

# 2020年 2月 第1週 新着論文サーベイ

2月3日(月曜日)

[1] [arXiv:2001.11605](#)

Title: "Interstellar comet 2I/Borisov as seen by MUSE: C<sub>2</sub>, NH<sub>2</sub> and red CN detections"

Author: Michele T. Bannister, Cyrielle Opitom, Alan Fitzsimmons, Youssef Moulane, Emmanuel Jehin, Darryl Seligman, Philippe Rousselot, Matthew M. Knight, Michael Marsset, Megan E. Schwamb, Aurélie Guilbert-Lepoutre, Laurent Jorda, Pierre Vernazza, Zouhair Benkhaldoun

Comments: 5 figures. Submitted to AAS Journals

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

[観測/2I/Borisov]

2019年11月にVLTの面分光器MUSEを使って可視光の波長域で2I/Borisovを観測した。同じ時期にTRAPPISTで得られたデータと合わせて、C<sub>2</sub>ガスとNH<sub>2</sub>ガスの生成率に制限をつけた。太陽系内の既知のサンプルと比べてNH<sub>2</sub>に富んでいることが分かった。

[2] [arXiv:2001.11515](#)

Title: "Scaling K2. II. Assembly of a Fully Automated C5 Planet Candidate Catalog Using EDI-Vetter"

Author: Jon K. Zink, Kevin K. Hardegree-Ullman, Jessie L. Christiansen, Courtney D. Dressing, Ian J. M. Crossfield, Erik A. Petigura, Joshua E. Schlieder, David R. Ciardi

Comments: 28 pages, 11 figures, and 3 data files. Submitted for publication in AJ

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

[観測/K2]

新規開発したDI-Vetterというプログラムを用いてK2のCampaign 5のデータを解析し、75の系外惑星候補を検出した。そのうち8個は、同データを人力で解析した先行研究では報告されていない惑星であった。

[3] [arXiv:2001.11511](#)

Title: "Scaling K2. I. Revised Parameters for 222,088 K2 Stars and a K2 Planet Radius Valley at 1.9 R<sub>⊕</sub>"

Author: Kevin K. Hardegree-Ullman, Jon K. Zink, Jessie L. Christiansen, Court-

ney D. Dressing, David R. Ciardi, Joshua E. Schlieder

Comments: 26 pages, 22 figures, 3 tables. Accepted for publication in ApJS on January 30, 2020. Machine readable versions of Tables 1 and 3 are available at this [http URL](#) (94 MB) and this [http URL](#) (190 KB)

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

[観測/K2]

K2 のターゲットとなる恒星 222,088 個について、Gaia DR2 と LAMOST DR5 から機械学習によって半径等のパラメータを決定した。得られた新しいパラメータを使って K2 の Campaigns 1-13 のデータを再解析し、惑星の分布を調べたところ、 $1.9R_{\oplus}$  の位置に planet radius valley が見られた。この特徴は Kepler planets でも見られていたものである。

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## 2 月 4 日 (火曜日)

### [1] [arxiv:2002.00906](#)

Title: "The CARMENES search for exoplanets around M dwarfs. Dynamical characterization of the multiple planet system GJ 1148 and prospects of habitable exomoons around GJ 1148 b"

Author: T. Trifonov, M. H. Lee, M. Kürster, Th. Henning, E. Grishin, S. Stock, J. Tjoa, J. A. Caballero, K. H. Wong, F. F. Bauer, A. Quirrenbach, M. Zechmeister, I. Ribas, S. Reffert, A. Reiners, P. J. Amado, D. Kossakowski, M. Azzaro, V. J. S. Béjar, M. Cortés-Contreras, S. Dreizler, A. P. Hatzes, S. V. Jeffers, A. Kaminski, M. Lafarga, D. Montes, J. C. Morales, A. Pavlov, C. Rodríguez-López, J. H. M. M. Schmitt, E. Solano, R. Barnes

Comments: Accepted for publication in A&A

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:2002.00773](#)

Title: "Understanding and Mitigating Biases when Studying Inhomogeneous Emission Spectra with JWST"

Author: Jake Taylor, Vivien Parmentier, Patrick G.J. Irwin, Suzanne Aigrain, Graham K.H. Lee, Joshua Krissansen-Totton

Comments: 13 pages, 9 figures, submitted to MNRAS after addressing a second round of comments from reviewer

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arXiv:2002.00723](#)

Title: "Impact of gravity waves on the middle atmosphere of Mars: a non-orographic gravity wave parameterization based on Global Climate modeling and MCS observations"

Author: G. Gilli, F. Forget, A. Spiga, T. Navarro, E. Millour, L. Montabone, A. Kleinböhl, D. M. Kass, D. J. McCleese, J. T. Schofield

Comments: JGR (Planets), accepted

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:2002.00691](#)

Title: "triceratops: A Tool for Rapid Validation of *TESS* Objects of Interest and Application to 424 Planet Candidates"

Author: Steven Giacalone, Courtney D. Dressing

Comments: Submitted to AAS journals

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:2002.00659](#)

Title: "Asteroid migration due to the Yarkovsky effect and the distribution of the Eos family"

Author: Yang-Bo Xu, Li-Yong Zhou, Christoph Lhotka, Wing-Huen Ip

Comments: 15 pages, 7 figures

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:2002.00430](#)

Title: "Assessing and Minimizing Collisions in Satellite Mega-Constellations"

Author: Nathan Reiland, Aaron J. Rosengren, Renu Malhotra, Claudio Bombardelli

Comments: 32 pages, 19 figures; submitted for publication in Adv. Space Res.; comments welcome

Subjects: Earth and Planetary Astrophysics (astro-ph.EP); Dynamical Systems (math.DS)

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:2002.00405](#)

Title: "Accretion disks around young stars: the cradles of planet formation"

Author: Dmitry A. Semenov, Richard. D. Teague

Comments: 7 pages, 3 figures, to appear in Europhysics News 51/1

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!!!!

[8] [arXiv:2002.00231](#)

Title: "Water delivery to dry protoplanets by hit-and-run collisions"

Author: C. Burger, T. I. Maindl, C. M. Schäfer

Comments: Published as IAU Symposium Proceedings

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:2002.00144](#)

Title: "Full-field modeling of heat transfer in asteroid regolith: Radiative thermal conductivity of polydisperse particulates"

Author: Andrew J. Ryan, Daniel Pino Muñoz, Marc Bernacki, Marco Delbo

Comments: Submitted to the Journal of Geophysical Research: Planets

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

[理論/観測/実験 etc....]

Comment!!!!

[10] [arXiv:2002.00106](#)

Title: "Orbital dynamics of highly probable but rare Orionid outbursts possibly observed by the ancient Maya"

Author: J. H. Kinsman, D. J. Asher

Comments: Monthly Notices of the Royal Astronomical Society. Accepted 2020 January 17. Received 2020 January 3; in original form 2019 May 30. 9 pages, 4 figures

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

[理論/観測/実験 etc....]

Comment!!!!

## 2月5日(水曜日)

### [1] [arXiv:2002.01468](#)

Title: "Ricochets on Asteroids"

Author: Esteban Wright, Alice Quillen, Juiliana South, Randal C. Nelson, Paul Sanchez, John Siu, Hesam Askari, Miki Nakajima, Stephen R. Schwartz

Comments: Link to the high speed videos for the 3 experiments tracked and discussed: [this https URL](#) Preliminary results presented at American Geophysical Union (AGU) 2019 Fall Meeting (P43D-3497). Submitted to the journal Icarus on February 3, 2020

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

[理論/観測/実験 etc....]

Comment!!!!

### [2] [arXiv:2002.01296](#)

Title: "A model of the 3- $\mu$ m hydration band with Exponentially Modified Gaussian (EMG) profiles: application to hydrated chondrites and asteroids"

Author: S. Potin, S. Manigand, P. Beck, C. Wolters, B. Schmitt

Comments: Accepted in Icarus

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

[理論/観測/実験 etc....]

Comment!!!!

### [3] [arXiv:2002.01250](#)

Title: "Scattering, absorption, and thermal emission by large cometary dust particles: Synoptic numerical solution"

Author: Johannes Markkanen, Jessica Agarwal

Comments: 7 pages, 8 figures

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

[理論/観測/実験 etc....]

Comment!!!!

### [4] [arXiv:2002.01198](#)

Title: "Three-dimensional modelling of absorption by various species for hot Jupiter HD 209458b"

Author: I F Shaikhislamov, M L Khodachenko, H Lammer, A G Berezutsky, I B Miroshnichenko, M S Rumenskikh

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

[理論/観測/実験 etc....]

Comment!!!!

[5] [arXiv:2002.01150](#)

Title: "Locating the Source Field Lines of Jovian Decametric Radio Emissions"

Author: Yuming Wang, Xianzhe Jia, Chuanbing Wang, Shui Wang, V. Krupar

Comments: accepted by Earth and Planetary Physics, 10 pages, 9 figures and 1 table

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

[理論/観測/実験 etc....]

Comment!!!!

[6] [arXiv:2002.01063](#)

Title: "A comparison of exoplanet spectroscopic retrieval tools"

Author: Joanna K. Barstow, Quentin Changeat, Ryan Garland, Michael R. Line,  
Marco Rocchetto, Ingo P. Waldmann

Comments: 25 pages, 21 figures. Submitted to 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:2002.00998](#)

Title: "Silicate Melting and Vaporization during Rocky Planet Formation"

Author: Erik J. Davies, Phil J. Carter, Seth Root, Richard G. Kraus, Dylan K.  
Spaulding, Sarah T. Stewart, Stein B. Jacobsen<sup>4</sup>

Comments: 15 pages, 8 figures, Accepted for publication in JGR: Planets

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

[理論/観測/実験 etc....]

Comment!!!!

[8] [arXiv:2002.01086](#)

Title: "Temporal Evolution of Spatially-Resolved Individual Star Spots on a  
Planet-Hosting Solar-type Star: Kepler 17"

Author: Kosuke Namekata, James R. A. Davenport, Brett M. Morris, Suzanne L.  
Hawley, Hiroyuki Maehara, Yuta Notsu, Shin Toriumi, Kai Ikuta, Shota  
Notsu, Satoshi Honda, Daisaku Nogami, Kazunari Shibata

Comments: 37 pages, 12 figures, 1 table. 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!!!!

[9] [arxive:2002.01021](#)

Title: "A Word to the WISE: Confusion is Unavoidable for WISE-selected Infrared Excesses"

Author: Erik Dennihy, Jay Farihi, Nicola Pietro Gentile Fusillo, John H. Debes

Comments: 13 pages, 4 Figures; Accepted for publication in ApJ

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!!!!

[10] [arxive:2002.00947](#)

Title: "Rigorous "Rich Argument" in Microlensing Parallax"

Author: Andrew Gould

Comments: 4 pages, submitted to JKAS

Subjects: Instrumentation and Methods for Astrophysics (astro-ph.IM); 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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2月6日(木曜日)

[1] [arxive:2002.01834](#)

Title: "Exo-MerCat: a merged exoplanet catalog with Virtual Observatory connection"

Author: Eleonora Alei, Riccardo Claudi, Andrea Bignamini, Marco Molinaro

Comments: 58 pages, 9 figures, accepted for publication by Astronomy and Computing

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

[系外惑星・カタログ]

現在4つある系外惑星のカタログ複合させたカタログを作った。Exo-MerCatというpythonライブラリで4つのデータベースから最も正確なデータをとってくる。

[2] [arxive:2002.01832](#)

Title: "Resonance libration and width at arbitrary inclination"

Author: Fathi Namouni, Helena Morais

Comments: 19 pages, 8 figures. Accepted for publication in Monthly Notices of the Royal Astronomical Society

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

[軌道共鳴・シミュレーション]

軌道共鳴にある系の進化を二次の秤動を含む新しいモデルを使って数値シミュレーションした。このモデルは有用であり太陽系の小惑星の軌道を説明する強力なツールになるだろう。

[3] [arXiv:2002.01807](#)

Title: "ISPY – NACO Imaging Survey for Planets around Young stars: Survey description and results from the first 2.5 years of observations"

Author: R. Launhardt, Th. Henning, A. Quirrenbach, D. Ségransan, H. Avenhaus, R. van Boekel, S. S. Brems, A. C. Cheetham, G. Cugno, J. Girard, N. Godoy, G. M. Kennedy, A.-L. Maire, S. Metchev, A. Müller, A. Musso Barucci, J. Olofsson, F. Pepe, S. P. Quanz, D. Queloz, S. Reffert, E. L. Rickman, H. L. Ruh, M. Samland

Comments: 25 pages, 14 figures

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

[直接撮像・VLT]

VLT で原始惑星系円盤やデブリ円盤を持つ若い星周りの惑星を直接撮像しようという NACO-ISPY プロジェクトの最初の 2.5 年の成果。新しい惑星は発見していないが、二つの連星系といくつかの原始惑星系円盤における散乱光を検出した。

[4] [arXiv:2002.01772](#)

Title: "The CARMENES search for exoplanets around M dwarfs. Characterization of the nearby ultra-compact multiplanetary system YZ Ceti"

Author: S. Stock, J. Kemmer, S. Reffert, T. Trifonov, A. Kaminski, S. Dreizler, A. Quirrenbach, J. A. Caballero, A. Reiners, S. V. Jeffers, G. Anglada-Escudé, I. Ribas, P. J. Amado, D. Barrado, J. R. Barnes, F. F. Bauer, Z. M. Berdiñas, V. J. S. Béjar, G. A. L. Coleman, M. Cortés-Contreras, E. Díez-Alonso, A. J. Domínguez-Fernández, N. Espinoza, C. A. Haswell, A. Hatzes, T. Henning, J. S. Jenkins, H. R. A. Jones, D. Kossakowski, M. Kürster, M. Lafarga, M. H. Lee, M. J. López González, D. Montes, J. C. Morales, N. Morales, E. Pallé, S. Pedraz, E. Rodríguez, C. Rodríguez-López, M. Zechmeister

Comments: Accepted for publication in A&A

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

[系外惑星・YZCeti]

YZCeti には少なくとも 3 つの惑星をもつ超コンパクト惑星系であり、中心星の活動などから不確定性が大きい 4 つ目の惑星候補があるとされてきた。この論文では視線速度の追観測と詳細な解析を行った。結果として 4 つ目の惑星



シグナルは受からずに、3つの惑星の軌道パラメーターを決定した。

[5] [arxiv:2002.01755](#)

Title: "Three planets transiting the evolved star EPIC 249893012: a hot  $8.8-M_{\oplus}$  super-Earth and two warm  $14.7$  and  $10.2-M_{\oplus}$  sub-Neptunes"

Author: D. Hidalgo, E. Pallé, R. Alonso, D. Gandolfi, M. Fridlund, G. Nowak, R. Luque, T. Hirano, A. B. Justesen, W. D. Cochran, O. Barragan, L. Spina, F. Rodler, S. Albrecht, D. Anderson, P. Amado, E. Bryant, J. A. Caballero, J. Cabrera, Sz. Csizmadia, F. Dai, J. De Leon, H. J. Deeg, Ph. Eigmuller, M. Endl, A. Erikson, M. Esposito, P. Figueira, I. Georgieva, S. Grziwa, E. Guenther, A. P. Hatzes, M. Hjorth, H. J. Hoeijmakers, P. Kabath, J. Korth, M. Kuzuhara, M. Lafarga, M. Lampon, I. C. Leao, J. Livingston, S. Mathur, P. Montanes-Rodriguez, J. C. Morales, F. Murgas, E. Nagel, N. Narita, L. D. Nielsen, M. Patzold, C. M. Persson, J. Prieto-Arranz, A. Quirrenbach, H. Rauer, S. Redfield, A. Reiners, I. Ribas, A. M. S. Smith, J. Subjak, V. Van Eylen, P. A. Wilson

Comments: Accepted for publication in A&A

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

[系外惑星]

K2の観測で三つの惑星を持つシステムを発見した。主星は主系列星を離れる寸前の太陽質量の星。惑星はタイトル通り内側から hot super-Earth と warm sub-Neptune で AO イメージングと RV の観測もしてるため結構詳細にパラメーターが求まっている。b は半径的には岩石惑星とガス惑星の間に位置するが密度的には岩石惑星。c と d は密度と軌道長半径より非常に暑い大気を持つことを示唆している。主星が進化の途中にあるのでアツい。

[6] [arxiv:2002.01744](#)

Title: "Potential Backup Targets for Comet Interceptor"

Author: Megan E. Schwamb, Matthew M. Knight, Geraint H. Jones, Colin Snodgrass, Lorenzo Bucci, José Manuel Sánchez Pérez, Nikolai Skuppin

Comments: Accepted to RNAAS

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

[Comet Interceptor ミッション]

ESA の Comet Interceptor ミッションのターゲットのバックアップ候補を連ねている。このミッションは long-period comet (LPC) に近づいて観測することを目的にしていて、LPC が来るまで ALIEL という別の衛星の中で待機する (L2)。理想的には a dynamically new comet (DNC) という初めて太陽系に来る星を狙いたい。LSST の観測で 10000 個の彗星が発見することが期待されており、LPC も年間数個ほど早期に発見できるらしく、これらがターゲット候補となる。2028 年打ち上げ。この論文は観測期間中に LPC が来なかった時に観測する既知の短周期惑星候補が表にしてある。

[7] [arXiv:2002.01672](#)

Title: "Design and performance of low-energy orbits for the exploration of Enceladus"

Author: E. Fantino, F.J.T. Salazar, E.M. Alessi

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

[エンケラドス]

エンケラドスの生命探査のためにエンケラドスに衛星を送るときの軌道を考えている。L1 と L2 (エンケラドスの表と裏) に飛ばす軌道をたくさん考えて最適解を探す。

[8] [arXiv:2002.01583](#)

Title: "A Tale of Two Grains: impact of grain size on ring formation via nonideal MHD processes"

Author: Xiao Hu, Lile Wang, Satoshi Okuzumi, Zhaohuan Zhu

Comments: 9 pages, 6 figures, submitted to AAS journals

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

[原始惑星系円盤・シミュレーション]

原始惑星系円盤を MHD シミュレーションした。タイトルの non-ideal は MHD 拡散率のこと？スノーライン周辺のリング形成に、ダストサイズが重要な働きをすることが分かった。

[9] [arXiv:2002.01495](#)

Title: "A Framework for Optimizing Exoplanet Target Selection for the James Webb Space Telescope"

Author: Charles D. Fortenbach, Courtney D. Dressing

Comments: 39 pages, 19 figures, and 11 tables, accepted for publication in PASP

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

[JWST]

JWST のターゲットセレクションのためのフレームワークを開発した。大気分光に適した惑星を必要観測時間ごとにランク付けしてくれる。他のターゲットセレクションとコンシステントだがこの方法は、ターゲット星の金属量、ノイズレベルなどの機器のパフォーマンスにランクが依存しているらしい。

[10] [arXiv:2002.01476](#)

Title: "Observational Signatures of Sub-Relativistic Meteors"

Author: Amir Siraj, Abraham Loeb

Comments: 10 pages, 7 figures; submitted for publication

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

[隕石]

隕石観測は十分確立されているがその速度は  $10^3 - 4)c$  に集中している。より高速の隕石に対して現在の観測では見落

とす可能性がある。特に、成長したダストや SN からの隕石は 0.1c の準相対論的速度になることを示唆している。このホワイトペーパーはこれらを見落とさない方法を考案するもの。地球突入時に発生する衝撃波をマイクでとらえる？

[11] [arxive:2002.01570](#)

Title: "Wave effects in the microlensing of pulsars and FRBs by point masses"

Author: Dylan L. Jow, Simon Foreman, Ue-Li Pen, Wei Zhu

Comments: 15 pages, 5 figures

Subjects: High Energy Astrophysical Phenomena (astro-ph.HE); Cosmology and Nongalactic Astrophysics (astro-ph.CO); Earth and Planetary Astrophysics (astro-ph.EP)

[マイクロレンズ・波動光学]

マイクロレンズは光が重力場によってレンズの様に曲げられる減少であるが、波としての性質はしばしば無視している。しかし、パルサーや fast radio bursts (FRBs) などのコヒーレントな (干渉しやすい) 点源では、波の性質が効いてくる。この論文では波動光学の影響を考慮するとレンズによって増える見かけの面積が幾何光学で考えた場合より増加することを示した。さらにこの方法なら光度曲線に干渉パターンが現れ、そのパラメーターからレンズの質量を瞬時に決定できるため惑星浮遊の質量決定もできる。

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## 2月7日(金曜日)

[1] [arxive:2002.02280](#)

Title: "Intermittent planet migration and the formation of multiple dust rings and gaps in protoplanetary disks"

Author: Gaylor Wafflard-Fernandez, Clément Baruteau

Comments: 23 pages, 15 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!!!!

[2] [arxive:2002.02203](#)

Title: "On the vortex evolution in non-isothermal protoplanetary discs"

Author: D. Tarczay-Nehéz, Zs. Regály, E. Vorobyov

Comments: Accepted in MNRAS, 14 pages, 8 figures, 1 table

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

[理論/観測/実験 etc....]

Comment!!!!

[3] [arxive:2002.02197](#)

Title: "A new orbital ephemeris for WASP-128b"

Author:

Alexis M. S. Smith, Philipp Eigmüller, Mahmoudreza Oshagh, John Southworth

Comments: Accepted for publication in Research Notes of the American Astronomical Society (RNAAS)

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:2002.02166](#)

Title: "The Bimodal Distribution in Exoplanet Radii: Considering Varying Core Compositions and H<sub>2</sub> Envelop Sizes"

Author: Darius Modirrousta-Galian, Daniele Locci, Giuseppina Micela

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:2002.02155](#)

Title: "The origin of s-process isotope heterogeneity in the solar protoplanetary disk"

Author: Mattias Ek, Alison C. Hunt, Maria Lugaro, Maria Schönbachler

Comments: 25 pages, 9 figures, 1 table

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!!!!

[6] [arXiv:2002.02015](#)

Title: "On the impact of tides on the transit-timing fits to the TRAPPIST-1 system"

Author: Emeline Bolmont, Brice-Olivier Demory, Sergi Blanco-Cuaresma, Eric Agol, Simon L. Grimm, Pierre Auclair-Desrotour, Franck Selsis, Adrien Leleu

Comments: 7 pages, 3 figures. Accepted for publication in Astronomy & Astrophysics

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

[理論/観測/実験 etc....]

Comment!!!!

[7] [arXiv:2002.01936](#)

Title: "The frequency of gaseous debris discs around white dwarfs"

Author: Christopher J. Manser, Boris T. Gänsicke, Nicola Pietro Gentile Fusillo, Richard Ashley, Elmé Breedt, Mark Hollands, Paula Izquierdo, Ingrid Pelisoli

Comments: 13 pages, 6 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!!!!

[8] [arXiv:2002.02254](#)

Title: "Magnetorotational Instability in Diamagnetic, Misaligned Protostellar Discs"

Author: Ebru Devlen, Ayse Ulubay, E. Rennan Pekünlü

Comments: 9 pages, 5 figures, published in MNRAS, 2020, vol. 491, pages 5481-5488

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

[理論/観測/実験 etc....]

Comment!!!!

[9] [arXiv:2002.01946](#)

Title: "Discovery of a low-mass companion embedded in the disk of the young massive star MWC 297 with VLT/SPHERE"

Author: M. Giulia Ubeira-Gabellini, Valentin Christiaens, Giuseppe Lodato, Mario van den Ancker, Davide Fedele, Carlo F. Manara, Daniel J. Price

Comments: 4 figures

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:2002.01943](#)

Title: "Two intermediate-mass brown dwarfs from the TESS mission"

Author: Theron W. Carmichael, Samuel N. Quinn, Alexander J. Mustill, Chelsea Huang, George Zhou, Carina M. Persson, Louise D. Nielsen, Karen A. Collins, Carl Ziegler, Kevin I. Collins, Joseph E. Rodriguez, Avi Shporer, Rafael Brahm, Andrew W. Mann, Francois Bouchy, Malcolm Fridlund, Keivan G. Stassun, Coel Hellier, Julia V. Seidel, Manu Stalport, Stephane Udry, Francesco Pepe, Michael Ireland, Marusa Zerjal, Cesar Briceno, Nicholas Law, Andres Jordan, Nestor Espinoza, Thomas Henning, Paula

Sarkis, David W. Latham

Comments: 18 pages, 10 figures, 8 tables, submitted to AJ

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

[理論/観測/実験 etc....]

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