Curriculum Vitae

Eli Galanti

April 2026

Personal details:

Department of Earth and Planetary Sciences
Weizmann Institute of Science
Tel: 972-52-5448122, e-mail: eli.galanti@weizmann.ac.il

Education

- Postdoctoral Research Scientist -International Research Institute for Climate Prediction, Columbia University. Field: Seasonal SST prediction. Advisor – Dr. Steve Zebiak. October 2002 - July 2004.
- Ph.D. Weizmann Institute of Science. Thesis: Dynamics and predictability of ENSO. Advisor – Prof. Eli Tziperman. March 2003.
- B.Sc. Geophysics and planetary sciences, Tel Aviv University. Field: geophysics and atmospheric dynamics. Magna Cum Laude. August 1996.

Employment

- Department of Earth and Planetary Sciences, Weizmann Institute of Science:
  - Senior Staff Scientist. May 2024 – Present.
  - Associate Staff Scientist. May 2020 – April 2024.
  - Assistant Staff Scientist. April 2016 – April 2020.
  - Research Scientist. September 2014 – March 2016.
- Tel Aviv University:
  - Research Scientist. Department of Geophysics and Planetary Sciences, April 2007 –August 2014.
  - Fellow, The Porter School of Environmental Studies. August 2004 – March 2007.

Mission Roles & Leadership

- Lead, Working Group 4 (Jupiter Atmosphere), European Space Agency (ESA) Jupiter Icy Moons Explorer (JUICE).
- Co-Investigator, ESA JUICE.
- Member, NASA Juno mission science team.
- Editor, Planetary Research.

Awards

- NASA Group Achievement Award (Juno Radio Occultation Team; recipient), 2025.
- Weizmann Travel Grant for Staff Scientists. 2022 and 2025.
- Maxine Singer Prize to Outstanding Staff Scientists for 2020.
- Rieger-JNF fellowship for Environmental Studies. 1999-2001.

Invited talks

- JUICE Science Team Meeting, Darmstadt, Germany. The Juno radio-occultation measurements.10/2024.
- Matter in Extreme Condition Workshop, HUJI, Israel. The zonal winds of Jupiter and Saturn and their possible interaction with the magnetic field. 01/2023.
- Frontiers in dynamo theory: from the Earth to the stars, Isaac Newton Institute for Mathematical Sciences. Cambridge University, UK. The deep winds of Jupiter and Saturn as inferred from Recent Gravity and Magnetic Measurements. 12/2022.
- 8th Joint Workshop on High Pressure, Planetary and Plasma Physics. Dresden, Germany. The deep winds of Jupiter and Saturn: similarities and differences. 10/2019.
- EPSC-DPS joint meeting, Geneva, Switzerland. Saturn's deep atmospheric flows in light of the Cassini gravity and magnetic measurements. 09/2019.
- JUICE SWT workshop, ESTEC, Noordwijk, Netherlands. The deep dynamics of Jupiter and Saturn.03/2019.
- EGU meeting, Vienna, Austria. The depth of Jupiter's zonal jet-streams as inferred from the Juno gravity measurements. 04/2018.
- AOGS meeting, Singapore. Determining the Depth of Atmospheric and Interior Flows on Jupiter from the Juno Gravity Measurements. 08/2017

Peer review

- Science, Nature, Nature Astronomy, Nature Communications, PNAS, GRL, JGR, Astrophysical Journal, Icarus, J. of Climate, J. of Atmospheric Sciences, Environmental Modeling & Software, Atmospheric Research, J. Atmos. Solar-Terrestrial Phys, Physica A., MNRAS.
- Grant proposals review – NASA, Israel Science Foundation (ISF)

Teaching at the Weizmann Institute of Science

- Introduction to the Earth Climate System (2026, 2024, 2020, 2017)
- Introduction to Mathematical Methods for Modeling and Data Analysis (2025, 2023, 2021, 2019, 2017)
- Global warming debates (2022, 2020, 2018)

(First two are core courses at the Faculty of Chemistry. All courses are taken by around 20 students)

Participation in grants

- 2025. Characterizing Jupiter's interior structure using machine learning. Weizmann Institute for Artificial Intelligence. 185,000$ (CO-PI with Prof. Yohai Kaspi, Weizmann).
- 2022. JUICE Occultations of Jupiter. Israel Space Agency. 500,000$ (with Prof. Yohai Kaspi, Weizmann)
- 2020. Unraveling the flow structure on Jupiter and Saturn using synergized analysis of magnetic and gravity measurements. IMOS. 180,000$ (CO-PI with Yohai Kaspi).
- 2017. Data analysis of the 2016-2018 Juno and Cassini spacecraft observations. IMOS. 165,000$ (CO-PI with Yohai Kaspi).
- 2017. JUICE Occultations of Jupiter. Israel Space Agency. 600,000$ (with Prof. Yohai Kaspi, Weizmann)
- 2014. JUICE Occultations of Jupiter. Israel Space Agency. 480,000$ (with Prof. Yohai Kaspi, Weizmann)
- 2014. Inferring the sub-cloud-layer atmospheric dynamics on Jupiter from Juno’s gravity measurements. Ministry of Science. 120,000$ (with Prof. Yohai Kaspi, Weizmann).

Selected presentations (2025–Present)

- AOGS, Singapore. An Overview of the Juno Radio Occultations at Jupiter. 08/2026. (Oral)*
- AOGS, Singapore. Juno Microwave Radiometer Observation of Jupiter's Polar Atmosphere. 08/2026. (Oral)*
- EGU meeting, Vienna, Austria. A Juno radio-occultation view of Jupiter's ionosphere with implications for magnetosphere-ionosphere coupling. 05/2026. (Oral)
- EGU meeting, Vienna, Austria. The latitudinal and vertical structure of Venus' thermal tides as inferred from radio occultations. 05/2026. (Oral)
- EGU meeting, Vienna, Austria. An overview of the Juno radio occultations at Jupiter. 05/2026. (Oral)*
- EGU meeting, Vienna, Austria. Juno results: implications on the origin and evolution of Jupiter and exoplanets. 05/2026. (Oral)*
- EGU meeting, Vienna, Austria. Characteristic interior structures of Jupiter and Saturn revealed with machine learning. 05/2026. (Oral)*
- EGU meeting, Vienna, Austria. From gas to ice giants: a unified mechanism for equatorial jets. 05/2026. (Oral)*
- EGU meeting, Vienna, Austria. New constraints on Jupiter's ionosphere from Juno radio occultations. 05/2026. (Poster)*
- AGU meeting, New Orleans, USA. Analysis of Jupiter's atmospheric thermal structure using two years of Juno radio occultations. 12/2025. (Oral)*
- EPSC-DPS joint meeting, Helsinki, Finland. The shape of Jupiter redefined by Juno. 09/2025. (Oral)*
- EPSC-DPS joint meeting, Helsinki, Finland. Juno radio-occultation measurements of Jupiter's atmosphere and structure. 09/2025. (Oral/Poster)*
- EPSC-DPS joint meeting, Helsinki, Finland. From gas to ice giants: a unified mechanism for equatorial jets. 09/2025. (Oral)*
- EPSC-DPS joint meeting, Helsinki, Finland. Implications of a radiative zone on Jupiter's gravity field and atmospheric dynamics. 09/2025. (Oral)*
- AOGS, Singapore. The Shape of Jupiter Redefined by Juno. 08/2025. (Oral)
- Analysis of Jupiter's Atmospheric Thermal Structure Using Juno Radio Occultations. 08/2025. (Oral)*
- EGU meeting, Vienna, Austria. The shape of Jupiter in light of the Juno radio occultation measurements. 04/2025. (Oral)
- EGU meeting, Vienna, Austria. Geodetic modeling of gas giants: an integrated approach applied to Jupiter. 04/2025. (Oral)*
- EGU meeting, Vienna, Austria. Characterizing Jupiter's interior using machine learning reveals four key structures. 04/2025. (Oral)*
- EGU meeting, Vienna, Austria. Radio occultations with Juno: unveiling the structure of Jupiter's polar atmosphere and ionosphere. 04/2025. (Oral)*
- EGU meeting, Vienna, Austria. A mechanism for equatorial jet formation on ice giants. 04/2025. (Poster)*

* Presented by collaborators

Earlier Presentations

- Over 150 additional presentations (1998 - 2024) at major international conferences (AGU, EGU, EPSC-DPS, COSPAR, AOGS, AOFD, DPS, IUGG), covering planetary atmospheric dynamics and interiors, gravity and magnetic constraints, radio occultations, and Earth climate and ocean–atmosphere interactions.

Involvement in student supervising

- Rachel Navon, Ph.D. student, Weizmann Institute (with Prof. Yohai Kaspi)
- Maayan Ziv, Ph.D. student, Weizmann Institute (with Prof. Yohai Kaspi)
- Maria Smirnova, Ph.D student, Weizmann Institute (with Prof. Yohai Kaspi)
- Keren Duer, Ph.D student, Weizmann Institute (with Prof. Yohai Kaspi)
- Dana Raiter, M.Sc. student, Weizmann Institute (with Prof. Yohai Kaspi)
- Marzia Parizi, Postdoctoral fellow, Weizmann Institute (with Prof. Yohai Kaspi)
- Morgan O'Neill, Postdoctoral fellow, Weizmann Institute (with Prof. Yohai Kaspi)
- Talia Tamarin, Ph.D student, Weizmann Institute (with Prof. Yohai Kaspi)
- Hilla Afargan, Ph.D student, Weizmann Institute (with Prof. Yohai Kaspi)
- Joe Davighi, visiting student, Weizmann Institute (with Prof. Yohai Kaspi)
- Hofit Shahaf, M.Sc., Tel Aviv University (with Prof. Colin Price)
- Keren Mezuman, M.Sc., Tel Aviv University (with Prof. Colin Price)
- Nitsa Haikin, Ph.D., Tel Aviv University (with Prof. Pinhas Alpert)
- Moriah Kohn, M.Sc., Tel Aviv University (with Prof. Colin Price)

Collaborators

- Prof. Takeshi Imamura, University of Tokyo, Tokyo, Japan
- Prof. Tristan Guillot, Observatoire de la Côte d'Azur, France.
- Prof. Paul Steffes, Georgia Institute of Technology, USA.
- Prof. Paolo Tortora, University of Bologna, Italy.
- Prof. Leigh N. Fletcher, University of Leicester, UK.
- Prof. Frederik Simons, Princeton University, USA.
- Prof. Yamila Miguel, Leiden University, the Netherlands.
- Prof. Luciano Iess, Sapienza University of Rome, Italy.
- Prof. Ravit Helled, Zurich University, Switzerland.
- Prof. Burkhard Militzer, UC Berkeley, USA.
- Prof. Hao Cao, UCLA, USA.
- Prof. William B. Hubbard, University of Arizona, USA.

List of Publications - April 2026

1) **Galanti, E.** and E. Tziperman, 2000: On ENSO's phase locking to the seasonal cycle in the fast SST, fast wave, and mixed mode regimes. *Journal of the Atmospheric Sciences*. 57, 2936-2950. Link

2) Harrison, M. J., A. Rosati, B. J. Soden, **E. Galanti,** and E. Tziperman, 2002: An evaluation of air-sea coupling for ENSO simulation and prediction. M*onthly Weather Review*, 130 (3), 723-732. Link

3) **Galanti, E.,** E. Tziperman, M. Harrison, A. Rosati, R. Giering, Z. Sirkes, 2002: The equatorial thermocline outcropping - A seasonal control on the tropical Pacific ocean-atmosphere instability. *Journal of Climate*, 15 (19), 2721-2739. Link

4) **Galanti, E.,** and E. Tziperman, 2003: A Mid-Latitude-ENSO teleconnection mechanism via baroclinically unstable long Rossby waves. *Journal of Physical Oceanography*. 33 (9), 1877-1888. Link

5) **Galanti, E.,** E. Tziperman, M. Harrison, A. Rosati, and Z. Sirkes, 2003: A study of ENSO prediction using a hybrid-coupled model and the adjoint method for data assimilation. M*onthly Weather Review*, 131 (11), 2748-2764. Link

6) Kohn, M., **E. Galanti**, C. Price, K. Lagouvardos and V. Kotroni, 2011: Now-Casting Thunderstorms in the Mediterranean Region using Lightning Data. *Atmos. Res.,* 100, 489-502. Link

7) Price, C., Y. Yair, A. Mugnai, K. Lagouvardos, M. C. Llasat, S. Michaelides, U. Dayan, S. Dietrich, **E. Galanti**, L. Garrote, N. Harats, D. Katsanos, M. Kohn, V. Kotroni, M. Llasat-Botija, B. Lynn, L. Mediero, E. Morin, K. Nicolaides, S. Rozalis, K. Savvidou, B. Ziv, 2011: The FLASH Project: Using lightning data to better understand and predict flash floods. *Environ. Sci. & Policy*, 14, 898-911. Link

8) Price, C., Y. Yair, A. Mugnai, K. Lagouvardos, M. C. Llasat, S. Michaelides, U. Dayan, S. Dietrich, F. Di Paola, **E. Galanti**, L. Garrote, N. Harats, D. Katsanos, M. Kohn, V. Kotroni, M. Llasat-Botija, B. Lynn, L. Mediero, E. Morin , K. Nicolaides, S. Rozalis, K. Savvidou, B. Ziv, 2011: Using lightning data to better understand and predict flash floods in the Mediterranean. *Surveys in Geophysics*, 32(6), 733-751. Link

9) Harnik, N., **E. Galanti**, O. Martius, and O. Adam, 2014: The anomalous merging of the African and North Atlantic jet streams during Northern Hemisphere winter of 2010. *Journal of Climate*, 27(19), 7319-7334. Link

10) Mezuman, K, C. Price, and **E. Galanti,** 2014: On the spatial and temporal distribution of global thunderstorm cells. *Environ. Res. Lett*. 9(12), 124023. Link

11) Haikin, N., T. Reisin, **E.Galanti.**, I. Mahrer, P. Alpert, 2015: Inner-structure of Atmospheric Inversion Layers in the Eastern Mediterranean. *Boundary-Layer Meteorology*. 156(3), 471-487. Link

12) Silver, I., C. Price, **E. Galanti**, and A. Shuval, 2015: Anomalously strong vertical magnetic fields from distant ELF/VLF sources. *JGR – Space Physics*. 120(7), 6036-6044. Link

13) Helled, R., **E. Galanti**, and Y. Kaspi, 2015: A fast spinning Saturn as determined from its gravitational field and oblateness. *Nature*, 520, 202-204. Link

14) Parisi M., **E. Galanti.,** S. Finocchiaro, L. Iess, and Y. Kaspi, 2016: Probing the depth of Jupiter's Great Red Spot with the Juno gravity experiment. *Icarus*, 267, 232-242. Link

15) **Galanti, E**. and Y. Kaspi, 2016: An adjoint based method for the inversion of the Juno and Cassini gravity measurements into wind fields. *The Astrophysical Journal*, 820(2), 91. Link

16) Kaspi, Y., J.E. Davighi, **E. Galanti** and W.B. Hubbard, 2016: The gravitational signature of internal flows in giant planets: Comparing the thermal wind approach with barotropic potential-surface methods. *Icarus*, 276, 170-181. Link

17) **Galanti, E.,** Y. Kaspi, and E. Tziperman, 2017: A full, self-consistent treatment of thermal wind balance on oblate fluid planets. *Journal of Fluid Mechanics*. 810, 175–195. Link

18) **Galanti, E.** and Y. Kaspi, 2017: Decoupling Jupiter's deep and atmospheric flows using the upcoming Juno gravity measurements and a dynamical inverse model. *Icarus*, 286, 46-55. Link

19) Wahl, S. M., W. B. Hubbard, B. Militzer, T. Guillot, Y. Miguel, N. Movshovitz, Y. Kaspi, R. Helled, D. Reese, **E. Galanti,** S. Levin, J.E. Connerney, S.J. Bolton, 2017: Comparing Jupiter interior structure models to Juno gravity measurements and the role of a dilute core. *Geophysical Research Letters*, 44. Link

20) **Galanti, E.,** D. Durante, S. Finocchiaro, L. Iess, and Y. Kaspi, 2017: Estimating Jupiter gravity field using Juno measurements, trajectory estimation analysis, and a flow model optimization. *The Astronomical Journal*, 154(2). Link

21) Kaspi, Y., T. Guillot, **E. Galanti,** Y. Miguel, R. Helled, W.B. Hubbard, B. Militzer, and S.M. Wahl, 2017: The effect of differential rotation on Jupiter's low-order even gravity moments. *Geophysical Research Letters*, 44, 5960-5968. Link

22) **Galanti, E.** and Y. Kaspi, 2017: Prediction for the flow-induced gravity field of Saturn: implications for Cassini's Grand Finale. *The Astrophysical Journal Letters*, 843, L25. Link

23) **Galanti, E.,** H. Cao, and Y. Kaspi, 2017: Constraining Jupiter's internal flows using Juno magnetic and gravity measurements. *Geophysical Research Letters*. 44:(16), 8173-8181. Link

24) Iess, I., W. M. Folkner, D. Durante, M. Parisi , Y. Kaspi, **E. Galanti**, T. Guillot, W. B. Hubbard, D. J. Stevenson, J. D. Anderson, D. R. Buccino, L. Gomez Casajus, A. Milani, R. Park, P. Racioppa, D. Serra, P. Tortora, M. Zannoni, H. Cao, R. Helled, J. I. Lunine, Y. Miguel, B. Militzer, S. Wahl, J. E. P. Connerney, S. M. Levin and S. J. Bolton, 2018: Measurement of Jupiter's asymmetric gravity field. *Nature*. 555, 220-222. Link

25) Kaspi, Y., **E. Galanti**, W. Hubbard, D. Stevenson, S. Bolton, L. Iess, T. Guillot, J. Bloxham, H. Cao, J. Connerney, D. Durante, W. Folkner, R. Helled, A. Ingersoll, J. Lunine, S. Levin, Y. Miguel, B. Militzer, M. Parisi, and S. Wahl, 2018: Jupiter's atmospheric jet streams extend thousands of kilometers deep. *Nature*, 555, 223-226. Link

26) Guillot, T., Y. Miguel, B. Militzer, W. Hubbard, Y. Kaspi, **E. Galanti**, H. Cao, R. Helled, S. Wahl, L. Iess, W. Folkner, D. Stevenson, J. Lunine, D. Reese, A. Biekman, M. Parisi, D. Durante, J. Connerney, S. Levin, and S. Bolton, 2018: A suppression of differential rotation in Jupiter's deep interior. *Nature*, 555, 227- 230. Link

27) **Galanti, E.**, Y. Kaspi, Y. Miguel, T. Guillot, D. Durante, P. Racioppa and L. Iess, 2019: Saturn's Deep Atmospheric Flows Revealed by the Cassini Grand Finale Gravity Measurements. *Geophysical Research Letters.* 46:(2)616-624. Link

28) Iess, I., B. Militzer, Y. Kaspi, P. Nicholson, D. Durante, P. Racioppa, A. Anabtawi, **E. Galanti**, W. Hubbard, M. J. Mariani, P. Tortora, S. Wahl, M. Zannoni, 2019: Measurement and implications of Saturn's gravity field and ring mass. *Science*. 364, 6445. Link

29) **Galanti, E**., Y. Kaspi, F. J. Simons, D. Durante, M. Parisi, S.J. Bolton, 2019: Determining the Depth of Jupiter's Great Red Spot with Juno: A Slepian Approach. *Astrophysical Journal Letters*, 874, L24. Link

30) Duer, K., **E. Galanti,** and Y. Kaspi, 2019: Analysis of Jupiter's Deep Jets Combining Juno Gravity and Time Varying Magnetic Field Measurements. *Astrophysical Journal Letters*, 879:L22. Link

31) Parisi, M., W. Folkner, **E. Galanti,** Y. Kaspi, D. Buccino, K. Oudrhiri, and S.J. Bolton, 2020: A mascon approach to estimating the depth of Jupiter's Great Red Spot with the Juno mission. *Planetary and Space Science*. 181, 104781. Link

32) Raiter, D., **E. Galanti** and Y. Kaspi, 2020: The Tropical Atmospheric Conveyor Belt: A Coupled Eulerian-Lagrangian Analysis of the Large-Scale Tropical Circulation. *Geophysical Research Letters*, 47, e2019GL086437. Link

33) Kaspi, Y., **E. Galanti**, A. Showman, D. Stevenson, T. Guillot, L. Iess, W. Hubbard and S.J. Bolton, 2020: Comparing the Deep Atmospheric Dynamics of Jupiter and Saturn in Light of the Juno and Cassini Gravity Measurements. *Space Science Reviews*, 216, 5, 84.. Link

34) Duer D., **E. Galanti**, and Y. Kaspi, 2020: The Range of Jupiter's Flow Structures Fitting the Juno Asymmetric Gravity Measurements. *JGR-Planets*, 125, 8. Link

35) Parisi, M., **E. Galanti**, W.M. Folkner, Y. Kaspi, and D.R. Buccino, 2020: Resolving the Latitudinal Short-scale Gravity Field of Jupiter using Slepian Functions. *JGR-Planets*, 125, 11. Link

36) **Galanti, E.** and Y. Kaspi, 2021: Combined magnetic and gravity measurements probe the deep zonal flows of the gas giants. *Monthly notices of the Royal Astronomical Society*, 501, 2352–2362. Link

37) **Galanti, E.,** Y. Kaspi, K. Duer, L. Fletcher, A. Ingersoll, C. Li, G. Orton, T. Guillot, S.M. Levin, and S., Bolton, 2021: Constraints on the Latitudinal Profile of Jupiter's Deep Jets. *Geophysical Research Letters*. 48, e2021GL092912. Link

38) Fletcher, L. N., F. A. Oyafuso, M. Allison, A. Ingersoll, L. Li, Y. Kaspi, **E. Galanti**, M. H. Wong, G. S. Orton, K. Duer, Z. Zhang, C. Li, T. Guillot, S. M. Levin, and S. Bolton, 2021: Jupiter's Temperate Belt/Zone Contrasts Revealed at Depth by Juno Microwave Observations. *JGR: Planets*. 126, 10 Link

39) Duer, K., N. Gavriel, **E. Galanti**, Y. Kaspi, L. N. Fletcher, T. Guillot, S. J. Bolton, S. M. Levin, S. K. Atreya, D. Grassi, A. P. Ingersoll, C. Li, L. Li, J. I. Lunine, G. S. Orton, F. A. Oyafuso, and J.H. Waite, 2021 :Evidence for Multiple Ferrel-like Cells on Jupiter. *Geophysical Research Letters*. 48, e2021GL095651. Link

40) Bolton, S. J., S. M. Levin, T. Guillot, C. Li, Y. Kaspi, G. Orton, M. H. Wong, F. Oyafuso, M. Allison, J. Arballo, S. Atreya, H. N. Becker, J. Bloxham, S. T. Brown, L. N. Fletcher, **E. Galanti**, S. Gulkis, M. Janssen, A. Ingersoll, J. L. Lunine, S. Misra, P. Steffes, D. Stevenson, J. H. Waite, R. K. Yadav, and Z. Zhang, 2021: Microwave observations reveal the deep extent and structure of Jupiter's atmospheric vortices. *Science*. 374, 968–972. Link

41) Parisi, M., Y. Kaspi, **E. Galanti**, D. Durante, S. J. Bolton, S. M. Levin, D. R. Buccino, L. N. Fletcher, W. M. Folkner, T. Guillot, R. Helled, L. Iess, C. Li, K. Oudrhiri, and M. H. Wong, 2021: The depth of Jupiter's Great Red Spot constrained by Juno gravity overflights. *Science*. 374, 6570, 964-968. Link

42) Nettelmann, N., N. Movshovitz, D. Ni, J. J. Fortney, **E. Galanti**, Y. Kaspi, R. Helled, C. R. Mankovich, and S. Bolton, 2021: Theory of Figures to the Seventh Order and the Interiors of Jupiter and Saturn. *The Planetary Science Journal.* 2, 6, 241. Link

43) **Galanti, E.**, D. Raiter, Y. Kaspi and E. Tziperman, 2022: Spatial Patterns of the Tropical Meridional Circulation: Drivers and Teleconnections. *JGR-Atmospheres*. 127, 2, e2021JD035. Link

44) Miguel, Y., M. Bazot, T. Guillot, S. Howard, **E. Galanti**, Y. Kaspi, W. B. Hubbard, B. Militzer, R. Helled, S. K. Atreya, J. E. P. Connerney, D. Durante, L. Kulowski, J. I. Lunine, D. Stevenson, and S. Bolton, 2022: Jupiter's inhomogeneous envelope. *Astronomy and astrophysics*. 662, A18. Link

45) Durante, D., T. Guillot, L. Iess, D. J. Stevenson, C. R. Mankovich, S. Markham, **E. Galanti**, Y. Kaspi, M. Zannoni, L. Gomez Casajus, G. Lari, M. Parisi, D. R. Buccino, R. S. Park, and S. J. Bolton, 2022: Juno spacecraft gravity measurements provide evidence for normal modes of Jupiter. *Nature Communications.* 13, 4632. Link

46) Militzer, B., W. B. Hubbard, S. Wahl, J. I. Lunine, **E. Galanti**, Y. Kaspi, Y. Miguel, T. Guillot, K. M. Moore, M. Parisi, J. E. P. Conner- ney, R. Helled, H. Cao, C. Mankovich, D. J. Stevenson, R. S. Park, M.

Wong, S. K. Atreya, J. Anderson, and S. J. Bolton, 2022: Juno Spacecraft Measurements of Jupiter's Gravity Imply a Dilute Core. *The Planetary Science Journal*. 3, 8, 185. Link

47) Howard, S, T. Guillot, M. Bazot, Y. Miguel, D. J. Stevenson, **E. Galanti**, Y. Kaspi, W. B. Hubbard, B. Militzer, R. Helled, N. Nettelmann, B. Idini, S. Bolton, 2023: Jupiter's interior from Juno: Equation-of-state uncertainties and dilute core extent. *Astronomy & Astrophysics*. Link

48) **Galanti, E.**, Y. Kaspi, and T. Guillot, 2023: The Shape of Jupiter and Saturn Based on Atmospheric Dynamics, Radio Occultations and Gravity Measurements. *Geophysical Research Letters*, 50, e2022GL102321.Link

49) Duer, K., **E. Galanti**, and Y. Kaspi, 2023: Gas giant simulations of eddy-driven jets accompanied by deep meridional circulation. AGU Advances, 4(6), e2023AV000330. Link

50) Kaspi, Y. **E. Galanti**, R. Park, K. Duer, N. Gavriel, D. Durante, L. Iess, M. Parisi, D. Buccino, T. Guillot, D. Stevenson, and S. Bolton, 2023: Observational evidence for cylindrically oriented zonal flows on Jupiter. Nature Astronomy. 7, 12, p. 1463-1472. Link

51) Fletcher, L. N., Cavalie, T., Grassi, D., Hueso, R., Lara, L.M, Kaspi, Y., **E. Galanti,** Greathouse, T.K., Molyneux, P.M., Galand, M., Vallat, C., Witasse, O., Lorente, R., Hartogh, P., Poulet, F., Langevin, Y., Palumbo, P., Gladstone, G.R., Retherford, K.D., Dougherty, M.K., Wahlund, J.E., Barabash, S., Iess, L., Bruzonne, L., Hussmann, H., Gurvits, L., Santolik, O., Kolmasova, I., Fischer, G., Muller-Wodarg, I., Piccioni, G., Fouchet, T., Gerard, J.C., Sanchez-Lavega, A., Irwin, P.J., Grodent, D., Altieri, F., Mura, A., and P. Drossart, 2023: Jupiter Science Enabled by ESA's Jupiter Icy Moons 2 Explorer. *Space Science Reviews*. 219, 7, 53. Link

52) Raiter, D., **E. Galanti**, R. Chemke, and Y. Kaspi, 2024. Linking Future Tropical Precipitation Changes to Zonally-Asymmetric Large-Scale Meridional Circulation. *Geophysical Research Letters*, 51(6), e2023GL106271. Link

53) Duer, K., **E. Galanti**, and Y. Kaspi, 2024: Depth Dependent Dynamics Explain the Equatorial Jet Difference Between Jupiter and Saturn. *Geophysical Research Letters*, 51(6), e2023GL107354. Link

54) Ziv, M., **Galanti, E**., Sheffer, A., Howard, S., Guillot, T., Kaspi, Y. (2024). NeuralCMS: A deep learning approach to study Jupiter's interior. *Astronomy & Astrophysics*, 686, L7. Link

55) Ziv, M., **Galanti, E**., Howard, S., Guillot, T., Kaspi, Y. (2024). Characterizing Jupiter's interior using machine learning reveals four key structures. *Astronomy & Astrophysics*, 692, A251. Link

56) Masters A., Modolo R., Roussos E., Krupp N., Witasse O., Vallat C., Cecconi B., Edberg N. J., Futaana Y., Galand M., Heyner D., Holmberg M., Huybrighs H., Jia X., Khurana K., Lamy L., Roth L., Sulaiman A., Tortora P., Barabash S., Bruzzone L., Dougherty M. K., Gladstone R., Gurvits L. I., Hartogh P., Hussmann H., Iess L., Poulet F., Wahlund J. E., Andrews D. J., Arridge C. S., Bagenal F., Baskevitch C., Bergman J., Bocanegra T. M., Brandt P., Bunce E. J., Clark G., Coates A. J., **Galanti, E**., Galli A., Grodent D., Jones G., Kasaba Y., Kaspi Y., Katoh Y., Kaweeyanun N., Khotyaintsev Y., Kimura T., Kollmann P., Mitchell D., Moirano A., Molera Calvés G., Morooka M., Müller-Wodarg I. C., Muñoz C., Mura A., Pätzold M., Pinto M., Plainaki C., Retherford K. D., Retinò A., Rothkaehl H., Santolík O., Saur J., Stenberg Wieser G., Tsuchiya F., Volwerk M., Vorburger A., Wurz P., Zannoni M. (2025). Magnetosphere and Plasma Science with the Jupiter Icy Moons Explorer. *Space Science Reviews*, 221(2), 24. Link

57) Duer-Milner, K., Gavriel, N., **Galanti, E**., Tziperman, E., Kaspi, Y. (2025). From gas to ice giants: A unified mechanism for equatorial jets. *Science Advances*, 11(41), eads8899. Link

58) **Galanti, E.**, Durante, D., Iess, L., Kaspi, Y. (2025). Observational constraints on the strength and depth of the zonal jets on Saturn. *Nature Communications*, 16, 2618. Link

59) Smirnova M., **Galanti, E**., Caruso A., Fletcher L. N., Buccino D. R., Gomez Casajus L., Hubbard W. B.,

Orton G. S., Parisi M., Park R. S., Zannoni M., Steffes P. G., Levin S. M., Bolton S. J., Tortora P., Kaspi Y. (2025) Probing Jupiter's Atmosphere Through Juno Radio Occultations: Analysis of the Atmospheric Thermal Structure. *Geophysical Research Letters*. 52, 22, e2025GL116. Link

60) Caruso A., Gomez Casajus L., Smirnova M., Buccino D., **Galanti, E**., Hubbard W. B., Togni A., Gramigna E., Parisi M., Park R. S., Zannoni M., Steffes P. G., Levin S. M., Bolton S. J., Tortora P., Kaspi Y. (2025). Probing Jupiter's Atmosphere Through Juno Radio Occultations: Methodology and Initial Observations. *Geophysical Research Letters*. 52, 22, e2024GL113. Link

61) Smirnova, M., **Galanti, E**., Fletcher, L. N., Buccino, D. R., Orton, G. S., Caruso, A., Fonsetti, M., Tortora, P., Steffes, P. G., Bolton, S. J., Kaspi, Y. (2026). Juno radio occultations reveal the structure of Jupiter's cold northern polar vortex. *Astronomy & Astrophysics*, 706, A109. Link

62) **Galanti, E.**, Smirnova M., Ziv M., Fonsetti M., Caruso A., Buccino D. R., Hubbard W. B., Militzer B., Bolton S. J., Guillot T., Helled R., Levin S. M., Parisi M., Park R. S., Steffes P., Tortora P., Withers P., Zannoni M., Kaspi Y. (2026). The size and shape of Jupiter. *Nature Astronomy.* Link

63) **Galanti, E.** and Kaspi Y. (2026). The shape of Jupiter is redefined by radio-occultation data from the Juno spacecraft. *Nature Astronomy*. Link

Refereed Book chapters:

64) Haikin, N., I. Mahrer, T. Reisin, **E. Galanti**, and P. Alpert, 2010: A high resolution study of Atmospheric dispersion over a coastal urban area with complex terrain. *Air Pollution Modeling and Its Application XX*, 75-80. Springer. Link

Other publications:

65) **Galanti, E.**, 2003: Dynamics and predictability of ENSO - a study using a hybrid-coupled model and the adjoint method. *Ph.D. Thesis*. Link