

2016年 9月 第1週 新着論文サーベイ

8月 29日 (月曜日)

[1] [arxiv:1608.07524](#)

Title: "Recurring sets of recurring starspots on exoplanet-host Qatar-2"

Author: T. Močnik, J. Southworth, C. Hellier

Comments: 9 pages, 9 figures and 4 tables. Submitted to MNRAS

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

[観測]

K2 の short cadence データから黒点情報を得たよという論文。
K 型矮星の周りを 1.34 日周期で公転するホットジュピターがある。
その系において、30 子の個別な黒点による食を検出した。
長生きしている黒点 (2 回転) や、系の傾きについて議論している。

[2] [arxiv:1608.07372](#)

Title: "The surface temperature of Europa"

Author: Yosef Ashkenazy

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

[理論]

先行研究でエウロパの表面温度は見積もられているが、木星の離心軌道の効果や、エウロパの内部熱の効果を無視している。
この論文では現在考え得る全ての効果を入れてエウロパ表面温度を見積もった。
極付近では内部熱の効果が重要で、先行研究から結果が大きく変わる。

[3] [arxiv:1608.07345](#)

Title: "Prospects for Characterizing the Atmosphere of Proxima Centauri b"

Author: Laura Kreidberg, Abraham Loeb

Comments: submitted to ApJL; comments welcome! this version has minor revisions based on input from the community

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

[観測]

最近発見されて地球サイズのハビタブル惑星だと評判の Proxima Centauri b 大気についての研究。
JWST の観測結果から、表面組成や経度熱分布に制限をつけた。
地球のような大気を組成を仮定した時、観測結果を時間積分オゾンのラインが見えるはずだと結論づけた。

[4] [arxiv:1608.07303](#)

Title:

”Does the Planetary Dynamo Go Cycling On? Re-examining the Evidence for Cycles in Magnetic Reversal Rate”

Author: Adrian L. Melott, Anthony Pivarunas, Joseph G. Meert, Bruce S. Lieberman

Comments: 4 figures. Submitted to Earth and Planetary Science Letters

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Chaotic Dynamics (nlin.CD); Data Analysis, Statistics and Probability (physics.data-an); Geophysics (physics.geo-ph)

[観測]

惑星の磁気反転の記録はプレートテクトニクス理論を発展させるために役に立つ。統計的な処理をすることで、コア-マントルの間の過程に繋がられると期待される。この論文では、磁気反転の記録を時間についてのフーリエ解析し、16年の周期的な成分と、カオス成分があることが分かった。16年周期はマントルの脈動と関連しているのかもしれない。

[5] [arxiv:1608.07322](#)

Title: ”Stellar magnetic cycles in the solar-like stars Kepler-17 and Kepler-63”

Author: Raissa Estrela, Adriana Valio

Comments: Accepted for publication in ApJ. 18 pages, 27 figures

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

[観測]

Kepler-17, Kepler-63の光度曲線から黒点に関する情報を得る。さらに、その結果から恒星磁場サイクルに制限をつけた。解析は個々のスポットを同定して求めて求める方法と、理想的な光度曲線からの差を解析する方法の二通りでやったが、どちらも結果は一致した。(だからロバストな結果が得られたはずだ。)

8月30日(火曜日)

[1] [arxiv:1608.08125](#)

Title: ”Detecting 3D vegetation structure with the Galileo space probe: Can a distant probe detect vegetation structure on Earth?”

Author: Christopher E. Doughty, Adam Wolf

Comments: 20 pages, 4 figures

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

[Galileo 観測/地球の植生 feature]

Sagan et al (1993) では、Galileo space probe の地球スペクトルデータから、red edge を見つけ、生命の証拠を見つけた。今回：データを再解析し、3次元の植生 map の情報が得られないか議論。反射率の(周期的)変化を使う手法。

[2] [arxiv:1608.08038](#)

Title: "Numerical integration of dynamical systems with Lie series: Relativistic acceleration and non-gravitational forces"

Author: D. Bancelin, D. Hestroffer, W. Thuillot

Comments: Accepted for publication in Celestial Mechanics and Dynamical Astronomy in Feb. 2012

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

[理論/Lie series]

Lie series の数値積分の議論。軌道運動などで出てくる高次の項の取り扱いと違って良さそう。

[3] [arxiv:1608.08032](#)

Title: "Dynamics of asteroids and near-Earth objects from Gaia Astrometry"

Author: D. Bancelin, D. Hestroffer, W. Thuillot

Comments: Accepted for publication in Planetary and Space Science in Dec. 2012

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

[GAIA 観測予想/小惑星・NEOs]

データ公開の日も近い GAIA 衛星に関して、小惑星と near-Earth objects のデータが公開された際の影響と、その follow up 観測体制などを議論。(2012 年に出版されたもの。ついでに投稿?)

[4] [arxiv:1608.08024](#)

Title: "The Gaia-FUN-SSO observation campaign of 99942 Apophis: A preliminary test for the network"

Author: D. Bancelin, W. Thuillot, A. Ivantsov, J. Desmars, M. Assafin, S. Eggl, D. Hestroffer, P. Rocher, B. Carry, P. David, Gaia-FUN-SSO team

Comments: Proceedings of the 3rd Gaia-FUN-SSO International Workshop held 24-26 November 2014 in Paris, France

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

[小惑星観測/follow up 観測試験]

上記で議論されていた GAIA 衛星で観測した小惑星/NEOs の follow up 観測を、99942 Apophis という天体について実行。(follow up 観測体制の確認が目的?)

[5] [arxiv:1608.08023](#)

Title: "Near-Earth asteroids orbit propagation with Gaia observations"

Author: D. Bancelin, D. Hestroffer, W. Thuillot

Comments: Proceedings of the 2nd Gaia-FUN-SSO International Workshop held 19-21 September 2012 in Paris, France

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

[小惑星観測/GAIA]

GAIA 衛星を用いた近地球小惑星の軌道研究の見通しの議論

[6] [arxive:1608.07933](#)

Title: "Acceleration of Individual, Decimetre-sized Aggregates in the Lower Coma of Comet 67P/Churyumov-Gerasimenko"

Author: J. Agarwal, M. F. A'Hearn, J.-B. Vincent, C. Guettler, S. Hoefner, H. Sierks, C. Tubiana, C. Barbieri, P. L. Lamy, R. Rodrigo, D. Koschny, H. Rickman, M. A. Barucci, J.-L. Bertaux, I. Bertini, S. Boudreault, G. Cremonese, V. Da Deppo, B. Davidsson, S. Debei, M. De Cecco, J. Deller, S. Fornasier, M. Fulle, A. Gicquel, O. Groussin, P. J. Gutierrez, M. Hofmann, S. F. Hviid, W.-H. Ip, L. Jorda, H. U. Keller, J. Knollenberg, J.-R. Kramm, E. Kuehrt, M. Kueppers, L. M. Lara, M. Lazzarin, J. J. Lopez Moreno, F. Marzari, G. Naletto, N. Oklay, X. Shi, N. Thomas

Comments: 11 pages, 14 figures, accepted for publication in MNRAS

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

[観測/彗星]

67P/Churyumov-Gerasimenko の観測から、氷を含む 0.1 メートルサイズのアグリゲイト粒子を見つけた話。太陽から 2AU の位置。速度場などを測定し、粒子の加速源を調査。(ガス drag も大事)

[7] [arxive:1608.07910](#)

Title: "Large Super-Fast Rotator Hunting Using the Intermediate Palomar Transient Factory"

Author: Chan-Kao Chang, Hsing-Wen Lin, Wing-Huen Ip, Thomas A. Prince, Shrinivas R. Kulkarni, David Levitan, Russ Laher, Jason Surace

Comments: Accepted by ApJS in Aug 2016. 33 pages (not include the full tables and figures). The full tables and figures for asteroid rotation periods will be available when the paper is officially published on ApJS

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

[小惑星観測/回転]

小惑星のサーベイ観測から、自転がものすごく早い小惑星を探すプロジェクト。(40511) 1999 RE88(と 18 個の候補天体) を発見。この天体は、直径 1.9 ± 0.3 km で、S type、自転は 1.96 ± 0.01 hr。自転とサイズの依存性なども議論。

[8] [arxive:1608.07844](#)

Title: "A curious ringlet that shares Prometheus' orbit but precesses like the F ring"

Author: M.M. Hedman, B.J. Carter

Comments: Accepted for publication in Icarus

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

[Cassini 観測/土星リング]

Cassini の土星 main ring 観測から、これまで報告されていない小環が発見。Prometheus と F リングの関係などを

議論。

[9] [arXiv:1608.07580](#)

Title: "The fates of Solar system analogues with one additional distant planet"

Author: Dimitri Veras

Comments: Accepted for publication in MNRAS

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

[理論/太陽系軌道の将来]

太陽系に第9惑星が(本当に)あったとして、その場合将来外惑星の軌道がどのように進化するか(不安定性)を議論。木星と同程度の重い惑星があった場合300AU以内、そしてスーパーアースサイズなら3000AU以内の値よりも、実際は不安定になりやすい。

[10] [arXiv:1608.08034](#)

Title: "On the maximum grain size entrained by photoevaporative winds"

Author: Mark A. Hutchison, Guillaume Laibe, Sarah T. Maddison

Comments: 11 pages, 9 figures, 1 table, 1 animation. Accepted for publication in MNRAS

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

[理論/光蒸発とダスト]

光蒸発の際に飛んでいくダストの最大サイズを、円盤モデルを変えて議論。

[11] [arXiv:1608.07817](#)

Title: "Mass measurements in protoplanetary disks from hydrogen deuteride"

Author: Melissa McClure, Ted Bergin, Ilse Cleeves, Ewine van Dishoeck, Geoff Blake, Neal Evans, Joel Green, Thomas Henning, Karin Öberg, Klaus Pontoppidan, Colette Salyk

Comments: Accepted for publication in ApJ, 14 pages, 8 figures, 5 tables

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

[観測/遠赤外 HD 輝線・円盤質量]

原始惑星系円盤からの HD J=1-0 112 μ m の line を Herschel で観測。

DM Tau と GM Aur で 3σ の検出。

CO から見積もった円盤ガス量と HD から見積もったガス量を比較すると、後者の方が多い傾向。近年問題となっている CO deplete 問題も議論。

8 月 31 日 (水曜日)

[1] [arXiv:1608.08620](#)

Title: "The Habitability of Proxima Centauri b: II: Environmental States and Observational Discriminants"

Author: Victoria S. Meadows, Giada N. Arney, Edward W. Schwieterman, Jacob Lustig-Yaeger, Andrew P. Lincowski, Tyler Robinson, Shawn D. Domagal-Goldman, Rory K. Barnes, David P. Fleming, Russell Deitrick, Rodrigo Luger, Peter E. Driscoll, Thomas R. Quinn, David Crisp

Comments: 93 pages, 36 figures, 3 tables. Submitted to Astrobiology

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxive:1608.08617](#)

Title: "Escape and collision dynamics in the planar equilateral restricted four-body problem"

Author: Euaggelos E. Zotos

Comments: Published in International Journal of Non-Linear Mechanics (IJNLM). arXiv admin note: substantial text overlap with arXiv:1512.08676, arXiv:1508.05209, arXiv:1505.04185, arXiv:1511.04881

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxive:1608.08610](#)

Title: "Fractal basins of attraction in the planar circular restricted three-body problem with oblateness and radiation pressure"

Author: Euaggelos E. Zotos

Comments: Published in Astrophysics and Space Science (A&SS) journal

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxive:1608.08593](#)

Title: "The UK Met Office GCM with a sophisticated radiation scheme applied to the hot Jupiter HD 209458b"

Author: David S. Amundsen, Nathan J. Mayne, Isabelle Baraffe, James Manners, Pascal Tremblin, Benjamin Drummond, Chris Smith, David M. Acreman, Derek Homeier

Comments: Accepted for publication in Astronomy & Astrophysics. 11 pages, 11 figures, 1 table

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arxiv:1608.08544](#)

Title: "Multilayer modeling of the aureole photometry during the Venus transit: comparison between SDO/HMI and VEx/SOIR data"

Auther: C. Pere, P. Tanga, Th. Widemann, Ph. Bendjoya, A. Mahieux, V. Wilquet, A.C. Vandaele

Comments: Astronomy and Astrophysics, in press; 9 pages, 8 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arxiv:1608.08487](#)

Title: "Towards High-Resolution Mercury Global Topography from MESSENGER Orbital Stereo Imaging - A Prototype Model for the H6 Quadrangle "Kuiper" "

Auther: Frank Preusker, Alexander Stark, Jürgen Oberst, Klaus-Dieter Matz, Klaus Gwinner, Tom R. Watters

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arxiv:1608.08257](#)

Title: "Extrasolar planets and brown dwarfs around AF-type stars. IX. The HARPS southern sample"

Auther: Simon Borgniet, Anne-Marie Lagrange, Nadège Meunier, Franck Galland

Comments: 23 pages (text), 15 figures, accepted in Astronomy and Astrophysics

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arxiv:1608.08539](#)

Title: "A PSF-based approach to Kepler/K2 data - III. Search for exoplanets and variable stars within the open cluster M 67 (NGC 2682)"

Auther: D. Nardiello, M. Libralato, L. R. Bedin, G. Piotto, L. Borsato, V. Granata, L. Malavolta, V. Nascimbeni

Comments: 14 pages, 9 figures (1 at low resolution), 3 tables. Accepted for publication in MNRAS on August 24, 2016. Electronic materials are available at this [http URL](#)

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!!!!

[9] [arXiv:1608.08366](#)

Title: "Exact scaling laws for helical three-dimensional two-fluid turbulent plasmas"

Author: Nahuel Andrés, Sebastien Galtier, Fouad Sahraoui

Comments: 1 Figure

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

[理論/観測/実験 etc....]

Comment!!!!

9月1日(木曜日)

[1] [arXiv:1608.08993](#)

Title: "Transmission spectroscopy of the inflated exoplanet WASP-52b, and evidence for a bright region on the stellar surface"

Author: J. Kirk, P. J. Wheatley, T. Louden, S. P. Littlefair, C. M. Copperwheat, D. J. Armstrong, T. R. Marsh, V. S. Dhillon

Comments: Accepted for publication in MNRAS. 11 pages, 6 figures, 2 tables

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1608.08959](#)

Title: "On the Origin of Earth's Moon"

Author: Amy C. Barr

Comments: 57 pages, 8 figures, 7 tables, 2 appendices; Journal of Geophysical Research – Planets, in press 2016

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1608.08847](#)

Title: "Thermodynamic Explanation for the Cosmic Ubiquity of Organic Pigments"

Author: Karo Michaelian, Aleksandar Simeonov

Comments: 23 pages, no figures

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:1608.08816](https://arxiv.org/abs/1608.08816)

Title: "NEOPROP: a NEO Propagator for Space Situational Awareness"

Author: V. Zuccarelli, D. Bancelin, S. Weikert, W. Thuillot, D. Hestroffer, C.Y. Valles, D. Koschny

Comments: Proceeding of the 6th IAASS Conference "Safety is Not an Option", held 21-23 May 2013 in Montreal, Canada, this [http URL](http://www.iaass.org)

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arxiv:1608.08774](https://arxiv.org/abs/1608.08774)

Title: "Sublimation of icy aggregates in the coma of comet 67P/Churyumov-Gerasimenko detected with the OSIRIS cameras onboard Rosetta"

Author: A. Gicquel, J.-B. Vincent, J. Agarwal, M. F. A'Hearn, I. Bertini, D. Bodewits, H. Sierks, Z.-Y. Lin, C. Barbieri, P. L. Lamy, R. Rodrigo, D. Koschny, H. Rickman, H. U. Keller, M. A. Barucci, J.-L. Bertaux, S. Besse, G. Cremonese, V. Da Deppo, B. Davidsson, S. Debei, J. Deller, M. De Cecco, E. Frattin, M. R. El-Maarry, S. Fornasier, M. Fulle, O. Groussin, P. J. Gutierrez, P. Gutierrez-Marquez, C. Guettler, S. Hoefner, M. Hofmann, X. Hu, S. F. Hviid, W.-H. Ip, L. Jorda, J. Knollenberg, G. Kovacs, J.-R. Kramm, E. Kuehrt, M. Kueppers, L. M. Lara, M. Lazzarin, J. J. Lopez Moreno, S. Lowry, F. Marzari, N. Masoumzadeh, M. Massironi, F. Moreno, S. Mottola, G. Naletto, N. Oklay, M. Pajola, A. Pommerol, F. Preusker, F. Scholten, X. Shi, N. Thomas, I. Toth, C. Tubiana

Comments: 11 pages, 7 figures, 3 tables, special issue "The ESLAB 50 Symposium - spacecraft at comets from 1P/Halley to 67P/Churyumov-Gerasimenko" in the Monthly Notices of the Royal Astronomical Society

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arxiv:1608.08772](#)

Title: "New Extreme Trans-Neptunian Objects: Towards a Super-Earth in the Outer Solar System"

Author: Scott S. Sheppard, Chad Trujillo

Comments: Accepted Astronomical Journal: this version has improved Figure 12

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!!!!

[7] [arxiv:1608.08756](#)

Title: "Migration of accreting planets in radiative discs from dynamical torques"

Author: Arnaud Pierens, Sean Raymond

Comments: accepted in MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arxiv:1608.08735](#)

Title: "Preliminary results of CCD observations of Himalia at Yunnan Observatories in 2015"

Author: H. W. Peng, N. Wang, Q. Y. Peng

Comments: 9 pages, 3 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arxiv:1608.08643](#)

Title: "On the Composition of Young, Directly Imaged Giant Planets"

Author: J. I. Moses, M. S. Marley, K. Zahnle, M. R. Line, J. J. Fortney, T. S. Barman, C. Visscher, N. K. Lewis, M. J. Wolff

Comments: Accepted in The Astrophysical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arxiv:1608.08636](#)

Title: "Merger of a White Dwarf-Neutron Star Binary to 10^{29} Carat Diamonds:

Origin of the Pulsar Planets”

Author: Ben Margalit, Brian D. Metzger

Comments: 15 pages, 6 figures, submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[11] [arXiv:1608.08893](#)

Title: ”High surface magnetic field in red giants as a new signature of planet engulfment?”

Author: Giovanni Privitera, Georges Meynet, Patrick Eggenberger, Cyril Georgy, Sylvia Ekström, Aline A. Vidotto, Michele Bianda, Eva Villaver, Asif ud-Doula

Comments: 5 pages, abstract abridged for arXiv submission, accepted for publication in A&A Letters

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arXiv:1608.08703](#)

Title: ”SEEDS direct imaging of the RV-detected companion to V450 Andromedae, and characterization of the system”

Author: K. G. Hełminiak, M. Kuzuhara, K. Mede, T. D. Brandt, R. Kandori, T. Suenaga, N. Kusakabe, N. Narita, J. C. Carson, T. Currie, T. Kudo, J. Hashimoto, L. Abe, E. Akiyama, W. Brandner, M. Feldt, M. Goto, C. A. Grady, O. Guyon, Y. Hayano, M. Hayashi, S. S. Hayashi, T. Henning, K. W. Hodapp, M. Ishii, M. Iye, M. Janson, G. R. Knapp, J. Kwon, T. Matsuo, M. W. McElwain, S. Miyama, J.-I. Morino, A. Moro-Martin, T. Nishimura, T. Ryu, T.-S. Pyo, E. Serabyn, H. Suto, R. Suzuki, Y. H. Takahashi, M. Takami, N. Takato, H. Terada, C. Thalmann, E. L. Turner, M. Watanabe, J. Wisniewski, T. Yamada, H. Takami, T. Usuda, M. Tamura

Comments: 15 pages, 9 figures, 7 tables, to appear in ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[13] [arxiv:1608.08642](#)

Title: "Resolving the planet-hosting inner regions of the LkCa 15 disk"

Author: C. Thalmann, M. Janson, A. Garufi, A. Boccaletti, S.P. Quanz, E. Sissa, R. Gratton, G. Salter, M. Benisty, M. Bonnefoy, G. Chauvin, S. Daemgen, S. Desidera, C. Dominik, N. Engler, M. Feldt, T. Henning, A.-M. Lagrange, M. Langlois, J. Lannier, H. Le Coroller, R. Ligi, F. Ménard, D. Mesa, M.R. Meyer, G.D. Mulders, J. Olofsson, C. Pinte, H.M. Schmid, A. Vigan, A. Zurlo

Comments: 6 pages, 4 figures, 1 table; accepted for publication in ApJ Letters

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

[理論/観測/実験 etc....]

Comment!!!!

9月2日(金曜日)

[1] [arxiv:1609.00319](#)

Title: "Coupled orbital and spin evolution of the CoRoT-7 two-planet system using a Maxwell viscoelastic rheology"

Author: Adrián Rodríguez Colucci, Nelson Callegari Jr., Alexandre Correia

Comments: Accepted for publication in MNRAS

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

[理論]

CoRoT-7にある2つの惑星における軌道と自転の進化を数値計算した。

[2] [arxiv:1609.00275](#)

Title: "Dusty tails of evaporating exoplanets. II. Physical modelling of the KIC 12557548b light curve"

Author: R. van Lieshout, M. Min, C. Dominik, M. Brogi, T. de Graaff, S. Hekker, M. Kama, C. U. Keller, A. Ridden-Harper, T. I. M. van Werkhoven

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

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

[理論]

KIC 12557548bのような岩石惑星は相当量のダストを彗星の尾のように放出している。計算したモデルをトランジットのライトカーブに適用したところ、ダストサイズが $0.2 \sim 5.6 \mu\text{m}$ 、ダスト放出量が $0.6 \sim 15.6 M_{\oplus} \text{Gyr}^{-1}$ (2σ ranges) だった。

[3] [arxiv:1609.00239](#)

Title: "EPIC 212803289: a subgiant hosting a transiting warm Jupiter in an eccentric orbit and a long-period companion"

Author: A. M. S. Smith, D. Gandolfi, O. Barragán, B. Bowler, Sz. Csizmadia, M. Endl, M. C. V. Fridlund, S. Grziwa, E. Guenther, A. P. Hatzes, G. Nowak, S. Albrecht, R. Alonso, J. Cabrera, W. D. Cochran, H. J. Deeg, Ph. Eigmüller, A. Erikson, D. Hidalgo, T. Hirano, M. C. Johnson, J. Korth, A. Mann, N. Narita, D. Nespral, E. Palles, M. Pätzold, J. Prieto-Arranz, H. Rauer, I. Ribas, B. Tingley, V. Wolthoff

Comments: 10 pages, 6 figures, 3 tables, submitted to MNRAS

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

[観測]

乙女座にある 11 等級の subgiant である EPIC 212803289 周りのエキセントリックプラネット 18.25-d を発見した (eccentricity は 0.19 ± 0.04)。主星質量は $1.60_{-0.10}^{+0.14} M_{\odot}$ 、半径は $3.1 \pm 0.1 R_{\odot}$ の metal-rich ($[Fe/H]=0.20 \pm 0.05$) な subgiant だった。惑星質量は $0.97 \pm 0.09 M_{Jup}$ 、半径は $1.29 \pm 0.05 R_{Jup}$ だった。 $-2.12 \pm 0.04 m s^{-1} d^{-1}$ の systemic radial acceleration からもう一つの天体の存在が示唆され、それはおそらく数百年周期で公転する褐色矮星だと思われる。

[4] [arxiv:1609.00016](#)

Title: "Stellar Companions to the Exoplanet Host Stars HD 2638 and HD 164509"

Author: Justin M. Wittrock, Stephen R. Kane, Elliott P. Horch, Lea Hirsch, Steve B. Howell, David R. Ciardi, Mark E. Everett, Johanna K. Teske

Comments: 9 pages, 5 figures, 3 tables, accepted for publication in the Astronomical Journal

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

[観測]

Gemini-North Observatory の Differential Speckle Survey Instrument (DSSI) を用いて 692 nm と 880 nm のバンドでおおよそ 100 天体をサーベイ観測した。HD 2638 と HD 164509 に恒星質量の伴星を検出した。HD 164509 に関しては初検出。

[5] [arxiv:1609.00120](#)

Title: "The long-term dynamical evolution of disc-fragmented multiple systems in the Solar Neighborhood"

Author: Yun Li, M.B.N. Kouwenhoven, D. Stamatellos, S.P. Goodwin

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

[理論/観測/実験 etc....]

disc fragmentation によって形成されるとも軽い天体 (低質量の恒星や褐色矮星、惑星質量天体) の運動と binary properties について、10Gyr までの長期的解析を行った。

Nature

[1] 0000

Title: "Planetary science: Cometary dust under the microscope"

Author: Ludmilla Kolokolova

[観測]

ロゼッタによる 67P/以下略 の塵粒子その場観測の結果を報告。

チリ粒子は、より小さく長細い粒子の集合体であって、サイズで階層構造していることが分かった。
多孔質コンドライトと良く似ており、それらの起源が彗星粒子であることを示唆する。

Science

[1] 0000

Title: "ケレス関連が一杯"

Author:

[理論, 観測, 実験 etc.]

- ・小惑星ベンヌの粉塵採集ミッションが始まったよ
- ・地球近傍の準衛星の話
- ・ケレス関連が6本

あるんですが出先でアブストが見れないので、興味あったらゼミでお願いします。