

# 2017年 3月 第5週 新着論文サーベイ

3月 27日 (月曜日)

[1] [arxiv:1703.08426](#)

Title: "The stability of tightly-packed, evenly-spaced systems of Earth-mass planets orbiting a Sun-like star"

Author: Alysa Obertas, Christa Van Laerhoven, Daniel Tamayo

Comments: 18 pages, 5 figures. Submitted to Icarus

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

[理論/近接地球型惑星の軌道安定性]

互いに接近した地球型惑星の軌道の安定性を、初期の軌道間隔を変えながら計算。

太陽周りのハビタブルゾーン内に、地球型惑星 5 個を  $10^9$  軌道公転の間近接遭遇させずに存在させられるらしい。

[2] [arxiv:1703.08519](#)

Title: "Preliminary orbits with line-of-sight correction for LEO satellites observed with radar"

Author: Helene Ma, Giovanni F. Gronchi, Davide Bracali Cioci

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

[理論/小惑星の正確な軌道決定]

レーダーを用いた低軌道にいる小惑星の軌道決定に、地球の扁平効果を入れた手法を議論。

[3] [arxiv:1703.08361](#)

Title: "Synergies between Exoplanet Surveys and Variable Star Research"

Author: Geza Kovacs

Comments: This is a review presented at "Wide-field variability surveys: a 21st-century perspective" - 22nd Los Alamos Stellar Pulsation Conference Series Meeting, held in: San Pedro de Atacama, Chile, Nov. 28-Dec. 2, 2016. To appear in Web of Conferences Journal: 13 pages, 8 figures

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

[観測/変光星観測レビュー]

変光星サーベイとそのデータ解析手法のレビュー。同じ光度曲線を使うという点で共通点あり。

[4] [arxiv:1703.08178](#)

Title: "On the estimation of the current density in space plasmas: multi versus single-point techniques"

Author: Silvia Perri, Francesco Valentini, Luca Sorriso-Valvo, Antonio Reda,  
Francesco Malara

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

[観測/宇宙プラズマ]

宇宙プラズマの測定法として、Curlometer という磁場の変動を用いて数密度を測定する手法がある。  
今回は、その手法の限界など議論。

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## 3月28日(火曜日)

### [1] [arxiv:1703.09132](#)

Title: "Connecting HL Tau to the Observed Exoplanet Sample"

Author: Christopher Simbulan, Daniel Tamayo, Cristobal Petrovich, Hanno Rein,  
Norman Murray

Comments: Accepted in MNRAS. 11 pages

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

[理論/観測/実験 etc....]

Comment!!!!

### [2] [arxiv:1703.09010](#)

Title: "EnVision: understanding why our most Earth-like neighbour is so different"

Author: Richard Ghail, Colin Wilson, Thomas Widemann, Lorenzo Bruzzone,  
Caroline Dumoulin, Jörn Helbert, Robbie Herrick, Emmanuel Marcq,  
Philippa Mason, Pascal Rosenblatt, Ann Carine Vandaele, Louis-Jerome  
Burtz

Comments: ES M5 mission proposal

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

[理論/観測/実験 etc....]

Comment!!!!

### [3] [arxiv:1703.09000](#)

Title: "Water transport to circumprimary habitable zones from icy planetesimal disks in binary star systems"

Author: D. Bancelin, E. Pilat-Lohinger, T.I. Maindl, Á. Bazzó

Comments: arXiv admin note: text overlap with arXiv:1506.00993

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1703.08884](#)

Title: "Characterisation of the radial velocity signal induced by rotation in late-type dwarfs"

Author: A. Suárez Mascareño, R. Rebolo, J. I. González Hernández, M. Esposito

Comments: 11 pages, 11 figures, 6 tables

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1703.08829](#)

Title: "Outer Architecture of Kepler-11: Constraints from Coplanarity"

Author: Daniel Jontof-Hutter, Brian P. Weaver, Eric B. Ford, Jack J. Lissauer,  
Daniel C. Fabrycky

Comments: 33 pages, 9 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1703.08819](#)

Title: "New normal form approaches adapted to the Trojan problem"

Author: Rocio Isabel Paez

Comments: Ph.D. Thesis - Presented on 23rd February 2016

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:1703.08815](#)

Title: "Anisotropic Ejection from Active Asteroid P/2010 A2: An Implication of Impact Shattering on an Asteroid"

Author: Yoonyoung Kim, Masateru Ishiguro, Tatsuhiro Michikami, Akiko M. Nakamura

Comments: accepted for publication in The Astronomical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:1703.08647](#)

Title: "Toward an initial mass function for giant planets"

Author: Daniel Carrera, Melvyn B. Davies, Anders Johansen

Comments: 10 pages, 9 figures; submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:1703.08639](#)

Title: "The Lowest Mass Ratio Planetary Microlens: OGLE 2016-BLG-1195Lb"

Author: I.A. Bond, D.P. Bennett, T. Sumi, A. Udalski, D. Suzuki, N.J. Rattenbury, V. Bozza, N. Koshimoto, F. Abe, Y. Asakura, R.K. Barry, A. Bhattacharya, M. Donachie, P. Evans, A. Fukui, Y. Hirao, Y. Itow, M.C.A. Li, C.H. Ling, K. Masuda, Y. Matsubara, Y. Muraki, M. Nagakane, K. Ohnishi, C. Ranc, To. Saito, A. Sharan, D.J. Sullivan, P.J. Tristram, T. Yamada, T. Yamada, A. Yonehara, J. Skowron, M.K. Szymanski, R. Poleski, P. Mroz, I. Soszynski, P. Pietrukowicz, S. Kozłowski, K. Ulaczyk, M. Pawlak

Comments: 7 pages, 4 figures, submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:1703.08560](#)

Title: "Circumstellar discs: What will be next?"

Author: Quentin Kral, Cathie Clarke, Mark Wyatt

Comments: invited review; comments welcome (32 pages)

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

[理論/観測/実験 etc....]

Comment!!!!

[11] [arXiv:1703.08548](#)

Title: "An Earth-mass Planet in a 1-AU Orbit around a Brown Dwarf"

Author: Y. Shvartzvald, J. C. Yee, S. Calchi Novati, A. Gould, C.-U. Lee, C. Beichman, G. Bryden, S. Carey, B. S. Gaudi, C. B. Henderson, W. Zhu, M. D. Albrow, S.-M. Cha, S.-J. Chung, C. Han, K.-H. Hwang, Y. K. Jung, D.-J. Kim, H.-W. Kim, S.-L. Kim, Y. Lee, B.-G. Park, R. W. Pogge, Y.-H.

Ryu, I.-G. Shin

Comments: 17 pages, 3 figures, 2 tables. Submitted to ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arxiv:1703.08546](#)

Title: "An ALMA Survey of Protoplanetary Disks in the  $\sigma$  Orionis Cluster"

Author: Megan Ansdell, Jonathan P. Williams, Carlo F. Manara, Anna Miotello, Stefano Facchini, Nienke van der Marel, Leonardo Testi, Ewine F. van Dishoeck

Comments: 16 pages, 9 figures; accepted to AJ

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!!!!

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3月29日(水曜日)

[1] [arxiv:1703.09668](#)

Title: "Anatomy of an Asteroid Break-Up: The Case of P/2013 R3"

Author: Dave Jewitt, Jessica Agarwal, Jing Li, Harold Weaver, Max Mutchler, Stephen Larson

Comments: 44 pages, 13 figures, accepted by Astronomical Journal

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:1703.09640](#)

Title: "Multi-instrumental observations of the 2014 Ursid meteor outburst"

Author: Manuel Moreno-Ibáñez, Josep Ma. Trigo-Rodríguez, José María Madiedo, Jérémie Vaubaillon, Iwan P. Williams, Maria Gritsevich, Lorenzo G. Morillas, Estefanía Blanch, Pep Pujols, François Colas, Philippe Dupouy

Comments: 12 pages, 6 figures, 7 tables

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1703.09543](#)

Title: "A decade of H $\alpha$  transits for HD 189733 b: stellar activity versus absorption in the extended atmosphere"

Author: P. Wilson Cauley, Seth Redfield, Adam G. Jensen

Comments: 31 pages (single column), 22 figures, accepted to AJ, please email [pcauley@wesleyan.edu](mailto:pcauley@wesleyan.edu) for animations of the H-alpha contrast transits

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1703.09519](#)

Title: "Measuring the radius and mass of Planet Nine"

Author: Jean Schneider

Comments: Submitted to PASP

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1703.09450](#)

Title: "The influence of orbital resonances on the water transport to objects in the circumprimary habitable zone of binary star systems"

Author: D. Bancelin, E. Pilat-Lohinger, T.I. Maindl, F. Ragossnig, C. Schäfer

Comments: submitted to ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1703.09388](#)

Title: "New constraints on the millimetre emission of six debris disks"

Author: Jonathan P. Marshall, S. T. Maddison, E. Thilliez, B. C. Matthews, D. J. Wilner, J. S. Greaves, W. S. Holland

Comments: 7 pages, 5 tables, 2 figures, 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!!!!

[7] [arXiv:1703.09348](#)

Title: "A Herschel resolved debris disc around HD 105211"

Author:S. Hengst, J. P. Marshall, J. Horner, S. C. Marsden

Comments: 11 pages, 4 figures, 6 tables, Accepted for publication in MNRAS on 25th March, 2017

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:1703.09285](#)

Title: "A precise optical transmission spectrum of the inflated exoplanet WASP-52b"

Author:Tom Louden, Peter J. Wheatley, Patrick G. J. Irwin, James Kirk, Ian Skillen

Comments: Submitted to MNRAS 17 Jan 2017, revised version after comments from reviewer, 12 pages, 10 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arxiv:1703.09229](#)

Title: "A Search for Lost Planets in the Kepler Multi-planet Systems and the Discovery of the Long-period, Neptune-sized Exoplanet Kepler-150 f"

Author:Joseph R. Schmitt, Jon M. Jenkins, Debra A. Fischer

Comments: 11 pages, 5 figures, 2 tables. Accepted into AJ

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arxiv:1703.09227](#)

Title: "A Multi-Wavelength Analysis of Dust and Gas in the SR 24S Transition Disk"

Author:P. Pinilla, L. M. Pérez, S. Andrews, N. van der Marel, E. F. van Dishoeck, S. Ataiee, M. Benisty, T. Birnstiel, A. Juhász, A. Natta, L. Ricci, L. Testi

Comments: Accepted for publication in ApJ

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!!!!

[11] [arxiv:1703.09225](#)

Title: "Addressing the statistical mechanics of planet orbits in the solar system"

Author: Federico Mogavero

Comments: 12 pages, 6 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arXiv:1703.09283](#)

Title: "Model atmospheres of sub-stellar mass objects"

Author: Ivan Hubeny

Comments: 31 pages, 10 figures

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:1703.09250](#)

Title: "Generating large misalignments in gapped and binary discs"

Author: James E. Owen, Dong Lai

Comments: 12 pages, 8 figures, submitted to MNRAS

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

[理論/観測/実験 etc....]

Comment!!!!

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## 3月30日(木曜日)

[1] [arXiv:1703.10046](#)

Title: "Transit Probabilities in Secularly Evolving Planetary Systems"

Author: Matthew J. Read, Mark C. Wyatt, Amaury H. M. J. Triaud

Comments: 24 pages, 14 figures, accepted for publication in MNRAS

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

[理論]

外側の惑星によって内側の2惑星の軌道がゆがめられて、互いに inclination を持つようになる解析的な表現と、その互いに inclination を持った惑星系が二つとも transit を起こす確率を考えた。これで、Kepler で観測された系に single transit が多いことを説明出来るかもしれない。

[2] [arXiv:1703.09889](#)

Title: "Secular light curves of 25 members of the Themis family of asteroids, suspected of exhibiting low level cometary activity"

Author: I. Ferrin, M. Perez, J. Rendon



Comments: 37 pages, 18 Figures, 4 Tables

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

[観測]

1996年から2015年のメインベルトの小惑星165個のライトカーブを調べたところ、25個で低いレベルの彗星的な活動性が見られた。

### [3] [arXiv:1703.09840](#)

Title: "Properties of hydrogen, helium, and silicon dioxide mixtures in giant planet interiors"

Author: François Soubiran, Burkhard Militzer, Kevin P. Driver, Shuai Zhang

Comments: HEDLA 2016 Proceedings, Special issue of Physics of Plasmas. 7 pages, 8 figures

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

[理論]

ガス惑星の主成分のほとんどは水素とヘリウムだけど、ガス惑星の内部は重い物質も混ざってその進化に重要な役割を果たしてると考えられてる。非経験的 (ab initio) なシミュレーションを使って、水素、ヘリウムと二酸化ケイ素の拡散や粘性をしらべたところ、それらの物質のミクスチャーのタイムスケールに制限を加えることができた。

### [4] [arXiv:1703.09741](#)

Title: "The Origin of Planetary Ring Systems"

Author: S. Charnoz, R. M. Canup, A. Crida, L. Dones

Comments: This material will be published as the 18th Chapter of the book Planetary Ring Systems, edited by Matthew S. Tiscareno and Carl D. Murray. See: [www.cambridge.org/9781107113824](http://www.cambridge.org/9781107113824)

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

[教科書]

今度出る惑星のリングの教科書の一章。(主に土星の) リングの起源について。

### [5] [arXiv:1703.09711](#)

Title: "Evidence for Two Hot Jupiter Formation Paths"

Author: Benjamin E. Nelson, Eric B. Ford, Frederic A. Rasio

Comments: 15 pages, 7 figures, 1 table. Submitted to AJ. The full analysis is publicly available at this [https URL](https://arxiv.org/abs/1703.09711)

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

[観測]

ホットジュピターの形成に円盤内を移動してきたモデルと、元々高離心率のものが、潮汐力によって円軌道化されたモデルがあるが、前者と後者とで止まる位置が異なる。Kepler と RV、HAT、WASP のデータを使って、階層ベイズ混合モデル?を使ってほんとジュピターのサンプルに異なるポピュレーションがあるか調べたところ、Kepler と RV は一つのポピュレーションで説明できたが、HAT、WASP は複数のポピュレーションの証拠を示した。15% が前者、85% が後者の高離心率の方。主星のプロパティとの相関は受かってない。

### [6] [arXiv:1703.09708](#)

Title: "Effects of disc midplane evolution on CO snowline location"

Author: O. Panic, M. Min

Comments: 12 pages, 6 figures

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

[理論/観測/実験 etc....]

円盤の中央面の温度変化は snow line の位置に影響を与えて、結果、物質の分布も変えるので、円盤の進化にも影響を及ぼす。その温度変化を考えると進化を負ったところ、CO の snow line の位置は円盤の property に強く依存することがわかった。ガスが消失して、ダストが成長するほど CO の snow line は内側に行く。また、フラットな円盤とフレア円盤でも全然異なる進化を示す。

## [7] [arxiv:1703.10130](https://arxiv.org/abs/1703.10130)

Title: "Frequent flaring in the TRAPPIST-1 system - unsuited for life?"

Author: Krisztián Vida, Zsolt Kővári, András Pál, Katalin Oláh, Levente Kriskovics

Comments: 7 pages, 6 figures, submitted to ApJ

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

[観測]

K2 の TRAPPIST-1 の光度曲線を解析した。トランジットのシグナルのほか、42 個のフレアイベントが受かってトータルのエネルギーは  $10^{30} - 10^{33}$  ergs になる。あまり生命には適してないと思われる。

## [8] [arxiv:1703.09710](https://arxiv.org/abs/1703.09710)

Title: "Fast and scalable Gaussian process modeling with applications to astronomical time series"

Author: Daniel Foreman-Mackey, Eric Agol, Ruth Angus, Sivaram Ambikasaran

Comments: Submitted to the AAS Journals. Comments welcome. Code available: this [https](https://github.com/dfm/gpml) URL

Subjects: Instrumentation and Methods for Astrophysics (astro-ph.IM); Earth and Planetary Astrophysics (astro-ph.EP); Solar and Stellar Astrophysics (astro-ph.SR); Data Analysis, Statistics and Probability (physics.data-an); Applications (stat.AP)

[方法論]

タイムドメイン天文学が発展する中、コンピュータで簡単に扱える大量のデータの解析法は必須だ。ガウス過程はこの目的で広く使われてるが、計算コストが、データ点の 3 乗で効いてくるので少ないデータ点に制限される。この論文ではガウス過程モデリングを 1 次元で扱う (つまりデータ点の 1 乗) 方法を提供する。この方法で解析して使って、星の自転、星震学の発振スペクトル、トランジットの惑星パラメータをだした。オープンソースで公開する。

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# 3 月 31 日 (金曜日)

## [1] [arxiv:1703.10596](https://arxiv.org/abs/1703.10596)

Title: "The Reversibility Error Method (REM): a new, dynamical fast indicator for planetary dynamics"

Author: Federico Panichi, Krzysztof Goździewski, Giorgio Turchetti

Comments: 23 pages, 20 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1703.10462](#)

Title: "The Rosetta mission orbiter Science overview the comet phase"

Author: M.G.G.T. Taylor, N. Altobelli, B. J. Buratti, M. Choukroun

Comments: 16 pages, 3 figures, 1 table accepted for publication in Philosophical Transactions of the Royal Society

A

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1703.10402](#)

Title: "The California-Kepler Survey. II. Precise Physical Properties of 2025 Kepler Planets and Their Host Stars"

Author: John Asher Johnson, Erik A. Petigura, Benjamin J. Fulton, Geoffrey W. Marcy, Andrew W. Howard, Howard Isaacson, Leslie Hebb, Phillip A. Cargile, Timothy D. Morton, Lauren M. Weiss, Joshua N. Winn, Leslie A. Rogers, Evan Sinukoff, Lea A. Hirsch

Comments: 11 pages, 4 figures, submitted to AAS journals

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1703.10400](#)

Title: "The California-Kepler Survey. I. High Resolution Spectroscopy of 1305 Stars Hosting Kepler Transiting Planets"

Author: Erik A. Petigura, Andrew W. Howard, Geoffrey W. Marcy, John Asher Johnson, Howard Isaacson, Phillip A. Cargile, Leslie Hebb, Benjamin J. Fulton, Lauren M. Weiss, Timothy D. Morton, Joshua N. Winn, Leslie A. Rogers, Evan Sinukoff, Lea A. Hirsch, Ian J. M. Crossfield

Comments: 20 pages, 19 figures, submitted to AAS Journals

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:1703.10385](#)

Title: "Size and density sorting of dust grains in SPH simulations of protoplanetary discs"

Author: Francesco C. Pignatale, Jean-François Gonzalez, Nicolas Cuello, Bernard Bourdon, Caroline Fitoussi

Comments: Astroph version. MNRAS: Accepted 2017 March 30. Received 2017 March 30; in original form 2016 May 10

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1703.10375](#)

Title: "The California-Kepler Survey. III. A Gap in the Radius Distribution of Small Planets"

Author: Benjamin J. Fulton, Erik A. Petigura, Andrew W. Howard, Howard Isaacson, Geoffrey W. Marcy, Phillip A. Cargile, Leslie Hebb, Lauren M. Weiss, John Asher Johnson, Timothy D. Morton, Evan Sinukoff, Ian J. M. Crossfield, Lea A. Hirsch

Comments: Paper III in the California-Kepler Survey series, submitted to AAS journals

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:1703.10292](#)

Title: "Gravito-turbulence in irradiated protoplanetary discs"

Author: Shigenobu Hirose, Ji-Ming Shi

Comments: 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!!!!

[8] [arXiv:1703.10273](#)

Title: "Zonal Flow Magnetic Field Interaction in the Semi-Conducting Region of Giant Planets"

Author: Hao Cao, David J. Stevenson

Comments: 38 pages, 12 figures, revised submission to Icarus

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arxiv:1703.10250](#)

Title: "A Low-Mass Exoplanet Candidate Detected By *K2* Transiting the Praesepe M Dwarf JS 183"

Author: Joshua Pepper, Ed Gillen, Hannu Parviainen, Lynne A. Hillenbrand, Ann Marie Cody, Suzanne Aigrain, John Stauffer, Frederick J. Vrba, Trevor David, Jorge Lillo-Box, Keivan G. Stassun, Kyle E. Conroy, Benjamin J. S. Pope, David Barrado

Comments: 30 pages, 11 figures, Accepted for publication in the *Astronomical Journal*

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arxiv:1703.10574](#)

Title: "The OSIRIS-REx Visible and InfraRed Spectrometer (OVIRS): Spectral Maps of the Asteroid Bennu"

Author: D.C. Reuter, A.A. Simon, J. Hair, A. Lunsford, S. Manthripragada, V. Bly, B. Bos, C. Brambora, E. Caldwell, G. Casto, Z. Dolch, P. Finneran, D. Jennings, M. Jhabvala, E. Matson, M. McLelland, W. Roher, T. Sullivan, E. Weigle, Y. Wen, D. Wilson, D.S. Lauretta

Comments: 14 figures, 3 tables, *Space Science Reviews*, submitted

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] [arxiv:1703.10432](#)

Title: "Detecting the Ultimate Power in the Universe with LSST"

Author: Michael B. Lund

Comments: 6 pages, 3 figures, submission for Saturday's Acta Prima Aprilia

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

[理論/観測/実験 etc....]

Comment!!!!

[12] [arxiv:1703.10330](#)

Title: "The Inner 25 AU Debris Distribution in the epsilon Eri System"

Author:Kate Y. L. Su, James M. De Buizer, George H. Rieke, Alexander V. Krivov, Torsten Lohne, Massimo Marengo, Karl R. Stapelfeldt, Nicholas P. Ballering, William D. Vacca

Comments: AJ in press

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

[理論/観測/実験 etc....]

Comment!!!!

[13] [arxive:1703.09799](#)

Title: "Gravity Defied (from potato asteroids to magnetised neutron stars) I : The self-gravitating objects"

Author:Sushan Konar

Comments: First of a 4-article series

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

[理論/観測/実験 etc....]

Comment!!!!

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## Nature

[1] [ID](#)

Title: "A retrograde co-orbital asteroid of Jupiter"

Author:Paul Wiegert et al.

[木星衛星観測]

木星の逆行共軌道衛星 2015BZ<sub>509</sub> の観測と解析。数百万年間は安定な軌道に存在。おそらく Halley 彗星由来。

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## Science

[1] [ID](#)

Title: "Surface changes on comet 67P/Churyumov-Gerasimenko suggest a more active past"

Author:M. Ramy El-Maarry et al.

[Rosetta 観測]

2年間の Rosetta 観測中における 67P/Churyumov-Gerasimenko 彗星の表面変化の観測の報告。それほど大きくは変わらず、過去の方が活動度が高かったことを示唆。

[2] ID

Title: "Mars' atmospheric history derived from upper-atmosphere measurements of  $^{38}\text{Ar}/^{36}\text{Ar}$ "

Author: B. M. Jakosky et al.

[火星大気観測]

Mars Atmosphere and Volatile Evolution (MAVEN) による、火星大気の  $^{38}\text{Ar}/^{36}\text{Ar}$  同位体比の観測。大気中の 66 パーセントの Ar が宇宙空間に逃げたと見積もり、過去の大気条件など議論。