

CHENG LI

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EDUCATION	Ph.D. Planetary Science, California Institute of Technology	2016
	B.S. Atmospheric Physics, Peking University	2011
RESEARCH POSITIONS	California Institute of Technology Postdoc Scholar, Juno mission team member	2017 – 2018
	Jet Propulsion Laboratory NASA Postdoc Program fellow	2016 – 2017
AWARDS	51 Pegasi b Fellowship (Heising-Simons Foundation)	2019
	NASA Postdoc Program Fellowship (NPP)	2016
	NASA Earth and Space Science Fellowship	2015
	Student of Academic Excellence, Peking University	2010
	The Piang'an Insurance Inspirational Scholarship	2009
	The Junyuan Tang Undergraduate Scholarship	2008 – 2011
	The First Prize of the 23 rd National Olympiad in physics, Shanghai, China	2006
PUBLICITY	Scientific American: Juno Reveals Jupiter's Deep Secrets https://www.scientificamerican.com/article/juno-reveals-jupiters-deep-secrets/	2017
	CBS News: Storms the size of Earth on Saturn, explained http://www.cbsnews.com/news/storms-the-size-of-earth-on-saturn-explained/	2015
	Afpbb.com News: 土星の巨大嵐「大白斑」の謎を解明、米大学研究 http://www.afpbb.com/articles/-/3045309	2015
PROFESSIONAL SERVICES	Presentation Judge: 2016 EGU OSPP / 2017 AGU OSPP	
	Session Chair: 2017 AGU / 2018 AGU / 2018 DPS	
	Referee: Nature Astronomy / Astronomy and Astrophysics / Journal of Fluid Mechanics / Icarus / Journal of Atmospheric Sciences	
	Grant Reviewer: 2017 NASA NESSF	
PUBLICATIONS	[16] Li, Cheng , X. Chen. Simulating Non-hydrostatic Atmospheres on Planets (SNAP): formulation, validation, and application to the Jovian atmosphere, <i>ApJS</i> , 240,2 (2019)	
	[15] Fan, Siteng, D. Shemansky, C. Li , P. Gao, Y. Yung. Retrieval of hydrocarbon and nitrile species in Titan's upper atmosphere, <i>ESS</i> , under review (2019)	
	[14] Li, Cheng , T. Le, X. Zhang, Y. Yung, 2018. A High-performance Atmospheric Radiation Package: with applications to the radiative energy budgets of giant planets, <i>JQSRT</i> , 217,353-362 (2018)	
	[13] Brown, Shannon, M. Janssen, V. Adumitroaie, S. Bolton, S. Gulkis, A. Ingersoll, S. Levin, C. Li , L. Li, J. Lunine, S. Misra, G. Orton, P. Steffes, F. Tabataba-Vakili, I. Kolmasova, M. Imai, O. Santolik, W. Kurth, G. Hospodarsky, D. Gurnett, J. Connerney. Detection of lightning sferics on Jupiter from Pole to Pole, <i>Nature</i> , 558, 87-90 (2018)	
	[12] Li, Cheng , A. Ingersoll, F. Oyafuso. Moist adiabats with multiple condensing species: A new theory with application to giant planet atmospheres, <i>JAS</i> , 75(4),1063-1072 (2018)	
	[11] Li, Cheng . Disrupting the atmospheric beat, <i>Nature Astronomy</i> , 1.11:753 (2017)	
	[10] Ingersoll, A.P., V. Adumitroaie, M. Allison, S. Atreya, A. Bellotti, S. Bolton, S. Brown, S. Gulkis, M. Janssen, S. Levin, C. Li , L. Li, J. Lunine, G. Orton, F. Oyafuso, P. Steffes. Implications of the ammonia distribution on Jupiter from 1 to 100 bars as measured by the Juno microwave radiometer. <i>GRL</i> , 44,7576-7685 (2017)	
	[9] Li, Cheng , A.P. Ingersoll, M.A. Janssen, S.M. Levin, S.T. Bolton, V. Adumitroaie, M.D. Allison, J. Arballo, A.A. Bellotti, S.T. Brown, S. Ewald, L. Jewell, S. Misra, G.S. Orton, F.A. Oyafuso, P.G. Steffes, R. Williamson. The distribution of ammonia on Jupiter from inversion of Juno Microwave Radiometer data. <i>GRL</i> , 44(11) (2017)	

- [8] Orton, G.S., T. Momary, A. Ingersoll, A. Adriani, C. Hanssen, M. Janssen, J. Arballo, S. Atreya, S. Bolton, S. Brown, M. Caplinger, D. Grassi, **C. Li**, S. Levin, M. Moriconi, A. Mura, G. Sindoni. Multiple-Wavelength Sensing of Jupiter During the Juno Mission's First Perijove Passage. *GRL*, 44(10) (2017)
- [7] Bolton, S.J., A. Adriani, V. Adumitroaie, J. Anderson, S. Atreya, J. Bloxham, S. Brown, J. E.P. Connerney, E. DeJong, W. Folkner, D. Gautier, S. Gulkis, T. Guillot, C. Hansen, W.B. Hubbard, L. Iess, A. Ingersoll, M. Janssen, J. Jorgensen, Y. Kaspi, S. Levin, **C. Li**, J. Lunine, Y. Miguel, A. Mura, G. Orton, T. Owen, M. Ravine, E. Smith, P. Steffes, E. Stone, D. Stevenson, R. Thorne, J. Waite, D. Durante, R. W. Ebert, T.K. Greathouse, V. Hue, M. Parisi, J. R. Szalay, R. Wilson. Jupiter's interior and deep atmosphere: the first close polar pass with the Juno spacecraft. *Science*, 356(6340) (2017)
- [6] Janssen, M.A., J. Oswald, S. Brown, S. Gulkis, S. Levin, S. Bolton, M. Allison, S. Atreya, D. Gautier, A. Ingersoll, J. Lunine, G. Orton, T. Owen, P. Steffes, V. Adumitroaie, A. Bellotti, L. Jewell, **C. Li**, et al. MWR: Microwave radiometer for the Juno Mission to Jupiter. *SSR*, 1-17 (2017)
- [5] Trammell, H., L. Li, X. Jiang, Y. Pan, M. Smith, E. Bering III, S. Horst, A. Vasavada, A. Ingersoll, M. Janssen, R. West, C. Porco, **C. Li**, A. Simon, K. Baines, 2016. Vortices in Saturn's Northern Hemisphere (2008-2015) observed by Cassini ISS. *JGR - Planets*, 121.9, 1814-1826 (2016)
- [4] **Li, Cheng**, A. Ingersoll. Moist convection in hydrogen atmospheres and the frequency of Saturn's giant storms, *Nature Geoscience*, 8, 398-403 (2015)
- [3] **Li, Cheng**, X. Zhang, P. Gao, Y. Yung. Vertical distribution of C₃-hydrocarbons in the stratosphere of Titan, *ApJL*, 803, L19 (2015)
- [2] Gao, P., R. Y. Hu, T. Robinson, **C Li**, Y. Yung. Stabilization of CO₂ atmosphere on exoplanets around M dwarf stars, *ApJ*, 806, 249 (2015)
- [1] **Li, Cheng**, X. Zhang, J. Kammer, M. Liang, R. Shia, Y. Yung. A non-monotonic eddy diffusivity profile of Titan's atmosphere revealed by Cassini observations. *PSS*, 104, Part A(0), 48-58 (2014)

SELECTED SEMINARS

- N. Nakamura, **C. Li** (presenting author), L. Schoon, M. Shete, Morphology of stratospheric sudden warming – insights from a rotating tank experiment. 2018/12
- C. Li**, 3D mapping of Jupiter's ammonia distribution, U Michigan (**Invited**) 2018/10
- C. Li**, The unsolved questions raised by Juno/MWR, Harvard (**Invited**) 2018/07
- C. Li**, A whole new Jupiter, UC Santa Cruz (**Invited**) 2018/02
- C. Li**, The first year of Juno observing Jupiter's atmosphere, UC Berkeley CIPS seminar (**Invited**) 2018/01
- C. Li** & A. Ingersoll, Shallow water modeling of Jovian polar jets and vortices, 50th DPS, Provo 2017/10
- C. Li** & M. Janssen, Aftermath of the Giant Saturn Storm of 2010-2011 as observed by the Cassini RADAR 2.2-cm radiometer, Cassini PSG meeting 2017/09
- C. Li** & the Juno/MWR science team, Preliminary results on Jupiter's atmosphere using the Juno Microwave Radiometer, 14th AOGS, Singapore (**Invited**) 2017/08
- C. Li** & A. Ingersoll, Shallow water modeling of Jovian polar jets and vortices, 21st AOFD, Portland 2017/06
- C. Li** & the Juno/MWR science team, Jupiter's global ammonia distribution, EGU 2017, Vienna 2017/04
- C. Li**, Juno's discovery of Jupiter's atmosphere: a beta version, Dix Planetary Science Seminar, Caltech (**Invited**) 2017/03
- C. Li** & the Juno/MWR science team, Ammonia in Jupiter's troposphere: first result from Juno Microwave Radiometer, 49th AGU Fall Meeting, San Francisco 2016/12
- C. Li**, Water, ammonia and the 30-year cycle of Saturn's storm, Macau University of Science and Technology (**Invited**) 2016/01
- C. Li**, A story of Saturn's giant storms, Peking University (**Invited**) 2015/12

C. Li & A. Ingersoll, Saturn's giant storms: Moist convection in hydrogen atmospheres, 48 th AGU Fall Meeting, San Francisco (Invited)	2015/12
C. Li , Estimating water, ammonia and dynamics with inversions of Juno microwave data, Juno Science Meeting, JHU/APL	2015/11
C. Li & A. Ingersoll, Revisiting the Galileo Probe result by a stretched atmospheric model, 47 th DPS, Washington D.C.	2015/11
C. Li , Saturn's Giant Storms: Moist Convection in Hydrogen Atmospheres, Cassini PSG Meeting, Caltech/JPL	2015/10
C. Li & Y. Yung, Towards a complete understanding of hydrocarbon chemistry in the stratosphere of Titan: from C-1 to C-3, 46 th DPS, Tucson	2014/10
C. Li & A. Ingersoll, Moist convection in hydrogen atmospheres and the frequency of Saturn's giant storms, 47 th AGU Fall Meeting, San Francisco	2014/12
C. Li & A. Ingersoll, Modeling Saturn's giant storms, 45 th DPS, Denver	2013/10
C. Li & Y. Yung, Revision of photochemical modeling of Titan's atmosphere, 44 th DPS, Reno	2012/10
C. Li & A. Ingersoll, Exploring the Giant Saturnian Storm in 2010: A Model of Moist Convection, 45 th AGU Fall Meeting, San Francisco	2012/12