

Howard Chen

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Taiwan Citizen, US Permanent Resident

Education

2016- Present Ph.D in Planetary Science, Northwestern University
May 2016 B.A. in Physics, Boston University
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Research Interests

Earth Climate Modeling, Exoplanet Structure, Astrobiology
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Publications & Talks

REFERRED JOURNAL ARTICLES

Howard Chen, Sourav Chatterjee ‘How do Planetesimal-Collisions Impact the Evolution of Sub-Neptune Sized Planets?’ *The Astrophysical Journal Letters*,

Howard Chen, Jing-Jung Liu, David Catling, James F. Kasting ‘The Response of Earth’s Surface Temperature to Variations in Oxygen Concentration in the Atmosphere,’ *Geophysical Research Letters*,

Howard Chen and Leslie Rogers, ‘Evolutionary Analysis of Gaseous Sub-Neptune-Mass Planets with MESA,’ *The Astrophysical Journal*, 2016

James F. Kasting, Howard Chen and Ravi Kopporapu, ‘Stratospheric Temperatures and Water Loss in the Moist Greenhouse Atmospheres of Earth-like Planets,’ *The Astrophysical Journal Letters*, Published 2015 October 22

Everett Schlawin, Ming Zhao, Howard Chen, and +3 other contributing authors ‘Reduced Activity and Large Particles from the Disintegrating Planet Candidate KIC 12557548b,’ *The Astrophysical Journal*, 2016 (*Accepted*)

CONFERENCE ABSTRACTS

Howard Chen, Leslie Rogers, James Kasting “From Sub-Neptunes to Earth-like Exoplanets: Modeling Optically Thick and Thin Planetary Atmospheres,” 2380917, *American Astronomical Society*

Abstracts, Kissimmee FL, January 2016.

Howard Chen and Leslie Rogers, “Constructing Mass-Radius Relationships of Low Mass Gaseous Extrasolar Planets with MESA,” 2097026, *American Astronomical Society Abstracts*, Seattle WA, January 2015.

Chin Wu Chen, Howard Chen, Lindsay Yuling Choang, Tsong-Liang Wen, “Shear wave splitting unmasks deformation properties in the Eastern Himalayan Syntaxis and Namchabarwa region” D111A-2173. *Proceedings of the American Geophysical Union*, San Francisco CA, December, 2013.

TALKS

Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Taiwan

Lunch Talk

July 11th, 2016

“From Earth to Super-Earths: Modeling Optically Thick and Thin Planetary Atmospheres”

Harvard-Smithsonian Center for Astrophysics (CfA), Cambridge, MA

Small-Scale Phenomenon Seminar

September 28th, 2015

“From Sub-Neptunes to Earth-like Exoplanets: Modeling Thick and Thin Planetary Atmospheres”

Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Taiwan

Lunch Talk

May 18th, 2015

“Modeling Highly Irradiated Very Low Mass Gaseous Exoplanets with Stellar Evolution Code MESA”

National Central University Institute of Astronomy, Taoyuan, Taiwan

Colloquium

May 15th, 2015

“Modeling Highly Irradiated Very Low Mass Gaseous Exoplanets with Stellar Evolution Code MESA”

Undergraduate Research Opportunities Program Research Symposium, Boston University

Poster Presentation

October, 17th, 2014

“On the Thermal Evolution of Low mass Gaseous Extrasolar Planets”

Summer Undergraduate Research Fellowship Poster Session, Caltech, Pasadena CA

Poster Presentation

August 18th, 2014

“On the Thermal Evolution of Low mass Gaseous Extrasolar Planets”

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Observing Experience

WIRC on Palomar Hale 200 inch Telescope, Palomar Observatory, San Diego, CA

Caltech SURF Student Observing Opportunity

August 17th, 2014

KIC-1255 Simultaneous Observation with IRTF (Cornell)

Skills

Advanced Level: \TeX , \LaTeX , Modules for Experimental Stellar Astrophysics (MESA), Kasting Radiative-Convective Climate Code

Novice Level: Interactive Data Language HST Pipeline, SAC (Seismic Analysis Code), Perple_X
Languages: Python, C-Shell, FORTRAN, IDL

Professional Affiliations & Activities

American Astronomical Society , Washington D.C., USA Junior Member	2014 – Present
American Geophysical Union , Washington D.C., USA Student Member	2013 – Present

References

James F. Kasting

Evan Pugh Distinguished Professor of Geosciences & Meteorology
Penn State University
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