-Pierre Veran, Jason Wang, Arlene Aleman

Comments:8 pages, 5 figures, Proc. of SPIE Paper No. 11447-410

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:2012.00753](#)

Title: "José Monteiro da Rocha (1734-1819) and his work of 1782 on the determination of comet orbits"

Author: Fernando B. Figueiredo, João M. Fernandes

Comments: Accepted in Journal for the History of Astronomy

Subjects: History and Philosophy of Physics (physics.hist-ph); Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

12月4日(金曜日)

[1] [arXiv:2012.02170](#)

Title: "Solving the Alhazen-Ptolemy Problem: Determining Specular Points on Spherical Surfaces for Radiative Transfer of Titan's Seas"

Author: William J. Miller, Jason W. Barnes, Shannon M. MacKenzie

Comments: 11 pages with 5 figures. Submitted to Planetary Science Journal

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:2012.02008](#)

Title: "Presolar Stardust in Highly Pristine CM Chondrites Asuka 12169 and Asuka 12236"

Author: Larry R. Nittler, Conel M. O'D. Alexander, Andrea Patzer, Maximilien J. Verdier-Paoletti

Comments: Accepted for publication in Meteoritics and Planetary Science (32 pages, 7 figures, 3 tables)

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!!!!

[3] [arXiv:2012.01862](#)

Title: "Auto-correlation functions of astrophysical processes, and their relation to Gaussian processes; Application to radial velocities of different starspot configurations"

Author:Manuel Perger, Guillem Anglada-Escudé, Ignasi Ribas, Albert Rosich,
Enrique Herrero, Juan Carlos Morales

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:2012.01735](#)

Title: "Modeling of the ALMA HL Tau Polarization by Mixture of Grain Alignment and Self-scattering"

Author:Tomohiro Mori, Akimasa Kataoka

Comments: 12 pages, 5 figures, accepted for publication in ApJ

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:2012.01495](#)

Title: "Detection of volatiles sublimating from 67P/Churyumov-Gerasimenko coma particles using ROSINA/COPS. Part I. ram gauge"

Author:Boris Pestoni, Kathrin Altwegg, Hans Balsiger, Nora Hänni, Martin Rubin, Isaac Schroeder, Markus Schuhmann, Susanne Wampfler

Comments: 9 pages, 8 figures, 2 tables, accepted for publication in 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!!!!

[6] [arXiv:2012.01486](#)

Title: "Refined System Ephemeris for Four Transiting Hot Jupiters using Ground-Based and TESS Observations"

Author:Fatemeh Davoudi, PegahSadat MirshafieKhozani, Ehsan Paki, Mojtaba Roshana, Fatemeh HashemiNasab, Ahmad MazidabadiFarahani, Farzaneh Ahangarani Farahani, Tayebah Farjadnia, Farshid Nasrollahzadeh, Shiva Rezvanpanah, Seyyed Mohammad Mahdi Mousavi, Rahimeh Foroughi, Atila Poro, Amir Ghalee, Michael Gillon, Emmanuel Jehin, Pierre Magain, Laetitia Delrez, Cyrielle Opitom, Monika Lendl

Comments: 14 figures, 4 tables, 3 appendix

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:2012.01472](#)

Title: "Astrochemistry associated with planet formation"

Author: Ewine F. van Dishoeck, Edwin A. Bergin

Comments: 11 pages, 5 figures, to appear as a book chapter in ExoFrontiers: Big questions in exoplanetary science, Ed. N Madhusudhan (Bristol: IOP Publishing Ltd) AAS-IOP ebooks

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:2012.01428](#)

Title: "Spectral binning of precomputed correlated-k coefficients"

Author: Jérémy Leconte

Comments: In press at Astronomy and Astrophysics. The Exo_k library can be found at this http URL along with tutorials, example scripts and notebooks, and an extensive online documentation

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:2012.02116](#)

Title: "Monitoring the radio emission of Proxima Centauri"

Author: Miguel Pérez-Torres, José Francisco Gómez, José Luis Ortiz, Paolo Leto, Guillem Anglada, José Luis Gómez, Eloy Rodríguez, Corrado Trigilio, Pedro J. Amado, Antonio Alberdi, Guillem Anglada-Escudé, Mayra Osorio, Grazia Umana, Zaira Berdiñas, María José López-González, Nicolás Morales, Cristina Rodríguez-López, James Chibueze

Comments: 14 pages, 11 figures. Accepted on December 2, 2020 in A&A (main journal), several typos corrected

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:2012.02054](#)

Title: "Theoretical kinetic studies of Venus chemistry. Formation and destruction of SCl , SCl_2 , and HSCl "

Author: David E. Woon, Dominique M. Maffucci, Eric Herbst

Comments:

Includes 3 tables and 5 figures, plus Supplemental Information (cartesian structures, energies, and ZPE corrections)

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

[理論/観測/実験 etc....]

Comment!!!!

[11] [arXiv:2012.01609](#)

Title: "Overview and Reassessment of Noise Budget of Starshade Exoplanet Imaging"

Author: Renyu Hu, Doug Lisman, Stuart Shaklan, Stefan Martin, Phil Willems, Kendra Short

Comments: Accepted for publication in the Journal of Astronomical Telescopes, Instruments, and Systems (JATIS)

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arXiv:2012.01560](#)

Title: "NPF update: Light-weight mirror development in Chile"

Author: A. Bayo, P. Mardones, S. Castillo, G. Hamilton, C. Lobos, L. Pedrero, C. Rozas, N. Soto, H. Hakobyan, C. García, M. R. Schreiber, W. Brooks, S. Zúñiga-Fernández

Comments: 7 pages, 4 figures, Submitted to SPIE

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

[理論/観測/実験 etc....]

Comment!!!!

Nature

ない

Science

ない