

Kepler/K2 Science Conference IV Program

Version 2, May 22 2017

Monday, June 19

Session 1 Kepler & K2 Updates

- 8:00-9:00 Registration
- 9:00-9:15 Welcome to Ames & Logistics
- 9:15-9:30 Jessie Dotson: K2 Project Status & Future Opportunities
- 9:30-10:00 Susan Thompson (invited): Kepler's Final Exoplanet Catalog

10:00-10:30 Coffee Break

Session 2 Benchmark Systems from Kepler/K2

- 10:30-11:00 Jason Rowe (invited): Interesting benchmark systems from Kepler/K2
- 11:00-11:15 Rodrigo Luger: K2 unveils a seven-planet resonant chain in TRAPPIST-1
- 11:15-11:30 Songhu Wang: Improved Masses for the Potentially Habitable TRAPPIST-1 Planets
- 11:30-11:45 Courtney Dressing: Characterizing K2 Planetary Systems Orbiting Cool Dwarfs
- 11:45-12:00 Andrew Vanderburg: HARPS-N Observations of K2 Planet Candidates and Planet Masses in the WASP-47 System

12:00-13:30 Lunch Break

Session 3 Asteroseismology of Solar-Like Oscillators

- 13:30-14:00 Dennis Stello (invited): The asteroseismic revolution of red giant stars: from stellar interiors to the structure of the Milky Way
- 14:00-14:15 Matteo Cantiello: Asteroseismic Signatures of Evolving Internal Stellar Magnetic Fields
- 14:15-14:30 Enrico Corsaro: Spin alignment of stars in old open clusters
- 14:30-14:45 Jamie Tayar: Core and Surface Rotation Rates of Evolved Intermediate Mass Stars
- 14:45-15:00 Kevin Schlaufman: Joint Spectroscopic and Asteroseismic Analysis of Very Metal-poor Stars in the Kepler Field

15:00-15:30 Coffee Break

Session 4 Exoplanets & Stars

- 15:30-15:45 Erik Petigura: The California Kepler Survey: High-Resolution Spectroscopy of 1305 Stars Hosting Transiting Planets
- 15:45-16:00 Rob Wittenmyer: Revised radius estimates for K2 planet candidates from AAT/HERMES

- 16:00-16:15 Tim Bedding: Surface Gravities for 15,000 Kepler Stars measured from Stellar Granulation
- 16:15-16:30 Emily Sandford: Know the Planet, Know the Star: Precise Stellar Parameters with Kepler
- 16:30-16:45 Rachel Matson: Stellar companions of K2 Exoplanet Candidate Host Stars
- 16:45-17:00 Lea Hirsch: Assessing the Effect of Stellar Companions to Kepler Objects of Interest

17:00-tbd Poster Session I

Tuesday, June 20

Session 1 Extragalactic & Solar System Science

- 8:30-9:00 Armin Rest (invited): High-cadence Light Curves of Transients from the Kepler Telescope
- 9:00-9:15 Brad Tucker: The Kepler Supernova Cosmology Experiment - C16 and C17
- 9:15-9:30 Erin Ryan: K2's Keys to the Solar System: Lightcurves of Trojan and Hilda Asteroids
- 9:30-9:45 András Pal: A review of the results related to Solar System studies
- 9:45-10:00 Miguel de Val-Borro: K2 photometry of comet 67P/Churyumov-Gerasimenko

10:00-10:30 Coffee Break

Session 2 Solar System (cont'd) + Microlensing

- 10:30-10:45 Carey Lisse: K2 Observations of the Pluto-Charon System
- 10:45-11:15 Calen Henderson (invited): K2's Campaign 9: The First Automated Microlensing Survey from the Ground and from Space
- 11:15-11:30 Wei Zhu: K2C9 Early Science Results and Synergy with Spitzer Microlensing
- 11:30-11:45 Radek Poleski: K2 observations of microlensing superstamp in Campaign 9 and selected targets in Campaign 11
- 11:45-12:00 Matthew Penny: Forward Model Photometry of K2 Crowded Field Data

12:00-13:30 Lunch Break

Session 3 Exoplanet Formation & Evolution

- 13:30-14:00 Ruth Murray Clay (invited): Planet formation and evolution: Implications for planetary compositions
- 14:00-14:15 Aaron Rizzuto: The Exoplanet Migration Timescale from K2 Young Clusters
- 14:15-14:30 John Brewer: Beyond Metallicity: Chemical Tracers of Planet Formation

- 14:30-14:45 Samuel Grunblatt: Re-Inflated Planets Orbit Evolved Stars: Toward Solving a 17-Year-Old Puzzle in Exoplanet Science
- 14:45-15:00 Vincent van Eylen: Planets around evolved stars: formation or evolution?

15:00-15:30 Coffee Break

Session 4 Galactic Archeology

- 15:30-16:00 Jennifer Johnson (invited): Peering into the past: Galactic Archaeology with Kepler and K2
- 16:00-16:15 Joel Zinn: Mind the GAP: A 360 degree view of the Galaxy with the K2 Galactic Archaeology Program
- 16:15-16:30 Victor Silva Aguirre: Age dissection of the Milky Way disk using asteroseismology
- 16:30-16:45 Marc Pinsonneault: Asteroseismology and Spectroscopy for a Large Sample of Kepler Dwarfs and Subgiants
- 16:45-17:00 Ruth Angus: The ages of K2 dwarfs

19:00-20:30 Public Talk: An Evening with the Storytellers (Nadia Drake, Dennis Overbye, Mike Lemonick)

Wednesday, June 21

Session 1 Asteroseismology of Classical Pulsators

- 8:30-9:00 Conny Aerts (invited): Asteroseismology of Hot Stars
- 9:00-9:15 Timothy van Reeth: The interior rotation of intermediate-mass stars
- 9:15-9:30 Timothy White: Beyond the K2 bright limit: variability in the brightest stars in the ecliptic
- 9:30-9:45 László Molnár: The K2 RR Lyrae and Cepheid Survey: hunting for pulsating stars, near and far
- 9:45-10:00 JJ Hermes: Evidence from K2 for rapid rotation in the descendant of an intermediate-mass star

10:00-10:30 Coffee Break

Session 2 Exoplanet Occurrence Rates

- 10:30-11:00 Chris Burke (invited): Terrestrial Planet Occurrence Rates From Kepler: Past, Current, and Future
- 11:00-11:15 Danley Hsu: Characterizing Kepler Planet Occurrence Rates Using Approximate Bayesian Computation
- 11:15-11:30 Ian Crossfield: Crowd-sourced Planet Occurrence: Citizen Science with K2
- 11:30-11:45 Steve Bryson: Science Yield from the Kepler Certified False Positive Table
- 11:45-12:00 Adam Kraus: The Ruinous Impact of Close Binary Companions on Planetary Systems

12:00-13:30 Lunch Break

Session 3 Breakout Sessions Part I

13:30-15:00 Kepler Occurrence Rate Hack (Natalie Batalha)

13:30-15:00 Speed-Dating with TESS (Tom Barclay)

13:30-15:00 Gaussian Processes (Daniel Foreman-Mackey)

15:00-15:30 Coffee Break

Session 4 Breakout Sessions Part II

15:30-17:00 Kepler Occurrence Rate Hack (Natalie Batalha)

15:30-17:00 NASA Exoplanet Exploration Program Update (Karl Stapelfeldt)

15:30-17:00 EVEREST Tutorial and Hack Session (Rodrigo Luger)

Thursday, June 22

Session 1 Exoplanet Compositions

8:30-9:00 Angie Wolfgang (invited): The Mass-Radius "Relation" and the Diversity of Exoplanet Compositions

9:00-9:15 Eric Lopez: Predictions for the Transition Between Rocky Super-Earths and Gaseous Sub-Neptunes

9:15-9:30 BJ Fulton: The California-Kepler Survey. III. A Gap in the Radius Distribution of Small Planets

9:30-9:45 Tsevi Mazeh: The Planetary Mass-Radius Relation and its Dependence on Orbital Period as Measured by Transit Timing Variations and Radial Velocities

9:45-10:00 Luca Malavolta: Kepler-9 and Kepler-19: two pivotal systems that reconcile RV and TTV mass determinations

10:00-10:30 Coffee Break

Session 2 Rotation, Activity & Clusters

10:30-11:00 Luisa Rebull (invited): Stellar Rotation in Clusters with K2

11:00-11:15 Rebecca Esselstein: Determining the Rotation Periods of M67 and Their Implications on Stellar Evolution from K2 Data

11:15-11:30 Jason Curtis: The K2 Survey of Ruprecht 147

11:30-11:45 James Davenport: Stellar flare rate evolution revealed by Kepler

11:45-12:00 Hiroyuki Maehara: Starspot activity and superflares on solar-type stars

12:00-13:30 Lunch Break

Session 3 Rotation, Activity & Clusters

13:30-14:00 Jennifer van Saders (invited): Kepler's Insights into Angular Momentum Evolution

- 14:00-14:15 Gibor Basri: Direct Signatures of Differential Rotation on Active Kepler Stars
- 14:15-14:30 Michael Gully-Santiago: Physical properties of starspots
- 14:30-14:45 Ben Montet: Observing Stellar Activity Cycles with Kepler
- 14:45-15:00 David Ciardi: Variable Variability: Understanding How Stars Vary from 4 years of Kepler Data

15:00-15:30 Coffee Break

Session 4 Dynamics, Architectures & Binaries

- 15:30-15:45 Gongjie Li: Uncovering Circumbinary Planetary Architectural Properties from Selection Biases
- 15:45-16:00 Dan Fabrycky: Differing Tidal Dissipation in exo-Earths, Super-Earths, and Sub-Neptunes from Resonant Chains of Planets
- 16:00-16:15 Daniel Jontof-Hutter: Outer Architecture of Kepler-11: Constraints from Coplanarity
- 16:15-16:30 Jerome Orosz: Kepler Triple Systems and Tidal Apsidal Structure Constants for Low Mass Stars
- 16:30-16:45 Avi Shporer: Radial velocity monitoring of Kepler heartbeat stars
- 16:45-17:00 Jim Fuller: Resonance Locking of Tidally Excited Pulsations in the Heartbeat Star KIC8164262

17:00-tbd Poster Session II

Friday, June 23

Session 1 Exoplanet Compositions + Dynamics, Architectures & Binaries (cont'd)

- 8:30-8:45 Evan Sinukoff: Small Planet Masses and Compositions from K2
- 8:45-9:00 William Cochran: Small planets from K2: Rocky or Gaseous?
- 9:00-9:15 James Owen: Evaporation Of Close-in Planets: The “Evaporation Valley”
- 9:15-9:30 Lauren Weiss: The California Kepler Survey V: Stellar and Planetary Properties of Kepler's Multiplanet Systems
- 9:30-9:45 Sarah Millholland: Supervised Learning Detection of Sixty Non-Transiting Hot Jupiter Candidates
- 9:45-10:00 Bill Welsh: Non-Transiting Circumbinary Planets: Kepler's Hidden Gift

10:00-10:30 Coffee Break

Session 2 Rotation, Activity & Clusters (cont'd) + Other topics

- 10:30-10:45 Raphaëlle Haywood: Addressing stellar activity at every step in the HARPS-N RV follow-up of Kepler and K2 systems
- 10:45-11:00 Fabienne Bastien: Space-Based Light Curves as Predictors of Good Radial Velocity Planet Search Targets
- 11:00-11:15 Christina Hedges: Hunting for Dippers with Supervised Machine Learning
- 11:15-11:30 Alexej Goldin: Astrometry with Kepler: prospects and lessons learned

11:30-11:45 Flavien Kiefer: KIC8462852: boosting up the exocomet fragments model
11:45-12:00 Poster competition winners

12:00-13:30 Lunch

Session 3 Future & Outlook

13:30-14:00 Eric Mamajek (invited): Kepler/K2 in the Context of Future Exoplanet Missions
14:00-14:15 George Ricker: Unlocking the Secrets of Nearby Exoplanets with the Transiting Exoplanet Survey Satellite
14:15-14:30 Jessie Christiansen: TESSing the Waters: Coordinating the characterisation of HD 3167 as a learning experience for TESS follow-up
14:30-15:00 Dave Latham (invited): Kepler & K2 Highlights and Future Outlook

15:00 End of Conference

Poster Presentations

Contributed talk abstracts were converted to posters if they were not selected for a talk. Due to space restrictions we require all poster presenters to confirm their attendance and posters by June 5. Please visit the following link to confirm your poster:

https://docs.google.com/spreadsheets/d/1Ia1RuoYNGVHRQ_iY99AdU32ig6-zlvw9u0OzRy6YFCo/edit?usp=sharing

Participants who do not confirm using the above link may not be able to present their poster at the conference.

Graduate students and postdocs are also invited to indicate whether they are planning to participate in the poster competition. The winners will present their posters as a 5 minute talk on Friday morning. Details regarding the logistics of the competition (including information for the poster judges) will be sent out a later time.

Akeson, Rachel:	Kepler and K2 data in the NASA Exoplanet Archive
Angus, Ruth:	Testing stellar age models using co-moving K2 targets, identified with Gaia
Baranec, Christoph:	Robotic adaptive optics for visible and near-infrared characterization of stellar blends
Bayliss, Daniel:	Vetting HATSouth Exoplanet Candidates with K2
Bayliss, Daniel:	EPIC 201702477b - A High Density Transiting Brown Dwarf in a 41 day Orbit

Bayliss, Daniel:	HARPS-K2: A Large Program to Determine Densities for Low-Mass K2 Planets
Becker, Juliette:	Effects of Unseen Planetary Companions on Compact Exoplanetary Systems
Bell, Keaton:	A New Outburst Phenomenon in Cool Pulsating White Dwarf Stars
Biersteker, John:	Searching for Exoplanetary Oblateness Using Transit Depth Variations
Castanheira Endl, Barbara:	Asteroseismology of white dwarfs observed by Kepler and K2
Chang, Han Yuan:	Hyper-flares phenomena of M dwarfs
Charbonneau, David:	A temperate rocky super-Earth transiting a nearby cool star
Chontos, Ashley:	Asteroseismology of Kepler Exoplanet Hosts
Clanton, Christian:	The Dependence of Planet Occurrence Rate on Stellar Effective Temperature
Clarke, Riley:	Age-Activity Relationships in Kepler Wide Binaries
Cody, Ann Marie:	K2 Spies on the Lagoon
Colon, Knicole:	Preparing for JWST: Ground-Based Near-Infrared Studies of K2 Exoplanets
Coughlin, Jeffrey:	The Kepler Robovetter
Curtis, Jason:	A Warm Brown Dwarf Transiting a Solar Twin in a Benchmark Cluster: Discovered with an iPhone 6 at Disneyland
Dai, Fei:	Stellar Obliquity from Spot-crossings and Transit Mapping
Dalba, Paul:	Non-existent phantom stars and erroneous transit depth dilution
Davenport, James:	Rotating stars from Kepler observed with Gaia
Domagal-Goldman, Shawn:	Planet Classification, Beyond the Habitable Zone
Faigler, Simchon:	The dearth of short-period Neptunian exoplanets and its sharp edge: separating hot Jupiters and short-period super-Earths
Ford, Eric:	The Occurrence Rate of Planetary Architectures
Fukui, Akihiko:	Multiband Photometry of K2 Transiting Planets with MuSCAT and MuSCAT2
Garcia, Rafael A.:	Analysis of solar-like stars measured with DR25 Short-cadence data of Kepler main mission
Giampapa, Mark:	Rotation and Activity in the Suns of M67
Goldin, Alexey:	TBC
Gonzales, Erica:	Candidate Companions to K2 Stars From High-Resolution Follow-up Observations and the Effect on Planet Radii Due to Transit Dilution
Grziwa, Sascha:	The KESPRINT collaboration
Grziwa, Sascha:	Wavelet based filter methods for the advanced detection of transiting planets in K2 light curves.

Guo, Xueying:	Ensemble Atmospheric Properties of Small Planets around M Dwarfs
Gurumath, Shashanka:	Evidence of Missing Terrestrial Mass and Migration of Jovian planets from the Kepler exoplanetary data
Haas, Michael:	Kepler's Product Menagerie
Haghighipour, Nader:	Detection of Inclined, Non-Transiting Circumbinary Planets Using Kepler Data
Hardegree-Ullman, Kevin:	Spitzer Transit Follow-up of the HD 3167 System
Hardegree-Ullman, Kevin:	Planet Occurrence Rates Around Mid-Type M Dwarfs in the Kepler Field
Hoffman, Kelsey:	Using Molecular Dynamics to Study the Material Properties of Exoplanet Interiors
Huber, Daniel:	Asteroseismology and Gaia: Testing Scaling Relations Using 2200 Kepler Stars with TGAS Parallaxes
Ikuta, Kai:	Estimation of starspot properties on superflare stars with a new technique on the basis of Bayesian method
Isaak, Kate:	CHEOPS: CHaracterising ExOPlanet Satellite
Jenkins, Jon:	The Kepler Data Processing Handbook: A Field Guide to Prospecting for Habitable Worlds
Jenkins, Jon:	Status of the TESS Science Processing Operations Center (SPOC)
Johnson, Marshall:	Warm Jupiters and their Spin-Orbit Misalignments from Kepler, K2, and Doppler Tomography
Jontof-Hutter, Daniel:	A targeted sample of low-mass exoplanet characterizations from transit timing.
Kaleida, Catherine:	The MAST Kepler and K2 Archive
Kane, Stephen:	A Catalog of Kepler Habitable Zone Exoplanet Candidates
Kosiarek, Molly:	New Mass Measurements of K2-3 and GJ3470 from Radial Velocity Measurements
Kostov, Veselin:	Tatooine's Future
Kruse, Ethan:	K2 Planet Candidates Using Everest and QATS
Kuchar, Thomas:	Dying Stars in the Kepler Field: A Progress Report
Lee, Chien-Hsiu:	Properties of eclipsing binaries from all-sky surveys
Lee, Chien-Hsiu:	Time-domain studies of M31
Lissauer, Jack:	Deducing the Characteristic Architecture of Inner Planet Systems from Kepler Data
Livingston, John:	200 Candidates and Validated Planets from Year Two of K2
Livingston, John:	Spitzer Confirmation of Planet Candidates from K2
Luhn, Jacob:	RVs with K2: Jitters, A New Planet, and Transit Probabilities for Subgiants

Martin, David:	Circumbinary planets - what Kepler has taught us and the complementary BEBOP radial velocity survey
Masuda, Kento:	Reassessment of the Null Result of the HST Search for Planets in 47 Tucanae
Mathur, Savita:	Studying the effect of magnetic activity on oscillations in solar-like stars
Matson, Rachel:	Radial Velocities of Kepler Eclipsing Binaries
Montiel, Edward:	K2 Observations of R Coronae Borealis Stars
Morello, Giuseppe:	Blind source separation for exoplanets data analysis
Morello, Giuseppe:	High-precision stellar limb-darkening in exoplanetary transits
Morello, Giuseppe:	ExoSim: an end-to-end simulator for transit spectroscopy
Morris, Brett:	The Active Latitudes of HAT-P-11
Murphy, Simon:	A planet in an 840-day orbit around a Kepler main-sequence A star
Nemec, James:	METAL ABUNDANCES FOR ~500 RR LYRAE STARS OBSERVED BY K2 (CAMPAIGNS 0-6)
Nemec, James:	DOUBLE-MODE RR LYRAE STARS OBSERVED DURING K2 CAMPAIGNS 1-6
Nemec, James:	SX PHE STARS IN THE KEPLER FIELD
Notsu, Yuta:	Statistical properties of superflares on solar-type stars with Kepler data
Notsu, Yuta:	Spectroscopic observations of solar-type superflare stars found from Kepler
Ofir, Aviv:	A spectral approach to transit timing variations
Olmedo Aguilar, José M.:	Near-UV Excesses and Variability of 660,000 Sources in the Kepler Field
Pál, András:	TESS in the Solar System
Paudel, Rishi R.:	K2 Survey of Ultracool Dwarfs
Peralta, Raphaël:	Extraction of seismic indices and stellar granulation parameters for CoRoT and Kepler red giants using the MLEUP method
Ragozzine, Darin:	The Importance of Multi-Transiting Probability for Debiased Exoplanetary System Architectures
Ranc, Clément:	Simultaneous K2 Photometry and Light Curves Modeling for the Analysis of K2C9 Microlensing Observations
Rodriguez, Joey:	Constraining Planet Migration with K2 and TESS: Two Small Planets Transiting HD 106315
Rowden, Pamela:	Kepler as a calibrator for the false positive rate in future transiting exoplanet surveys
Rustamkulov, Zafar:	A New Model for High-Resolution Exoplanet Transmission Spectroscopy

Ryan, Erin:	K2's Keys to the Solar System: Asteroid shape models from long baseline photometry
Schlieder, Joshua:	On The Trail of Jovians Transiting Low-Mass Stars with K2
Scott, Nic:	Speckle imaging follow-up for Exoplanet Validation and characterization
Sheets, Holly:	A Statistical Characterization of Reflection and Refraction in the Atmospheres of sub-Saturn Kepler Planet Candidates
Shporer, Avi:	K2 Warm Jupiters with the LCO TECH Team
Skinner, Julie:	Activity and Planets at the Bottom of the Main Sequence
Socia, Quentin:	KIC 9832227: Testing the Red Nova Merger Prediction Using Vulcan Data
Somers, Garrett:	Testing models of M dwarf angular momentum evolution with K2 young cluster rotation rates
Stauffer, John:	The Role of Binarity in the Angular Momentum Evolution of M Dwarfs
Stefansson, Gudmundur:	Extreme precision photometry from the ground with beam-shaping diffusers to follow-up Kepler, K2, and TESS targets
Thompson, Susan:	Kepler DR25 Exoplanet Catalog Highlights
Thorngren, Daniel:	Bayesian Inference of Hot Jupiter Radius Anomalies Points to Ohmic Dissipation
Trust, Otto:	Age of rotating stars in NGC 6811 Open cluster
Tucker, Brad:	GLUV - A High-Altitude Balloon-Borne UV Survey
Van Saders, Jennifer:	A K2 Stellar Astrophysical Study of the Old Open Cluster M67
Vega, Laura:	Evidence for Possible Disk Obscuration in Kepler Observations of the Pulsating RV Tau Variable DF Cygni
Vrard, Mathieu:	Amplitudes and lifetime of radial modes in red giant star spectra observed by Kepler
Wang, Ji:	Studying Planets in Binary Stars in Kepler and K2 Field of View
Wang, Songhu:	Kepler-9 -- A New Look at a Classic Planetary System
Werner, Michael:	Spitzer Meets K2 - A Status Report
Windemuth, Diana:	Searching for Tatooines
Ziegler, Carl:	The Robo-AO KOI Survey: LGS-AO Imaging Of Every Kepler Planetary Candidate Host Star