

# 2016年 9月 第3週 新着論文サーベイ

9月 12日 (月曜日)

## [1] [arxiv:1609.02859](#)

Title: "Spectral energy distribution simulations of a possible ring structure around the young, red brown dwarf G196-3B"

Author: Olga V. Zakhochay, María Rosa Zapatero Osorio, Víctor J. S. Béjar, Yann Boehler

Comments: 12 pages, 7 figures, 4 tables, accepted for publication in MNRAS

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

[観測/褐色矮星赤外超過]

ある程度の年齢の L 型矮星において、可視-赤外の大きな超過が見られるが、その原因はよくわかっていない。(ダストという説が有力)

今回は、G196-3B(L3 型、15 木星質量、年齢 20-300Myr) 周りの原始惑星系円盤&ダストリングのシミュレーションを通じ、もう一つの説について考えて見る。

暖かくて細いデブリ円盤が中心星近くにあればよさそう。

## [2] [arxiv:1609.02817](#)

Title: "Mass extinctions and supernova explosions"

Author: Gunther Korschinek

Comments: Chapter for forthcoming book: Handbook of Supernovae, P. Murdin and A. Alsabeti (eds.), Springer International Publishing (in press)

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

[理論/超新星爆発等の影響]

超新星爆発・ $\gamma$ 線バーストなどの地球への影響を簡単に review した内容。雲形成&オゾン層破壊など。

## [3] [arxiv:1609.02767](#)

Title: "HAT-P-65b and HAT-P-66b: Two Transiting Inflated Hot Jupiters and Observational Evidence for the Re-Inflation of Close-In Giant Planets"

Author: Joel D. Hartman, Gáspár Á. Bakos, Waqas Bhatti, Kaloyan Penev, Allyson Bieryla, David W. Latham, Géza Kovács, Guillermo Torres, Zoltan Csubry, Miguel de Val-Borro, Lars Buchhave, Tamás Kovács, Samuel Quinn, Andrew W. Howard, Howard Isaacson, Benjamin J. Fulton, Mark E. Everett, Gilbert A. Esquerdo, Bence Béky, Tamás Szklennar, Emilio Falco, Alexandre Santerne, Isabelle Boisse, Guillaume Hébrard,

Adam Burrows, Jozsef Lázár, István Papp, Pál Sári

Comments: Accepted for publication in AJ, 32 pages, 19 figures, 8 tables

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

[観測/Hot Jupiters]

短周期で膨れている Hot Jupiters の観測結果。

また、中心星の光度進化を考えると、これらの惑星の半径は一旦しぼんだ後再び膨らんだと予想。

[4] [arxiv:1609.02760](https://arxiv.org/abs/1609.02760)

Title: "The heart of the swarm: K2 photometry and rotational characteristics of 56 Jovian Trojan asteroids"

Auther: Gy. M. Szabó, A. Pál, Cs. Kiss, L. L. Kiss, L. Molnár, O. Hanyecz, E. Plachy, K. Sárneczky, R. Szabó

Comments: 14 pages, 13 figures, 2 tables, to be published in Astronomy and Astrophysics

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

[K2 観測/トロヤ群小惑星]

K2 の観測期間 6 で見つかった 56 個の木星トロヤ群の小惑星の位相光度曲線を示す。

周期や光度変化などを見積もる。周期分布などは割とこれまでと同じ。

[5] [arxiv:1609.02759](https://arxiv.org/abs/1609.02759)

Title: "Uninterrupted optical light curves of main-belt asteroids from the K2 Mission"

Auther: R. Szabó, A. Pál, K. Sárneczky, Gy. M. Szabó, L. Molnár, L. L. Kiss, O. Hanyecz, E. Plachy, Cs. Kiss

Comments: 9 pages, 9 figures, 6 tables, to be published in Astronomy and Astrophysics, for the full tables of observed asteroids and their rotational parameters see this [http URL](http://)

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

[K2 観測/mainbelt 小惑星]

M35 領域から 924 個、Neptune/Nereid 領域から 96 個を観測。

[6] [arxiv:1609.02706](https://arxiv.org/abs/1609.02706)

Title: "Modeling of deep gaps created by giant planets in protoplanetary discs"

Auther: K.D. Kanagawa, H. Tanaka, T. Muto, T. Tanigawa

Comments: 17page, 15figures, submitted to MNRAS

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

[理論/円盤 gap]

ご存知 Kanagawa et al.

2次元流体シミュレーションを通じ、gap 周りの波の発生/散逸を考え、semi-analytical な表面密度分布を算出。

[7] [arxiv:1609.02576](#)

Title: "MagAO Imaging of Long-period Objects (MILO). II. A Puzzling White Dwarf around the Sun-like Star HD 11112"

Author: Timothy J. Rodigas, P. Bergeron, Amelie Simon, Pamela Arriagada, Jackie Faherty, Guillem Anglada-Escude, Eric E. Mamajek, Alycia Weinberger, R. Paul Butler, Jared R. Males, Katie Morzinski, Laird M. Close, Philip M. Hinz, Jeremy Bailey, Brad Carter, James S. Jenkins, Hugh Jones, Simon O'Toole, C.G. Tinney, Rob Wittenmyer, John Debes

Comments: Accepted to ApJ on September 8, 2016. 13 pages aastex6 2-column format. Comments welcome

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

[直接撮像観測/伴星]

RVの変動が見えているHD11112という太陽型星を、Magellan AO系で観測。その結果、重力的に束縛された白色矮星の可能性が高まった。

[8] [arxiv:1609.02563](#)

Title: "Mass and eccentricity constraints on the planetary debris orbiting the white dwarf WD 1145+017"

Author: Pol Gurri, Dimitri Veras, Boris T. Gänsicke

Comments: Accepted to MNRAS

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

[理論/白色矮星周りの円盤]

N体軌道計算の結果から、白色矮星WD1145+017が持ちうる質量と離心率を制限。

[9] [arxiv:1609.02559](#)

Title: "Imaging protoplanets: observing transition disks with non-redundant masking"

Author: Steph Sallum, Josh Eisner, Laird M. Close, Philip M. Hinz, Katherine B. Follette, Kaitlin Kratter, Andrew J. Skemer, Vanessa P. Bailey, Runa Briguglio, Denis Defrere, Bruce A. Macintosh, Jared R. Males, Katie M. Morzinski, Alfio T. Puglisi, Timothy J. Rodigas, Eckhart Spalding, Peter G. Tuthill, Amali Vaz, Alycia Weinberger, Marco Xomperio

Comments: SPIE conference proceeding

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

[観測/遷移円盤内の惑星候補]

T Cha と LkCa 15 周りの遷移円盤に対して、non-redundant masking という手法を使って原始惑星の存在を調査。

T Cha : 静的な前方散乱円盤がある?! LkCa 15 : 多数の公転運動する伴星がある?!

9月13日(火曜日)

[1] [arxiv:1609.03449](#)

Title: "A terrestrial planet candidate in a temperate orbit around Proxima Centauri"

Author: Guillem Anglada-Escudé, Pedro J. Amado, John Barnes, Zaira M. Berdiñas, R. Paul Butler, Gavin A. L. Coleman, Ignacio de la Cueva, Stefan Dreizler, Michael Endl, Benjamin Giesers, Sandra V. Jeffers, James S. Jenkins, Hugh R. A. Jones, Marcin Kiraga, Martin Kürster, María J. López-González, Christopher J. Marvin, Nicolás Morales, Julien Morin, Richard P. Nelson, José L. Ortiz, Aviv Ofir, Sijme-Jan Paardekooper, Ansgar Reiners, Eloy Rodríguez, Cristina Rodríguez-López, Luis F. Sarmiento, John P. Strachan, Yiannis Tsapras, Mikko Tuomi, Mathias Zechmeister

Comments: Version accepted for publication by Nature (unedited, July 7th, 2016), figures inserted in text for easier read. Article body : 10 pages, 3 figures, 1 table. Methods section : 23 pages, 9 figures, 1 table. IMPORTANT NOTE : Acknowledgment to IAA/CSIC researchers Javier Pascual Granado and Rafael Garrido added for useful discussions and feedback on the mathematical properties of time-series

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

[理論/観測/実験 etc....]

Proxima Centauri は星の活動と惑星との距離などから、惑星の温度は水を持つかもしれない温度である。

[2] [arxiv:1609.03227](#)

Title: "A pebbles accretion model with chemistry and implications for the solar system"

Author: Mohamad Ali-Dib

Comments: Submitted to MNRAS (in revision), 21 pages, 15 figures, feedback is welcome

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

[理論/観測/実験 etc....]

円盤の化学進化モデルを用いて、円盤の光蒸発がある場合とない場合でガス惑星の組成の違いについて調べた。木星のNの組成については光蒸発がある場合の方がうまく説明できる。しかし、どちらの場合が正しいかは分からないので、今後のJunoの観測結果に期待。

[3] [arxiv:1609.03082](#)

Title: "Atmospheric characterization of Proxima b by coupling the SPHERE high-contrast imager to the ESPRESSO spectrograph"

Author: C. Lovis, I. Snellen, D. Mouillet, F. Pepe, F. Wildi, N. Astudillo-Defru, J.-

L. Beuzit, X. Bonfils, A. Cheetham, U. Conod, X. Delfosse, D. Ehrenreich, P. Figueira, T. Forveille, J.H.C. Martins, S. Quanz, N.C. Santos, H.-M. Schmid, D. Ségransan, S. Udry

Comments: 16 pages, 7 figures, submitted to 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....]

Proxima b の SPHERE による高精度直接撮像による大気組成について。O<sub>2</sub>, H<sub>2</sub>O, メタンなどの biosignature の高精度スペクトルデータが得られた。

#### [4] [arxiv:1609.03037](#)

Title: "An all-sky catalog of solar-type dwarfs for exoplanetary transit surveys"

Author: V. Nascimbeni, G. Piotto, S. Ortolani, G. Giuffrida, P. M. Marrese, D. Magrin, R. Ragazzoni, I. Pagano, H. Rauer, J. Cabrera, D. Pollacco, A. M. Heras, M. Deleuil, L. Gizon, V. Granata

Comments: 14 page, 6 figures, 2 tables. Accepted in MNRAS

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....]

将来の survey のために、太陽近傍の solar-type dwarf の全天カタログを作った。

#### [5] [arxiv:1609.03019](#)

Title: "The imprint of exoplanet formation history on observable present-day spectra of hot Jupiters"

Author: Christoph Mordasini, Roy van Boekel, Paul Mollière, Thomas Henning, Björn Benneke

Comments: 32 pages, 18 figures. Accepted for publication in ApJ

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

[理論/観測/実験 etc....]

円盤の形成進化過程、星からの日射を考慮して、ホットジュピターの大気の組成がどうなるかについて調べた。結果は  
(1) 大気の組成は主に惑星形成後期の微惑星衝突によって決まる  
(2) 円盤内縁で C の枯渇によって、スノーラインの内側外側いずれの場合でも C/O < 1  
(3) C/O < 1 ではあるが、条件によって大きく異なる  
ということがわかった。

#### [6] [arxiv:1609.02917](#)

Title: "The origin of the eccentricity of the hot Jupiter in CI Tau"

Author: Giovanni P. Rosotti, Richard A. Booth, Cathie J. Clarke, Jean Teyssandier, Stefano Facchini, Alexander J. Mustill

Comments: 5 pages, 4 figures. Accepted to MNRAS letters

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

[理論/観測/実験 etc....]

CI Tau は大きな離心率 ( $e \sim 0.3$ ) の惑星を持っている。ガス円盤による励起と重力散乱による場合の 2 つについて調べた。ガス円盤による励起は系のパラメータによって離心率の励起は実現可能。重力散乱による場合については、円盤の magnetospheric cavity の中にいたならば、観測された惑星の離心率を説明できる。

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## 9 月 14 日 (水曜日)

### [1] [arxiv:1609.03968](#)

Title: "Probability of coincidental similarity among the orbits of small bodies - I. Pairing"

Author: Tadeusz J. Jopek, Malgorzata Bronikowska

Comments: 11 pages, 16 figures, 33 references. Submitted to Planetary and Space Science

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

[理論：軌道類似性]

小天体が軌道間に偶発的な類似性を持つ事について検証した。D-function(軌道類似性を表す関数), 軌道のサイズ, 計算手法 (軌道進化過程?) に対する依存性を調べた。NEAs、meteoroid に対して比較も行っている。

### [2] [arxiv:1609.03909](#)

Title: "Bayesian analysis of interiors of HD 219134b, Kepler-10b, Kepler-93b, CoRoT-7b, 55 Cnc e, and HD 97658b using stellar abundance proxies"

Author: C. Dorn, N. R. Hinkel, J. Venturini

Comments: accepted for publication in Astronomy & Astrophysics, 15 pages, 9 figures

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

[理論/観測：惑星内部]

a generalized Bayesian inference method を用いて選んだ 6 つのスーパーアースの内部構造、主にコアのサイズ、マンツルの薄さおよび構成、水の量、大気の構造について制限を与えたい。バルク存在量の評価値、さらにバルク存在量における主星惑星間の相関関係について依存性がどれほどあるか調べた。(評価値は異なる手法で得られたものがある)。結果、含まれる岩石サイズと水の量の間に関係が見られた。異なる評価値は主にコアのサイズとマンツルの構成に制限を与えた。

### [3] [arxiv:1609.03906](#)

Title: "Potassium detection in the clear atmosphere of a hot-Jupiter: FORS2 transmission spectroscopy of WASP-17b"

Author: Elyar Sedaghati, Henri M J Boffin, Tereza Jeřabková, Antonio García Muñoz, John L Grenfell, Alain Smette, Valentin D Ivanov, Szilard Csizmadia, Juan Cabrera, Petr Kabath, Marco Rocchetto, Heike Rauer

Comments: 14 pages, 11 figures, 4 tables. Accepted for publication in A&A

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

**[観測：惑星大気]**

WASP-17b において white light curve をモデリングし、バルク・transit parameter を得た。スペクトルから pressure-broadened なナトリウムを検知し、カリウム (Potassium) の吸収線も得られた。

#### [4] [arxiv:1609.03905](#)

Title: ”**Transits Probabilities Around Hypervelocity and Runaway Stars**”

Auther: Giacomo Fragione, Idan Ginsburg

Comments: 7 pages, 4 figures, submitted to MNRAS

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

**[理論/観測：高速恒星の transit]**

TESS での系外惑星探査に向けて、高速で動く (high velocity で遠ざかる) 恒星まわりで惑星を transit 観測できるか検証した。発見確率は  $10^{-3} \lesssim P \lesssim 10^{-1}$  と見積もられた。

#### [5] [arxiv:1609.03903](#)

Title: ”**A photo-evaporative gap in the closest planet forming disc**”

Auther: Barbara Ercolano, Giovanni P. Rosotti, Giovanni Picogna, Leonardo Testi

Comments: 5 pages, 2 figures, Accepted by MNRAS Letters

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

**[理論：円盤 gap モデル]**

形成中の photoevaporative gap が撮影されたであろう TW Hya 周りの円盤について。photo-evaporation のモデルとその検証を紹介している。

#### [6] [arxiv:1609.03711](#)

Title: ”**Propagation of Acoustic Waves in Troposphere and Stratosphere**”

Auther: J. M. Kashyap, M. G. Maithri

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

**[理論：対流圏および成層圏での弾性波伝播]**

先行研究として、等温で階層的な媒質における弾性波伝播の cutoff 周波数が導きだされており、その中で様々な導出法が紹介されている (H. Lamb)。ここではその手法を習い、非等温媒質での伝播の cutoff 周波数を検証する。手法は太陽や恒星、地球の大気によって変わるが、今回は地球の対流圏と成層圏について解析を行った。地球大気に対応する定常状態の気温データと good agreement であった。

#### [7] [arxiv:1609.03674](#)

Title: ”**Radial-Velocity Fitting Challenge. II. First results of the analysis of the data set**”

Auther: X. Dumusque, F. Borsa, M. Damasso, R. Diaz, P. C. Gregory, N.C. Hara, A. Hatzes, V. Rajpaul, M. Tuomi, S. Aigrain, G. Anglada-Escude, A.S.

Bonomo, G. Boue, F. Dauvergne, G. Frustagli, P. Giacobbe, R. D. Haywood, H. R. A. Jones, M. Pinamonti, E. Poretti, M. Rainer, D. Segransan, A. Sozzetti, S. Udry

Comments: 36 pages (including 10 pages of appendix), 23 figures, Accepted in A&A

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

**[理論/観測：RV fitting 手法の比較]**

恒星表面の活動から RV 信号が生まれる (恒星 RV 信号)。つまりこれが惑星の RV 観測に variation をもたらす。惑星の軌道による RV 信号よりも大きな variation が含まれるため、正確な RV 観測での検知の大きな妨げとなる。恒星 RV 信号を和らげる様々な手法について、非常に低質量な惑星もとらえられる効率を比較する。異なる観測チームの解析手法を、実際のデータを含む RV 観測のシミュレーションに対して適用し、比較した。

**[8] [arxiv:1609.03630](https://arxiv.org/abs/1609.03630)**

Title: "Equations for spinning test particles in equatorial orbits when they are orbiting in a weak rotating field"

Author: Nelson Velandia, Juan Manuel Tejeiro

Comments: 16 pages

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

**[理論：相対論、重力と回転]**

Mathisson - Papapetrou - Dixon equations(重力場を運動する回転大質量天体の運動を記述する式、一般相対論)を用いて、回転するテスト粒子が弱 Kerr 計量で軌道するときの方程式を組み立てた。回転する天体の赤道面を円軌道で周回するテスト粒子について、粒子が回転する場合としない場合の解を求めた。このような系での Gravitomagnetism Effects や重力波のような効果を考える重要な指針となる。地球質量とその衛星 (test 粒子) において解を出しており、衛星の回転の有無に対する軌道周期の差は  $10^{-7}$ s ほど生まれた。これが Gravitomagnetism Effects によるもの (回転が重力場に与える影響?)

**[9] [arxiv:1609.03908](https://arxiv.org/abs/1609.03908)**

Title: "A generalized bayesian inference method for constraining the interiors of super Earths and sub-Neptunes"

Author: C. Dorn, J. Venturini, A. Khan, K. Heng, Y. Alibert, R. Helled, A. Rivoldini, W. Benz

Comments: accepted for publication in Astronomy & Astrophysics, 17 pages, 15 figures

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

**[理論/観測]**

やりたい事は先の論文と同じ。観測とモデルの不定性を考慮した full probabilistic Bayesian inference analysis、Markov chain Monte Carlo technique をもちいて、可能な分布を計算した。海王星で計算手法を確認し、次に系外惑星に対して (1) radius, (2) atmospheric model, (3) data uncertainties, (4) semi-major axes, (5) atmospheric composition が変化した時、内部構造や構成にどう影響を与えるか検証した。



9月15日(木曜日)

[1] [arxiv:1609.04389](#)

Title: "Accurate, Empirical Radii and Masses of Planets with Gaia Parallaxes"

Author: Keivan G. Stassun, Karen A. Collins, B. Scott Gaudi

Comments: Submitted to AAS Journals. 75 pages, 12 figures, 7 tables. All tables included, but only 60 (of 498 total) representative SED figures included here due to arxiv size constraints. Updated with larger embedded figures

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arxiv:1609.04027](#)

Title: "Direct detection of scattered light gaps in the transitional disk around HD 97048 with VLT/SPHERE"

Author: C. Ginski, T. Stolker, P. Pinilla, C. Dominik, A. Boccaletti, J. de Boer, M. Benisty, B. Biller, M. Feldt, A. Garufi, C.U. Keller, M. Kenworthy, A.L. Maire, F. Ménard, D. Mesa, J. Milli, M. Min, C. Pinte, S.P. Quanz, R. van Boekel, M. Bonnefoy, G. Chauvin, S. Desidera, R. Gratton, J. H. V. Girard, M. Keppler, T. Kopytova, A.-M. Lagrange, M. Langlois, D. Rouan, A. Vigan

Comments: 11 pages, 8 Figures, accepted for publication in A&A as of September 13th 2016 (submitted July 7th)

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxiv:1609.04010](#)

Title: "Constraining the Frequency of Free-Floating Planets from a Synthesis of Microlensing, Radial Velocity, and Direct Imaging Survey Results"

Author: Christian Clanton, B. Scott Gaudi

Comments: 13 pages, 9 figures. Submitted to AAS Journals. Comments welcome

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arxiv:1609.04263](#)

Title: "Exocomet signatures around the A-shell star  $\Phi$  Leo?"

Author: C. Eiroa, I. Rebollido, B. Montesinos, E. Villaver, O. Absil, Th. Henning, A. Bayo, H. Canovas, A. Carmona, Ch. Chen, S. Ertel, D. P. Iglesias, R. Launhardt, J. Maldonado, G. Meeus, A. Moór, A. Mora, A. J. Mustill, J. Olofsson, G. Rauw, P. Riviere-Marichalar, A. Roberge

Comments: A&A letters, accepted

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arxiv:1609.04128](#)

Title: "Revised Stellar Properties of Kepler Targets for the Q1-17 (DR25) Transit Detection Run"

Author: Savita Mathur, Daniel Huber, Natalie M. Batalha, David R. Ciardi, Fabienne A. Bastien, Allyson Bieryla, Lars A. Buchhave, William D. Cochran, Michael Endl, Gilbert A. Esquerdo, Elise Furlan, Andrew W. Howard, Steve B. Howell, Howard Isaacson, David W. Latham, Phillip J. MacQueen, David R. Silva

Comments: 19 pages, 13 figures. Submitted to ApJS

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arxiv:1609.04061](#)

Title: "Inertia-less convectively-driven dynamo models in the limit of low Rossby number"

Author: Michael A. Calkins, Keith Julien, Steven M. Tobias

Comments: 22 pages

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

[理論/観測/実験 etc....]

Comment!!!!

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9月16日(金曜日)

[1] [arxiv:1609.04798](#)

Title: "Super-Earths as Failed Cores in Orbital Migration Traps"

Author: Yasuhiro Hasegawa

Comments: 19 pages, 4 figures, 5 tables, accepted for publication in ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[2] [arXiv:1609.04786](#)

Title: "Effect of surface-mantle water exchange parameterizations on exoplanet ocean depths"

Author: Thaddeus D. Komacek, Dorian S. Abbot

Comments: Accepted at ApJ

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:1609.04751](#)

Title: "Highly siderophile elements were stripped from Earth's mantle by iron sulfide segregation"

Author: David C. Rubie, Vera Laurenz, Seth A. Jacobson, Alessandro Morbidelli, Herbert Palme, Antje K. Vogel, Daniel J. Frost

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

[理論/観測/実験 etc....]

Comment!!!!

[4] [arXiv:1609.04701](#)

Title: "Altitudinal dependence of meteor radio afterglows measured via optical counterparts"

Author: K. S. Obenberger, J. M. Holmes, J.D. Dowell, F. K. Schinzel, K. Stovall, E. K. Sutton, G. B. Taylor

Comments: 22 pages, 4 figures

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!!!!

[5] [arXiv:1609.04677](#)

Title: "The Pan-STARRS 1 Discoveries of five new Neptune Trojans"

Author: Hsing Wen Lin, Ying-Tung Chen, Matthew J. Holman, Wing-Huen Ip, M. J. Payne, P. Lacerda, W. C. Fraser, D. W. Gerdes, A. Bieryla, Z.-F.

Sie, W.-P. Chen, W. S. Burgett, L. Denneau, R. Jedicke, N. Kaiser, E. A. Magnier, J. L. Tonry, R. J. Wainscoat, C. Waters

Comments: 24 pages, 6 figures, AJ accepted

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:1609.04452](#)

Title: "Fragmentation Kinematics in Comet 332P/Ikeya-Murakami"

Author: David Jewitt, Max Mutchler, Harold Weaver, Man-To Hui, Jessica Agarwal, Masateru Ishiguro, Jan Kleyna, Jing Li, Karen Meech, Marco Micheli, Richard Wainscoat, Robert Weryk

Comments: 19 pages, 1 table, 4 figures, To be published on ApJL

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:1609.04416](#)

Title: "No hydrogen exosphere detected around the super-Earth HD97658 b"

Author: Vincent Bourrier, David Ehrenreich, George King, Alain Lecavelier des Etangs, Peter J. Wheatley, Alfred Vidal-Madjar, Francesco Pepe, Stéphane Udry

Comments: 15 pages, 8 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:1609.04804](#)

Title: "Cloud Atlas: Discovery of Patchy Clouds and High-amplitude Rotational Modulations In a Young, Extremely Red L-type Brown Dwarf"

Author: Ben W. P. Lew, Daniel Apai, Yifan Zhou, Glenn Schneider, Adam J. Burgasser, Theodora Karalidi, Hao Yang, Mark S. Marley, Nicolas B. Cowan, Luigi R. Bedin, Stanimir A. Metchev, Jacqueline Radigan, Patrick J. Lowrance

Comments: 9 pages, 4 figures, Accepted for publication in ApJL on September 15th

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arxive:1609.04635](#)

Title: "ET Probes: Looking Here as Well as There"

Author: John Gertz

Comments: 4 pages, no figures, JBIS Accepted

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arxive:1609.04520](#)

Title: "Detecting Sub-lunar Mass Compact Objects toward the Local Group Galaxies"

Author: Kaiki Taro Inoue

Comments: 5 pages, 3 figures

Subjects: Cosmology and Nongalactic Astrophysics (astro-ph.CO); Earth and Planetary Astrophysics (astro-ph.EP)

[理論/観測/実験 etc....]

Comment!!!!

[11] [arxive:1609.04412](#)

Title: "iLocator: A Diffraction-limited Doppler Spectrometer for the Large Binocular Telescope"

Author: Justin R. Crepp, Jonathan Crass, David King, Andrew Bechter, Eric Bechter, Ryan Ketterer, Robert Reynolds, Philip Hinz, Derek Kopon, David Cavalieri, Louis Fantano, Corina Koca, Eleanya Onuma, Karl Stapelfeldt, Joseph Thomes, Sheila Wall, Steven Macenka, James McGuire, Ronald Korniski, Leonard Zugby, Joshua Eisner, B. Scott Gaudi, Fred Hearty, Kaitlin Kratter, Marc Kuchner, Giusi Micela, Matthew Nelson, Isabella Pagano, Andreas Quirrenbach, Christian Schwab, Michael Skrutskie, Alessandro Sozzetti, Charles E. Woodward, Bo Zhao

Comments: 13 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!!!!

[12] [arXiv:1609.04411](#)

Title: "The iLocator cryostat: design and thermal control strategy for precision radial velocity measurements"

Author: Jonathan Crass, Louis G. Fantano, Frederick R. Hearty, Justin R. Crepp, Matthew J. Nelson, Sheila M. Wall, David A. Cavalieri, Corina Koca, David L. King, Robert O. Reynolds, Karl R. Stapelfeldt

Comments: 10 pages, 7 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!!!!

[13] [arXiv:1609.04410](#)

Title: "On-sky single-mode fiber coupling measurements at the Large Binocular Telescope"

Author: Andrew Bechter, Jonathan Crass, Ryan Ketterer, Justin R. Crepp, Robert O. Reynolds, Eric Bechter, Philip Hinz, Fernando Pedichini, Michael Foley, Elliott Runburg, Eleanya Onuma, Scott Gaudi, Giuseppina Micela, Isabella Pagano, Charles E. Woodward

Comments: 11 pages, 7 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!!!!

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## Nature

[1] [0001](#)

Title: "A nucleosynthetic origin for the Earth's anomalous  $^{142}\text{Nd}$  composition"

Author: C. Burkhardt, L. E. Borg, G. A. Brennecka, Q. R. Shollenberger, N. Dauphas & T. Kleine

[コンドライト隕石/地球の起源]

地球の前駆天体：コンドライト隕石に比べ、高い  $^{142}\text{Nd}/^{144}\text{Nd}$  比を持つ。

=>遅い中性子捕獲過程 (s 過程) の元素合成を反映していて、初期の分化課程を反映したものではない。

=>コンドライト隕石は地球よりも太陽から遠い所で作られ、地球とは異なる太陽系前駆物質の混合物を含んでいる？

[2] 0002

Title: "Primitive Solar System materials and Earth share a common initial  $^{142}\text{Nd}$  abundance"

Author: A. Bouvier & M. Boyet

[コンドライト隕石・CAI/地球の起源]

CAI と非平衡エンスタタイト・コンドライト試料における、サマリウム (Sm) とネオジム (Nd) の同位体組成を報告。  
結果：地球マントルと一致。地球マントルはコンドライト的。

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Science

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