# JADE H. CHECLAIR

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## EDUCATION

**University of Chicago** *Expected Summer 2021*
Ph.D., Geophysical Sciences

**University of Toronto** *June 2016*
B.Sc., Honors Physics
*with distinction*

## PUBLICATIONS

*5 lead-author, 7 total, 42 citations, h=3*

**Checlair, J.H.**, Salazar, A.M., Paradise, A., Menou, K., and Abbot, D.S. 2019. No Snowball Cycles at the Outer Edge of the Habitable Zone for Habitable Tidally Locked Planets, *The Astrophysical Journal Letters*, 887 (1), 3.

**Checlair, J.H.**, Olson, S.L., Jansen, M.F., Abbot, D.S. 2019. No Snowball on Habitable Tidally Locked Planets with a Dynamic Ocean, *The Astrophysical Journal Letters*, 884 (2), 46.

**Checlair, J.H.**, Abbot, D.S., Webber, R.J., Feng, Y.K., Bean, J.L., Schwieterman, E.W., Stark, C.C., Robinson, T.D., Kempton, E.M.-R., et al. 2019. A Statistical Comparative Planetology Approach to Maximize the Scientific Return of Future Exoplanet Characterization Efforts, *White paper submitted for the 2020 NASA Astronomy Decadal Survey.*

Abbot, D.S., Bloch-Johnson, J., **Checlair, J.**, Farahat, N.X., Graham, R.J., Plotkin, D., Popovic, P., Spaulding-Astudillo, F. 2018. Decrease in hysteresis of planetary climate for planets with long solar days. *The Astrophysical Journal*, 854 (1), 3.

**Checlair, J.**, Menou, K., Abbot, D.S. 2017. No Snowball on habitable tidally-locked planets. *The Astrophysical Journal*, 845 (2), 132.

**Checlair, J.**, McKay, C.P., Imanaka, H. 2016. Titan-like exoplanets: Variations in geometric albedo and effective transit height with haze production rate. *Planetary and Space Science*, 129, 1-12.

Law, D., Shapley, A., **Checlair, J.**, Steidel, C. 2015. Physical Properties of a pilot sample of spectroscopic close pair galaxies at z$\sim$2. *The Astrophysical Journal*, 808 (2), 160.

## TALKS AND POSTERS

### Invited talks

- Breakthrough Discuss, UC Berkeley, Berkeley CA — *April 2019*
  *"Testing the habitable zone concept"*
- LUVOIR seminar, NASA Goddard, Washington DC — *April 2019*
  *"Testing the habitable zone concept"*
- ClimaTea, Harvard, Cambridge MA — *November 2018*
  *"A statistical comparative planetology approach to test the habitable zone concept"*
- Habitable Worlds, breakout session, Laramie WY — *October 2017*
  *"Empirical tests for the habitable zone concept"*

### Contributed talks

- AAS, Honolulu HI — *January 2020*
  *"What Can HabEx and LUVOIR Tell Us About the Distribution of Earth-Like Life in the Universe"*
- AGU, San Fransisco CA — *December 2019*
  *"No Snowball on Tidally Locked Planets"*
- ExoClimes V, Oxford, UK — *August 2019*
  *"Testing the weathering feedback with LUVOIR/HabEx"*
- SIAM conference on Applications of Dynamical Systems, Snowbird UT — *May 2019*
  *"No Snowball bifurcation on tidally locked planets"*
- Comparative Climatology of Terrestrial Planets 3, Houston TX — *August 2018*
  *"A statistical comparative planetology approach to test the habitable zone concept"*
- AGU, New Orleans LA — *December 2017*
  *"Empirical tests for the habitable zone concept"*
- Chicago-area Exoplanet meeting, Chicago IL — *November 2017*
  *"Empirical tests for the habitable zone concept"*
- Astrobiology Science Conference, Mesa AZ — *April 2017*
  *"No Snowball on habitable tidally locked planets"*

### Contributed posters

- AGU, Washington D.C. — *December 2018*
  *"A statistical approach to maximize the scientific return of future instruments"*
- Habitable Worlds, Laramie WY — *November 2017*
  *"Empirical tests for the habitable zone concept"*
- Les Houches école de physique on planetary circulation regimes, France — *March 2017*
  *"No Snowball on habitable tidally locked planets"*
- AGU, San Francisco CA — *December 2016*
  *"Lack of a Snowball bifurcation on tidally locked planets"*

## ADVISING AND TEACHING

### Advising

- Andrea Salazar, Physics undergraduate student — *April 2018-June 2019*

### Teaching

- The Atmosphere (GEOS 13300), University of Chicago — *Springs of 2017, 2019*
- Natural Hazards (PHSC 13600), University of Chicago — *Winters of 2017, 2018, 2019*
- Global Warming (PHSC 13400), University of Chicago — *Fall 2017*
- Introduction to Physics I (PHY 131), University of Toronto — *Fall 2015*

## INTERNSHIPS/FELLOWSHIPS AND SUMMER SCHOOLS

**ROCKE-3D Tutorial** *May 2019*
Held at NASA GISS, New York, NY

**NASA International Summer School in Astrobiology on Exoplanet Habitability** *June 2017*
Held at the Universidad Internacional Menéndez Pelayo (UIMP), Santander, Spain

**Earth-Life Science Institute (ELSI)** *Summer 2016*
Junior visiting fellow, Tokyo, Japan

**NASA Ames Research Center** *Summer 2015*
Summer research intern, Moffett Field CA

## OUTREACH AND SERVICE

**Co-organizer of an AGU session** *December 2018*

**Reviewer for peer-reviewed journal Icarus** *November 2018-present*

**The Anti Cruelty Society**
Volunteer in the Dog Adopts program *October 2018-present*

**The Noble Academy High School**
Teacher of the Python Club *September-December 2018*

## TECHNICAL AND ADDITIONAL SKILLS

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|---|---|
| **Computer Languages** | Python, UNIX, Fortran, Matlab, IDL |
| **Models** | PlaSim (3D climate model), SMART (radiative transfer model), CLIMA (radiative-convective model), ROCKE-3D (3D climate model), PSG (planetary spectra generator) |
| **Tools** | Vim, Jupyter, LaTex |
| **Languages** | English (bilingual), French (native), Japanese (intermediate) |