

2017年 2月 第3週 新着論文サーベイ

2月13日(月曜日)

[1] [arxiv:1702.03136](#)

Title: "The GAPS Programme with HARPS-N at TNG. XIII. The orbital obliquity of three close-in massive planets hosted by dwarf K-type stars: WASP-43, HAT-P-20 and Qatar-2"

Author: M. Esposito, E. Covino, S. Desidera, L. Mancini, V. Nascimbeni, R. Zanmar Sanchez, K. Biazzo, A.F. Lanza, G. Leto, J. Southworth, A. S. Bonomo, A. Suárez Mascareño, C. Boccato, R. Cosentino, R. U. Claudi, R. Gratton, A. Maggio, G. Micela, E. Molinari, I. Pagano, G. Piotto, E. Poretti, R. Smareglia, A. Sozzetti, L. Affer, D.R. Anderson, G. Andreuzzi, S. Benatti, A. Bignamini, F. Borsa, L. Borsato, S. Ciceri, M. Damasso, L. di Fabrizio, P. Giacobbe, V. Granata, A. Harutyunyan, T. Henning, L. Malavolta, J. Maldonado, A. Martinez Fiorenzano, S. Masiero, P. Molaro, M. Molinaro, M. Pedani, M. Rainer, G. Scandariato, O.D. Turner

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:1702.03086](#)

Title: "Size Dependence of Dust Distribution around the Earth Orbit"

Author: Takahiro Ueda, Hiroshi Kobayashi, Taku Takeuchi, Daisuke Ishihara, Toru Kondo, Hidehiro Kaneda

Comments: 31 pages, 8 figures, accepted for publication in AJ

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxiv:1702.02994](#)

Title: "Pale Orange Dots: The Impact of Organic Haze on the Habitability and Detectability of Earthlike Exoplanets"

Author: Giada N. Arney, Victoria S. Meadows, Shawn D. Domagal-Goldman, Drake Deming, Tyler D. Robinson, Guadalupe Tovar, Eric T. Wolf, Ed-

ward Schwieterman

Comments: 21 pages, 10 figures, published in ApJ (836, 49)

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:1702.02943](#)

Title: "Time-Series Analysis of Broadband Photometry of Neptune from K2"

Author: Jason F. Rowe, Patrick Gaulme, Jack J. Lissauer, Mark S. Marley, Amy A. Simon, Heidi B. Hammel, Victor Silva Aguirre, Thomas Barclay, Othman Benomar, Patrick Boumier, Douglas A. Caldwell, Sarah L. Casewell, William J. Chaplin, Knicole D. Colon, Enrico Corsaro, G.R. Davies, Jonathan J. Fortney, Rafael A. Garcia, John E. Gizis, Michael R. Haas, Benoit Mosser, Francois-Xavier Schmider

Comments: 31 pages, 6 figure, accepted for publication in AJ

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!!!!

[5] [arxiv:1702.03170](#)

Title: "Astero-seismology of the exoplanet-host F-type star 94 Ceti : impact of atomic diffusion on the stellar parameters"

Author: M. Deal, M.E. Escobar, S. Vauclair, G. Vauclair, A. Hui-Bon-Hoa, O. Richard

Comments: 7 pages, 6 figures, accepted for publication in 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!!!!

2月14日(火曜日)

[1] [arxiv:1702.03885](#)

Title: "Stacked Bayesian general Lomb-Scargle periodogram: Identifying stellar activity signals"

Author: A. Mortier, A. Collier Cameron

Comments: 8 pages, 9 figures, 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!!!!

[2] [arXiv:1702.03797](#)

Title: "Planet-Induced Stellar Pulsations in HAT-P-2's Eccentric System"

Author: J. de Wit, N.K. Lewis, H.A. Knutson, J. Fuller, V. Antoci, B.J. Fulton, G. Laughlin, D. Deming, A. Shporer, K. Batygin, N.B. Cowan, E. Agol, A.S. Burrows, J.J. Fortney, J. Langton, A.P. Showman

Comments: Published in ApJL on 14 Feb 2017

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1702.03783](#)

Title: "3D modeling of organic haze in Pluto's atmosphere"

Author: Tanguy Bertrand, François Forget

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1702.03678](#)

Title: "Quantitative indexing and Tardigrade analysis of exoplanets"

Author: J. M. Kashyap

Comments: 5 pages

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1702.03665](#)

Title: "The splitting of double-component active asteroid P/2016 J1 (PANSTARRS)"

Author: Fernando Moreno, Francisco Pozuelos, Bojan Novakovic, Javier Licandro, Antonio Cabrera-Lavers, Bryce Bolin, Robert Jedicke, Brett Gladman, Michele Bannister, Stephen Gwyn, Peter Veres, Kenneth Chambers, Serge Chastel, Larry Denneau, Heather Flewelling, Mark Huber, Eva Schunova-Lilly, Eugene Magnier, Richard Wainscoat, Christopher Waters, Robert

Weryk, Davide Farnocchia, Marco Micheli

Comments: Accepted by ApJ Letters, Feb. 17, 2017

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1702.03571](#)

Title: "The LCES HIRES/Keck Precision Radial Velocity Exoplanet Survey"

Author: R. Paul Butler, Steven S. Vogt, Gregory Laughlin, Jennifer A. Burt, Eugenio J. Rivera, Mikko Tuomi, Johanna Teske, Pamela Arriagada, Matias Diaz, Brad Holden, Sandy Keiser

Comments: Accepted for publication in The Astronomical Journal. Paper data available at: [this http URL](#)

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:1702.03570](#)

Title: "ExoMol molecular line lists XIX: high accuracy computed hot line lists for H_2^{18}O and H_2^{17}O "

Author: Oleg L. Polyansky, Aleksandra A. Kyuberis, Lorenzo Lodi, Jonathan Tennyson, Sergei N. Yurchenko, Roman I. Ovsyannikov, Nikolai F. Zobov

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:1702.03386](#)

Title: "The cosmic shoreline: the evidence that escape determines which planets have atmospheres, and what this may mean for Proxima Centauri b"

Author: Kevin J. Zahnle, David C. Catling

Comments: 19 pages, 4 figures, 1 table

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:1702.03322](#)

Title: "ALMA mapping of rapid gas and dust variations in comet C/2012 S1 (ISON): new insights into the origin of cometary HNC"

Author:

M. A. Cordiner, J. Boissier, S. B. Charnley, A. J. Remijan, M. J. Mumma,
G. Villanueva, D. C. Lis, S. N. Milam, L. Paganini, J. Crovisier, D.
Bockelee-Morvan, Y.-J. Kuan, N. Biver, I. M. Coulson

Comments: 9 pages. Accepted for publication in ApJ, February 2017

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arxive:1702.03315](#)

Title: "Constraints on Climate and Habitability for Earth-like Exoplanets Determined from a General Circulation Model"

Author: Eric T. Wolf, Aomawa L. Shields, Ravi K. Kopparapu, Jacob Haqq-Misra,
Owen B. Toon

Comments: accepted at Astrophysical Journal, 3 tables, 6 figures, 43 pages

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

[理論/観測/実験 etc....]

Comment!!!!

[11] [arxive:1702.03301](#)

Title: "A VLA Search for Radio Signals from M31 and M33"

Author: Robert H. Gray, Kunal P. Mooley

Comments: 14 pages, 9 figures, 5 tables. Accepted for publication in the Astronomical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arxive:1702.03550](#)

Title: "On the origin of the crescent-shaped distributions observed by MMS at the magnetopause"

Author: G. Lapenta, J. Berchem, M. Zhou, R. J. Walker, M. El-Alaoui, M. L. Goldstein, W. R. Paterson, B. L. Giles, C. J. Pollock, C. T. Russell, R. J. Strangeway, R. E. Ergun, Y. V. Khotyaintsev, R. B. Torbert, J. L. Burch

Comments: to appear on J. Geophys. Res

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

[理論/観測/実験 etc....]

Comment!!!!

2月15日(水曜日)

[1] [arxiv:1702.04089](#)

Title: "Is Proxima Centauri b habitable? – A study of atmospheric loss"

Author: Chuanfei Dong, Manasvi Lingam, Yingjuan Ma, Ofer Cohen

Comments: 7 pages, 2 figures, submitted to ApJL

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:1702.03968](#)

Title: "The January 7, 2015, superbolide over Romania and structural diversity of meter-sized asteroids"

Author: Jiří Borovička, Pavel Spurný, Valentin I. Grigore, Ján Svoreň

Comments: accepted in Planetary and Space Science

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxiv:1702.03931](#)

Title: "The Multi-site All-Sky CAmERA: Finding transiting exoplanets around bright ($m_V < 8$) stars"

Author: G.J.J. Talens, J.F.P. Spronck, A.-L. Lesage, G.P.P.L. Otten, R. Stuik, D. Pollacco, I.A.G Snellen

Comments: 9 pages, 12 figures, Accepted for publication in A&A. See also this [http URL](#)

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:1702.03930](#)

Title: "Phantom: A smoothed particle hydrodynamics and magnetohydrodynamics code for astrophysics"

Author: Daniel J. Price, James Wurster, Chris Nixon, Terrence S. Tricco, Stéven Toupin, Alex Pettitt, Conrad Chan, Guillaume Laibe, Simon Glover,

Clare Dobbs, Rebecca Nealon, David Liptai, Hauke Worpel, Clément Bonnerot, Giovanni Dipierro, Enrico Ragusa, Christoph Federrath, Roberto Iaconi, Thomas Reichardt, Duncan Forgan, Mark Hutchison, Thomas Constantino, Ben Ayliffe, Daniel Mentiplay, Kieran Hirsh, Giuseppe Lodato

Comments: 77 pages, 51 figures, 335 equations, submitted to PASA. Code available from this [https](https://github.com/astro-ph/PASA) URL

Subjects: Instrumentation and Methods for Astrophysics (astro-ph.IM); Earth and Planetary Astrophysics (astro-ph.EP); Astrophysics of Galaxies (astro-ph.GA); High Energy Astrophysical Phenomena (astro-ph.HE); Solar and Stellar Astrophysics (astro-ph.SR)

[理論/観測/実験 etc....]

Comment!!!!

2月16日(木曜日)

[1] [arxiv:1702.04617](https://arxiv.org/abs/1702.04617)

Title: "Numerical Simulations of Saturn's B Ring: Granular Friction as a Mediator between Self-Gravity and Viscous Overstability"

Author: Ronald-Louis Ballouz, Derek C. Richardson, Ryuji Morishima

Comments: 10 pages, 7 figures, Accepted for publication to the Astrophysical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:1702.04543](https://arxiv.org/abs/1702.04543)

Title: "Secular evolution of eccentricity in protoplanetary discs with gap-opening planets"

Author: Jean Teyssandier, Gordon I. Ogilvie

Comments: 16 pages, 18 figures, accepted for publication in MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxiv:1702.04385](https://arxiv.org/abs/1702.04385)

Title: "Accretion of Saturn's Inner Mid-sized Moons from a Massive Primordial Ice Ring"

Author: Julien Salmon, Robin M. Canup

Comments: 28 pages, 17 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:1702.04365](#)

Title: "A supernova at 50 pc: Effects on the Earth's atmosphere and biota"

Author: A.L Melott, B.C. Thomas, M. Kachelriess, D.V. Semikoz, A. C. Overholt

Comments: 5 figures. arXiv admin note: text overlap with arXiv:1605.04926

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); High Energy Astrophysical Phenomena (astro-ph.HE); Solar and Stellar Astrophysics (astro-ph.SR); Geophysics (physics.geo-ph); Populations and Evolution (q-bio.PE)

[理論/観測/実験 etc....]

Comment!!!!

[5] [arxiv:1702.04383](#)

Title: "Characterising face-on accretion onto and the subsequent contraction of protoplanetary discs"

Author: T.P.G. Wijnen, O.R. Pols, F.I. Pelupessy, S. Portegies Zwart

Comments: Accepted for publication in A&A, 20 pages, 8 figures, 2 tables

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....]

Comment!!!!

2月17日(金曜日)

[1] [arxiv:1702.05078](#)

Title: "Starspots on WASP-107 and pulsations of WASP-118"

Author: T. Močnik, C. Hellier, D. R. Anderson, B. J. M. Clark

Comments: 8 pages, 8 figures, 2 tables

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

[理論/観測/実験 etc....]

ウォームサターンがあると目される WASP-107 のライトカーブを再解析した。トランジットの変動が 17.5 日周期。黒点の寿命が自転周期より短くない限りは黒点による変動ではなさそう。膨らんだホットジュピターがあると思われる WASP-118 のライトカーブも調べて、変動が 200ppm なのが分かった。二次食や TTV、他の惑星によるトランジットは検出出来なかった。

[2] [arxiv:1702.04979](#)

Title: "Spectral Analysis of Non-Ideal MRI Modes: The effect of Hall diffusion"

Author:Gopakumar Mohandas, Martin E. Pessah

Comments: 16 pages, 11 figures, accepted by ApJ

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

[理論]

Hall 効果について、線形基底モード解析をした。まず幾何学的なモード表現を開発して、Hall 効果とコリオリ力が偏光特性にどのような影響を及ぼすかを調べた。シアリングボックスなシミュレーションもした。

[3] [arxiv:1702.04780](#)

Title: "Polarized disk emission from Herbig Ae/Be stars observed using Gemini Planet Imager: HD 144432, HD 150193, HD 163296, and HD 169142"

Author:John D. Monnier, T. J. Harries, A. Aarnio, F. Adams, S. Andrews, N. Calvet, C. Espaillat, L. Hartmann, S. Hinkley, S. Kraus, M. McClure, R. Oppenheimer, M. Perrin, D. Wilner

Comments: Accepted Astrophysical Journal

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

[観測]

Herbig Ae/Be 星の HD150193、HD163296、HD169142 を初めて偏光撮像観測。H バンドで HD144432 も観測。GPI で。HD169142 はダブルリング構造が H バンドで確認されていた。外側のリングは内側のリングに比べて偏光でみると赤化している。J、H の観測と SED から、モデルを立てて、これが説明できた。HD163296 は 77AU の半径に位置する赤道面から 18AU の所に散乱光の表面が見つかった。ALMA の CO スノーラインと関係があるかも知れない。残り二つは観られなかった。

[4] [arxiv:1702.04734](#)

Title: "The Oblique Orbit of WASP-107b from K2 Photometry"

Author:Fei Dai, Joshua N. Winn

Comments: Submitted to AAS journals

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

[理論/観測/実験 etc....]

WASP-107 の 9 つのトランジットが 3 つの黒点と惑星が重なったによるものだと分かった。恒星の自転周期が 17 日で、軌道面傾斜は観測出来ないけれど 40–140° のようだ。大きく傾いた大きな惑星があるかも知れない。

[5] [arxiv:1702.04744](#)

Title: "Thermochemical modelling of brown dwarf discs"

Author:A.J. Greenwood, I. Kamp, L.B.F.M. Waters, P. Woitke, W.-F. Thi, Ch. Rab, G. Aresu, M. Spaans

Comments: Accepted for publication in A&A. 11 pages, 10 figures, 3 tables

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

[理論/観測]

褐色矮星の円盤について、形状と大きさくらいで、大規模な探査はまだ無い。T Tauri の円盤を単純にスケールダウンしたものを想定しているけれど良く分からない。 ρ Oph 102 の観測で褐色矮星円盤モデルを構築する。CO と HCN と

HCO⁺のラインをみる。輻射と熱化学をふくんだ2Dの詳細なモデルは今回が初めて。褐色矮星円盤もT Tauri円盤と似ているようだ。

Nature

ない

Science

ない