## 2020 Virtual DDA Meeting Schedule

### 2020 Virtual 51st Annual Meeting of the DDA

**Q&A/Discussion Webinar Schedule**

All presentations (except the plenary prize lectures) are pre-recorded and are available for viewing on the registrant-only DDA meeting website. [1]

Public links to many of the presentations are now available!

You can see all of the meeting abstracts in ADS [2], or click on the individual talk/poster titles to go to individual abstracts in ADS.

All times below are EDT (UTC-4)

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<th>Monday, August 3</th>
<th>Kat Volk, SOC and DDA chair</th>
<th>Introduction and announcements</th>
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<td>10:50 AM EDT</td>
<td>Renu Malhotra</td>
<td>lunar and Planetary Laboratory, The University of Arizona</td>
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<tr>
<td>11:00 AM - 11:35 AM EDT</td>
<td><strong>Special Session</strong></td>
<td><strong>The Main Belt: A Complex Dynamical System (Session 100)</strong></td>
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<td>Chairs: Bojan Novakovic and Apostolos Christou</td>
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<tr>
<td><strong>Mikael Granvik</strong></td>
<td>University of Helsinki / Luleå University of Technology</td>
<td>(Invited) Source regions of meteorites and near-Earth asteroids [7] - Link to Recording [8]</td>
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<td><strong>Stanley Dermott</strong></td>
<td>University of Florida</td>
<td>A new observational constraint on the Yarkovsky-driven mobility of main belt asteroids [9] - Link to Recording [10]</td>
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<tr>
<td><strong>Apostolos Christou</strong></td>
<td>Armagh Observatory and Planetarium</td>
<td>Orbital mobility of asteroids in the Inner Main Belt: A closer look at gravitational diffusion [11]</td>
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### 2020 Virtual DDA Meeting Schedule

Published on Division on Dynamical Astronomy (https://dda.aas.org)

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<td>11:35 AM - 12:05 PM EDT</td>
<td><strong>Planetary System Populations (Session 101)</strong></td>
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<td></td>
<td><strong>Chairs:</strong> Darin Ragozzine</td>
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<td></td>
<td><strong>Matthias He</strong> The Pennsylvania State University</td>
<td><strong>The Intrinsic Architectures of Planetary Systems: Correlations of AMD-Stable Systems</strong> [16] - [Link to Recording] [17]</td>
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<td></td>
<td><strong>Emily Safsten</strong> The Pennsylvania State University</td>
<td><strong>Nature vs. nurture: a Bayesian framework for assessing apparent correlations between planetary orbital properties and stellar ages</strong> [18]</td>
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<td><strong>Jiayin Dong</strong> The Pennsylvania State University</td>
<td><strong>Unraveling Warm, Large Exoplanet (WaLE) Origins From TESS Observations</strong> [19] - [Link to Recording] [20]</td>
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<td><strong>Kyriaki Antoniadou</strong> Aristotle University of Thessaloniki</td>
<td><strong>Kepler and K2 systems dynamically unveiled via periodic orbits</strong> [21] (Poster)</td>
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<td><strong>Srisurya Yadavalli</strong> Georgia Institute of Technology</td>
<td><strong>On the Seasonal Flux and Temperature Variations on Circumbinary Planets</strong> [22] - [Link to Recording] [23]</td>
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<td>1:00 PM - 2:30 PM EDT</td>
<td><strong>Plenary Session (Session 102): Vera Rubin Early Career Prize Lecture</strong></td>
<td><strong>Dirk Brouwer Prize Lecture</strong></td>
<td><strong>Chair:</strong> Kat Volk</td>
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<td></td>
<td><strong>1:00</strong> Jo Bovy University of Toronto</td>
<td><strong>What I have learned about the Milky Way's dynamics from Gaia so far</strong> [24]</td>
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<td><strong>1:45</strong> Fred Rasio Northwestern University</td>
<td><strong>Forming Gravitational Wave Sources through Stellar Dynamics</strong> [25]</td>
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<td><strong>Tuesday, August 4</strong></td>
<td><strong>Stellar Kinematics in the Milky Way and Complex Stellar Clusters (Session 200)</strong></td>
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<td><strong>Chair:</strong> Heidi Jo Newberg</td>
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<tr>
<td>9:30 AM - 10:00 AM EDT</td>
<td><strong>Eric Mendelsohn</strong> Rensselaer Polytechnic</td>
<td><strong>N-Body Simulations</strong></td>
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Nondh Panithanpaisal  University of Pennsylvania

Stellar Streams and Their Progenitors in MW-like Simulations

Thomas Donlon  Rensselaer Polytechnic Institute

A Recent Major Radial Merger Leaves Shells in the Milky Way

Drona Vargya  University of Pennsylvania

Nemesis Stars in Dynamic Time-Dependent Galactic Potentials

Maria Tiongco  University of Colorado

Complexities in the Kinematical Evolution of Globular Clusters

Hangci Du  Tsinghua University

Kinematics of RR Lyrae stars in the Galactic bulge with OGLE-IV and Gaia DR2

10:00 AM - 10:15 AM EDT

The Solar System in the Galaxy: Interstellar objects and stellar flybys (Session 201)

Chair: Darryl Seligman

Amir Siraj  Harvard University

Identifying Interstellar Objects Trapped in the Solar System through Their Orbital Parameters

Marvin Morgan  University of Pennsylvania

Close Encounters of Stars in the Solar Neighborhood (Poster PDF)

Tim Hallatt  McGill University

The Dynamics of Interstellar Asteroids and Comets within the Galaxy: An Assessment of Local Candidate Source Regions for 1I/'Oumuamua and 2I/Borisov

10:15 AM - 10:40 AM EDT

Early Planetary Systems: accretion, collisions, and orbital configurations (Session 202)

Chair: Gongjie Li

Mor Rozner  Technion

The aeolian-erosion barrier for the growth of metre-size objects in protoplanetary-discs and implications
Christopher Spalding  
Yale University  
**The Solar Wind Prevents Re-accretion of Debris after Mercury’s Giant Impact**

Jennifer Pouplin  
Purdue University  
**The Importance of Being Swiftest: The effects of collisional fragmentation on the accretion timescale of the martian moons and the terrestrial planets**

Carlisle Wishard  
Purdue University  
**Swiftest: An N-body dynamics code incorporating collisional regime determination and fragmentation**

Matthew Clement  
Carnegie Institution of Washington  
**Born eccentric: constraints on Jupiter and Saturn's pre-instability orbits**

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**1:30 PM - 2:00 PM EDT**

**Asteroid Dynamics: Pairs, Multiples, Shapes, and Spin States (Session 203)**

Chair: Seth Jacobson

Darryl Seligman  
University of Chicago  
**The Onset of Chaos in Permanently Deformed Binaries from Spin-Orbit and Spin-Spin Coupling**

Sanjana Prabhu Desai  
UCLA  
**Evolution of the Binary Asteroid 66391 Moship-Squannit (1999 KW4)**

Valeri Makarov  
U.S. Naval Observatory  
**Spin-orbit resonances of prolate asteroids and minor planets at high eccentricity (e > 0.9)**

Darin Ragozzine  
Brigham Young University  
**Non-Keplerian Effects in Kuiper Belt Multiples**

Tamires Moura  
São Paulo State University - UNESP  
**Dynamical Environment and Surface Characteristics of Asteroid (16) Psyche**

Timothy Holt  
University of Southern California  
**A pair of Jovian Trojans**
Queensland  
[60]  
2:00 PM - 2:20 PM EDT  
**Exoplanets: Linking Observations and Dynamics with TTVs (Session 204)**  
Chair: Juliette Becker  
Chris Fox  
University of Western Ontario  
Exomoon Candidates from Transit Timing Variations [61]  
Jack Lissauer  
NASA Ames Research Center  
Perturbations, TTVs & the (Un)reliability of Ephemerides of Kepler Planets [62] - Link to Recording [63]  
Mariah MacDonald  
Pennsylvania State University  
Confirming and characterizing the five-planet resonant chains of K2-138 and Kepler-80 [64] - Link to Recording [65]  
Abigail Graham  
Brigham Young University  
Investigating unseen exoplanets in Kepler multis [66] - Link to Recording [67]

2:20 PM - 2:50 PM EDT  
**Planetary Satellites and Rings (Session 205)**  
Chair: Matthew Tiscareno  
Joseph A'Hearn  
University of Idaho  
Periodic orbits for small N co-orbital satellite systems [68] - Link to Recording [69]  
Maryame El Moutamid  
Cornell University  
The Orbital History of Mimas, Enceladus and Dione [70]  
Matija Cuk  
SETI Institute  
Are The Inner Satellites of Uranus Stable? [71] - Link to Recording [72]  
Matthew Hedman  
University of Idaho  
Sudden changes in the structure and orbit of one of Saturn's dusty rings [73] - Link to Recording [74]  
Philip Nicholson  
Cornell University  
The outer edge of Saturn's A ring, as revealed by Cassini occultation observations, [75]  
Matthew Young  
University of Idaho  
Evidence for a new type of moonlet wake near Enceladus [76] (Poster PDF [77])

**Wednesday, August 5**

9:30 AM - 10:00 AM EDT  
**Planetary System Stability (Session 300)**  
Chair: Dimitri Veras  
Daniel Tamayo  
Princeton University  
Predicting the
A. Paula Granados Contreras  
Academia Sinica

Long-term stability of compact multi-planet systems [78] - Link to Recording [79]

Mass stability limit for coorbital planets in a horseshoe configuration [80]

Sacha Gavino  
CNRS-Université de Bordeaux

Orbital stability of compact three-planet systems, [81]- Link to Recording [82]

Billy Quarles  
Georgia Institute of Technology

Orbital Stability of Circumstellar Earth-like planets in Binary Systems [83]

Marialis Rosario-Franco  
National Radio Astronomy Observatory

Orbital Stability of Exomoons and Submoons with Applications to Kepler 1625b-I [84]

Laetitia Rodet  
Cornell University

Hiding resonant objects behind a big friend [85](Poster)

10:00 AM - 10:25 EDT

Bars and Spiral Arms in Galaxies (Session 301)

Chair: Aleksey Generozov

Monica Valluri  
University of Michigan

FORSTAND: A New Schwarzschild Dynamical Modeling Code for Galaxies of All Morphological Types [86] - Link to Recording [87]

Katherine Xiang  
Johns Hopkins University

Buckling bars in face-on galaxies observed with MaNGA [88]

E. Athanassoula  
Laboratoire D'Astrophysique De Marseille

Orbits in galactic bars [89] - Link to Recording [90]

Angela Collier  
JILA/ UC Boulder

Halo-Bar Coupling via Secular Torques [91] - Link to Recording [92]

Emma Lieb  
University of Colorado Boulder

Leading Spiral Arms in Isolated Disc Galaxies [93] -- Duncombe Student Research Prize Winner - Link to Recording [94]

Special Session

The Dynamics of Building a Dynamics Community (Session 302)

Chair: Smadar Naoz

2:00 PM - 2:05 PM

Ruth Murray-Clay (DDA) Thoughts on Building an
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<td>2:05 PM - 3:30 PM EDT</td>
<td>Sherard Robbins (Invited Workshop) Do I Have To?: Navigating Your Introversion In Higher Education.</td>
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<td><strong>Thursday, August 6</strong></td>
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<td>11:00 AM - 11:30 AM EDT</td>
<td><strong>Special Session</strong></td>
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<td><strong>Artificial Celestial Bodies as a Dynamical Laboratory for Astrophysical and Celestial Dynamics (Session 400)</strong></td>
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<td>Chairs: TBD</td>
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<td>Alessandra Celletti</td>
<td>University of Rome Tor Vergata (Invited) Regular, resonant and chaotic motions within space debris - Link to Recording</td>
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<td>Shane Ross</td>
<td>Virginia Tech (Invited) The interplanetary transport network: mechanisms of fast transport in the solar system - Link to Recording</td>
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<td>Conor Benson</td>
<td>University of Colorado YORP-Driven Spin State Evolution of Meter-Sized Asteroids - Link to Recording</td>
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<td>Marielle Pellegrino</td>
<td>University of Colorado Boulder Influence of Solar Radiation Pressure on the Luni-Solar Resonance Structure of MEO satellites</td>
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<td>11:30 AM - 11:50 AM EDT</td>
<td><strong>Near Earth Asteroids (Session 401)</strong></td>
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<td>Chair: Althea Moorhead</td>
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<td>Jean-Luc Margot</td>
<td>University of California, Los Angeles Measurements of Yarkovsky Drift Rates for 247 Near-Earth Asteroids</td>
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<td>Jorge Pérez-Hernández</td>
<td>Universidad Nacional Autonoma de Mexico (UNAM) The Yarkovsky effect for (99942) Apophis and observational predictions for the upcoming 2020-2021 close approach to Earth -- Duncombe Student Research Prize Winner - Link to Recording</td>
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<td>Bruno Chagas</td>
<td>UNESP Deflect an hazardous asteroid through kinetic impact - Poster PDF</td>
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<td>12:00 PM - 1:00 PM EDT</td>
<td><strong>DDA Members’ Meeting</strong></td>
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<td>7:10 PM - 7:30 PM EDT</td>
<td><strong>Solar System Evolution: numerical methods and long-term stability (Session 402)</strong></td>
<td>Oscar Fuentes-Munoz</td>
<td>University of Colorado, Boulder</td>
<td>Semi-analytical long-term propagation of asteroids</td>
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<td>Kevin Zhang</td>
<td>Cornell University</td>
<td>GLISSE: A GPU-optimized planetary system integrator with application to orbital stability calculations</td>
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<td>Yukun Huang</td>
<td>University of British Columbia</td>
<td>Four Billion Year Stability of the Earth-Mars Belt</td>
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<td>7:30 PM - 7:55 PM EDT</td>
<td><strong>Formation and Evolution of Planetary System Architectures (Session 403)</strong></td>
<td>Ruth Murray-Clay</td>
<td>University of California, Santa Cruz</td>
<td>A Giant Impacts Phase for Giant Planets</td>
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<td>Isabel Angelo</td>
<td>University of California, Los Angeles</td>
<td>The Dynamical Origins of Kepler-1656b’s Extreme Eccentricity</td>
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<td>Sarah Morrison</td>
<td>Missouri State University</td>
<td>Producing Close-in Super-Earths and Mini-Neptunes in Resonant Chains During In Situ Planet Formation</td>
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<td>Yuji Matsumoto</td>
<td>Academia Sinica Institute of Astronomy and Astrophysics</td>
<td>Breaking resonant chains triggered by long-term mass evolution</td>
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<td>Juliette Becker</td>
<td>Caltech</td>
<td>The Origins of Multi-Planet Systems with Misaligned, Nearby Companions</td>
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<td><strong>Meteoroids and Comets (Session 500)</strong></td>
<td>David Minton</td>
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<td><strong>Chair:</strong> Mark Moretto</td>
<td>University of Colorado</td>
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<td><strong>Title:</strong> The Perturbative Effects of Gas Drag at Active Comets: Equations of Motion for the Mean Elements under General Inverse-Square Perturbations [125]</td>
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<td><strong>Chair:</strong> Luke Dones</td>
<td>Southwest Research Institute</td>
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<td><strong>Title:</strong> Splitting as a Source of Periodic Comets [126] - Link to Recording [127]</td>
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<td><strong>Chair:</strong> Althea Moorhead</td>
<td>NASA Marshall Space Flight Center</td>
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<td><strong>Title:</strong> Realistic gravitational focusing of meteoroid streams [128] - Link to Recording [129]</td>
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<td>10:20 AM - 10:40 AM EDT</td>
<td><strong>Outer Solar System: dynamics and observations of TNOs (Session 501)</strong></td>
<td>Matthew Hedman</td>
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<td><strong>Chair:</strong> Benjamin Proudfoot</td>
<td>Brigham Young University</td>
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<td><strong>Title:</strong> Unlocking the mystery of the Haumea Family [130] - Link to Recording [131]</td>
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<td><strong>Chair:</strong> Ann-Marie Madigan</td>
<td>CU Boulder</td>
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<td><strong>Title:</strong> Collective gravity in the Outer Solar System [132] - Link to Recording [133]</td>
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<td><strong>Chair:</strong> Malena Rice</td>
<td>Yale University</td>
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<td><strong>Title:</strong> Surveying the Trans-Neptunian Solar System with TESS [134] -- Duncombe Student Research Prize Winner</td>
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<td><strong>Chair:</strong> William Oldroyd</td>
<td>Northern Arizona University</td>
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<td></td>
<td><strong>Title:</strong> Constraining the Outer Solar System Perihelion Gap [135] - Link to Recording [136]</td>
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<td>10:40 AM - 11:05 AM EDT</td>
<td><strong>Planets and Planetesimals around Highly Evolved Stars (Session 502)</strong></td>
<td>Cristobal Petrovich</td>
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<td><strong>Chair:</strong> Catriona McDonald</td>
<td>University of Warwick</td>
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<td><strong>Title:</strong> How the breakup of triaxial asteroids generates debris reservoirs for white dwarf pollution [137] (Poster PDF [138])</td>
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<td><strong>Chair:</strong> Christopher O'Connor</td>
<td>Cornell University</td>
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<td></td>
<td><strong>Title:</strong> High-e migration of planetesimals around polluted white dwarfs [139]</td>
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<td><strong>Chair:</strong> Alexander Stephan</td>
<td>UCLA</td>
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<td><strong>Title:</strong> Social Distancing for Stars: A hidden friend for WD</td>
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Dimitri Veras  
University of Warwick  
The dynamical history and current orbital constraints of a milestone ice giant planet orbiting a white dwarf [141]

María Ronco  
Instituto de Astrofísica - Pontificia Universidad Católica de Chile  
How Jupiters save or destroy inner Neptunes around evolved stars [142] - Link to Recording [143]

1:00 PM - 1:25 PM EDT  
Planetary System Obliquities and Tidal Evolution (Session 503)
Chair: Smadar Naoz

Yubo Su  
Cornell University  
Dynamics of Colombo's Top: Generating Exoplanet Obliquities from Planet-Disk Interactions [144] -- Duncombe Student Research Prize Winner - Link to Recording [145]

Sarah Millholland  
Princeton University  
Formation of Ultra-Short-Period Planets by Obliquity-Driven Tidal Runaway [146] - Link to Recording [147]

Craig Duguid  
University of Leeds  
Convective turbulent viscosity acting on equilibrium tidal flows: new frequency scaling of the effective viscosity [148] - Link to Recording [149]

Cristobal Petrovich  
University of Arizona  
Disk dispersal-driven instabilities: application to hot Neptunes [150] - Link to Recording [151]

Steven Kreyche  
University of Idaho  
Retrograde-rotating exoplanets experience obliquity excitations in an eccentricity-enabled resonance [152] - Link to Recording [153]

1:25 PM - 1:50 PM EDT  
The Center of Galaxies (Session 504)
Chair: Alexander Stephen

Smadar Naoz  
University of California, Los Angeles  
A Hidden Friend for the Galactic Center Black Hole, Sgr A* [154]

Sanaea Rose  
UCLA  
On Socially Distant Neighbors: Binaries as
### Asynchronous Poster Presentations (Session 103)

**Discussion via Slack**

#### Available all week

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<td>M. Clement</td>
<td>Earth and Planets Laboratory, Carnegie Institution of Washington</td>
<td>New initial conditions for terrestrial planet formation derived from high resolution simulations of planetesimal accretion [159]- Poster PDF [160] &quot;Barrel Instability&quot; for Elongated Secondaries in Binary Asteroids [161] - Poster PDF [162]</td>
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<tr>
<td>M Cuk</td>
<td>SETI Institute,</td>
<td>The Low Mass Stellar Initial Mass Function of the Ultra Faint Dwarf Spheroidal Galaxy Boötes I [163] - Poster PDF [164]</td>
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<td>P. Gratia</td>
<td>JP Morgan Chase (formerly Northwestern University)</td>
<td>Eccentricity and the Lifetimes of Closely-Spaced Five-Planet Systems [165] - Poster PDF [166]</td>
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<tr>
<td>A. Moorhead</td>
<td>NASA Marshall Space Flight Center</td>
<td>Is LaTeX use correlated with the number of equations in a manuscript? [167] - Poster PDF [168]</td>
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<tr>
<td>D. Veras</td>
<td>University of Warwick</td>
<td>A full-lifetime planetary simulation: from stellar birth cluster evolution to planetary destruction around white dwarfs [169] - Poster PDF [170]</td>
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<tr>
<td>K. Volk</td>
<td>Lunar and Planetary Lab, The University of</td>
<td>Dynamical instabilities in systems of multiple short-period planets are</td>
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Arizona likely driven by secular chaos: a case study of Kepler-102 [171] - Poster PDF [172]

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[1] http://r20.rs6.net/tn.jsp?f=001h_uDgQBPS40tK0oZkqE-M2xHeG3ff6oWv5Yb0B86SZBNda5GNFpMd3Js4_J5nOtDU3Uuzg70yb5uFDZcNq1enYelcCF-vjOU6R5ix3X34iVUjgSsXQmkWMxfqFOB50jN9Zs7shVb80vLLby6jfd9rCQdzzQCi;=SZaoQUQpZxt4AGZhGoD1T2-vDq_gBNFjTc45Z-gKCD-a04fjGkH8Sw==&amp;ch=nYjX8yOwOk3oP6qweieQ3-Q5hV2iDd-M1UYpC0MNX3rypeRueMuQw==
[2] https://ui.adsabs.harvard.edu/search/fq=%7B!type%3Daqp%20v%3D%24fq_database%7D&amp;fq_database=(database%3Aastronomy)&amp;q=series%3AAAS%2FDivision%20of%20Dynamical%20Astronomy%20Meeting%20year%3A2020&amp;sort=bibcode%20asc%2C%20bibcode%20asc&amp;p=0
[3] https://ui.adsabs.harvard.edu/abs/2020DDA....5110001M/abstract
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