Curriculum vitae

Keren (Duer) Milner

Contact information

Phone: (+972) 528970990
Address: office 314, Sussmann building, Weizmann Institute of Science, Hertzl 234, Rehovot, Israel.
Email: keren.duer@weizmann.ac.il

Education

2018-present: **Weizmann institute of science, Rehovot, Israel**
PhD student (Department of Earth and planetary science)
Adviser: Prof. Yohai Kaspi
Expected graduation: 09/2022
Research focus: The interaction between the magnetic field of gas giants and their atmospheric flows. We incorporate MHD (magnetohydrodynamic) equations into a numerical GCM and analyze observations from the Juno spacecraft.

2016-2018: **Weizmann institute of science, Rehovot, Israel**
MSc student (Department of Earth and planetary science)
Adviser: Prof. Yohai Kaspi
Research focus: understanding the structure of Jupiter's deep jets using detailed analysis of Juno's gravity measurements combined with the time-varying magnetic measurements.

2013-2016: **The Hebrew university of Jerusalem, Israel**
BSc student (Department of Earth sciences)
Majored in atmosphere science and geology
Graduated with honors (GPA 93.6)
Academic coursework included fluid mechanics, geophysics, programming and physical oceanography.

Jul.-Aug. 2016: **Dalhousie university, Halifax, Canada**
Awarded the Schulich scholarship for a three weeks long course in field oceanography.

Professional experience

Mar.-Jul. 21: **Weizmann institute of science, Rehovot, Israel**
Teaching assistant for the course "Mathematical Methods For Modeling And Data Analysis".

Mar.-Jul. 20: **Weizmann institute of science, Rehovot, Israel**
Teaching assistant for the course "Introduction to the Global Climate System".

Oct. 18-Feb. 19: **Weizmann institute of science, Rehovot, Israel**
Teaching assistant for the course "Mathematical Methods For Modeling And Data Analysis".

Aug. 2017: **Davidson institute**
Instructor of high-school students in a summer science project.

2015-2016: **The Hebrew university of Jerusalem, Israel**
Research worker (during BSc)
Adviser: Prof. Hezi Gildor
Research focus: The different tidal components in the eastern Mediterranean using matlab and winADCP.

2015-2016: **The Virtual High School**
Physics tutor (during BSc)
Teaching assistant for virtual physics course in an all-girls religious high school as part of the formal studies in Israel.

2009-2011: **Israeli air force**
Teaching assistant for physics, maths, and aerodynamics courses in the Israeli flight school, in cooperation with Ben Gurion university, Be'er sheva, Israel.

Honors and awards

Dean's honor list 2013-2014
Dean's honor list 2014-2015
BSc graduating with honor
Best poster presentation award in 2019 AMS AOFD meeting

Participation in international meetings and schools

AGU fall meeting, New Orleans, USA. "Jupiter's Deep Meridional Circulation as Inferred From Juno's MWR". 12/2021, upcoming.

Juno media briefing, live broadcast on NASA TV. 10/2021. link

EGU meeting, virtual. "The relation between the zonal jets and ammonia anomalies in Jupiter". 05/2021.

IPS meeting, virtual. "The relation between the zonal jets and ammonia anomalies in Jupiter". 02/2021.

AGU fall meeting, virtual. "The statistical probability of deep flow structures that fit Jupiter's asymmetric gravity field". 12/2020.

EPSC meeting, virtual. "The range of flow structures fitting Jupiter's asymmetric gravity field". 09/2020.

EGU meeting, virtual. "The range of flow structures fitting Jupiter's asymmetric gravity field". 05/2020.

EPSC-DPS meeting, Geneva, Swiss. "New insight on Jupiter's deep flows using a combination of Juno gravity and magnetic field measurements". 09/2019.

AOFD meeting, Portland, Me, USA. "Analysis of Jupiter's deep jets combining Juno gravity and time-varying magnetic field measurements". 06/2019. (Poster)

EGU meeting, Vienna, Austria. "New insight on Jupiter's deep jets using the Juno gravity and magnetic field measurements". 04/2019.

GTP workshop, Boulder, USA. "The interaction between the flow and the magnetic field in atmospheres of gas-giants". 09/2018.

Fluid Mechanics of Planets and Stars, Udine, Italy. International course held in CISM center. 04/2018.

AGU fall meeting, New Orleans, USA. "Investigating Jupiter's Deep Flow Structure using the Juno Magnetic and Gravity Measurements". 12/2017. (Poster)

AOFD meeting, Portland, Or, USA. 06/2017.

Publications

Duer, K., Gabriel N., Galanti, E., Kaspi Y., et al. (2021). Evidence for multiple Ferrel-like cells on Jupiter. *Geophys. Res. Lett.* e2021GL095651 link

Galanti, E., Kaspi Y., **Duer, K.**, et al. (2021). Constraints on the Latitudinal Profile of Jupiter's Deep Jets. *Geophys. Res. Lett.* 48(9) link

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

Duer, K., Galanti, E., and Kaspi Y. (2020). The range of Jupiter's flow structures fitting the Juno asymmetric gravity measurements. *J. Geophys. Res. (Planets)* 125(8) link

Duer, K., Galanti, E., and Kaspi, Y. (2019). Analysis of Jupiter's deep jets combining Juno gravity and time-varying magnetic field measurements. *Astrophys. J. Let*. 879(2) link