Jake Gristey

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D.O.B.:	12 Nov 1991		CO, USA
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EDUCATION

2014-2018 — **PhD. Atmosphere, Oceans and Climate**
Department of Meteorology, University of Reading, UK.
Thesis: Understanding Earth's Energy Flows from a Constellation of Satellites.

2010-2014 — **MMet. Meteorology and Climate with a year in Oklahoma**
Department of Meteorology, University of Reading, UK.
Grade: 1st class hons.

2008-2010 — **A-levels. Mathematics (A), Physics (A), Geography (A)**
Wilmington Grammar School for Boys, Kent, UK.

PROFESSIONAL EXPERIENCE

2018-present — **CIRES Research Scientist I**
NOAA Chemical Sciences Laboratory, Boulder, CO, USA.

Summer 2015 — **Research Internship**
NASA Jet Propulsion Laboratory, CA, USA.

Summer 2014 — **Post Graduate Research Assistant**
Department of Meteorology, University of Reading, UK.

Summer 2013 — **Undergraduate Research Placement**
Department of Engineering, University of Reading, UK.

AWARDS

2019 — **Selected Presentation, Gordon Research Seminar**
Chosen to present at Gordon Research Conference on Radiation and Climate.

2016 — **Early Career Scientist Award, National Centre for Earth Observation**
Best oral presentation at the NCEO annual science conference.

2016 — **Quo Vadis winner**
Best oral presentation at annual departmental event.

2014 — **MMet undergraduate prize**
Highest grade in graduation year.

2014 — **Houses of Parliament award**
Best poster at university event, chosen to present at the Houses of Parliament.

2010 — **Entrance Excellence Scholarship**
Admission to the University of Reading by exceeding grade requirements.

KEY SKILLS

2015-present	**Programming and data analysis** Languages: Extensive Python, some FORTRAN and MATLAB. Big data experience: Satellite observations, reanalysis datasets, weather and climate model output, surface observations. Techniques: Machine learning, principal component analysis, spherical harmonic retrieval, cluster analysis.
2015-present	**Atmospheric modelling** 1D and 3D radiative transfer: multiple codes. Large Eddy Simulation: System for Atmospheric Modeling.
2015-2018	**Teaching** Assisted in lectures, problem classes, practicals and marking during PhD. Gained "Preparing to Teach" qualification.

SELECTED PRESENTATIONS

	Invited talks
2019	ARM/ASR PI Meeting. Washington, D.C., USA.
2016	Satellite Applications Workshop. University of Surrey, UK.
2016	Royal Meteorological Society. Reading, UK.
	Talks
2020	AGU Fall Meeting. Virtual.
2020	Libera Science Team Meeting. Virtual.
2020	ARM/ASR PI Meeting. Virtual.
2019	Gordon Research Seminar on Radiation and Climate. MA, USA.
2018	AMS Atmospheric Radiation Conference. Vancouver, Canada.
2016	International Radiation Symposium. University of Auckland, New Zealand.
	Posters
2017/2019	AGU Fall Meeting. New Orleans/San Francisco, USA.
2017	EGU General Assembly. Vienna, Austria.
2015/2019	Gordon Research Conference on Radiation and Climate. MA, USA.

SCHOLARY SERVICE AND OUTREACH

-	**Professional engagement** Libera satellite mission: science team member. NASA ACCP: radiation working group member. Frontiers in Remote Sensing: editorial board (review editor).
-	**Journal article reviewer** J Climate, Atmos Chem Phys, Q J Roy Meteor Soc J Geophys Res, J Adv Model Earth Sy, J Atmos Ocean Tech Remote Sensing, Atmos Meas Tech
-	**Professional memberships** Royal Meteorological Society, American Geophysical Union, European Geosciences Union.
-	**Blog posts** https://socialmetwork.blog/author/jakegristey/

PEER REVIEW PUBLICATIONS

2020 (1) **Gristey, J. J.** et al.: Influence of aerosol embedded within shallow cumulus clouds on the surface solar irradiance distribution, *In prep.*

2020 (2) **Gristey, J. J.**, G. Feingold, I. B. Glenn, K. S. Schmidt, and H. Chen: On the relationship between shallow cumulus cloud field properties and surface solar irradiance, *Geophysical Research Letters*, 47, e2020GL090152.

2020 (3) Riihimaki L. D., C. Flynn, A. McComiskey, D. Lubin, Y. Blanchard, J. C. Chiu, G. Feingold, D. R. Feldman, **J. J. Gristey**, C. Herrera, G. Hodges, E. Kassianov, S. E. LeBblanc, A. Marshak, J. J. Michalsky, P. Pilewskie, S. Schmidt, R. C. Scott, Y. Shea, K. Thome, R. Wagener, B. Wielicki: The Shortwave Spectral Radiometer for Atmospheric Science: New Capabilities, Applications, and Experience from the ARM User Facility. *Bull. Amer. Meteor. Soc.* 1-39.

2020 (4) Angevine, W. M., J. Olson, **J. J. Gristey**, I. B. Glenn, G. Feingold, and D. Turner: Scale awareness, resolved circulations, and practical limits in the MYNN-EDMF boundary layer and shallow cumulus scheme. *Mon. Wea. Rev.* 148, 4629–4639.

2020 (5) **Gristey, J. J.**, G. Feingold, I. B. Glenn, K. S. Schmidt, and H. Chen: Surface Solar Irradiance in Continental Shallow Cumulus Fields: Observations and Large Eddy Simulation. *J. Atmos. Sci.*, 77, 1065–1080.

2020 (6) Glenn, I. B., G. Feingold, **J. J. Gristey**, and T. Yamaguchi: Quantification of the radiative effect of aerosol-cloud-interactions in shallow continental cumulus clouds. *J. Atmos. Sci.*, 77, 2905–2920.

2020 (7) Riihimaki L. D., C. Flynn, A. McComiskey, J. C. Chiu, D. R. Feldman, **J. J. Gristey**, A. Habte, C. Herrera, G. Hodges, S. Jones, E. Kassianov, B. Kindel, M. Kutchenreiter, K. Lantz, S. E. LeBblanc, A. Marshak, J. J. Michalsky, D. Stanitski, S. Schmidt, H. Scott, H. Telg, A. Theisen, R. Wagner: ARM Shortwave Spectral Radiometry Strategy Review Report. United States, pp. 22.

2019 (8) **Gristey, J. J.**, J. C. Chiu, R. J. Gurney, K. P. Shine, S. Havemann, J.-C. Thelen, and P. G. Hill: Short-wave spectral radiative signatures and their physical controls. *J. Clim.*, 32, 4805–4828.

2018 (9) **Gristey, J. J.**, J. C. Chiu, R. J. Gurney, C. J. Morcrette, P. G. Hill, J. E. Russell, and H. E. Brindley: Insights into the diurnal cycle of global Earth outgoing radiation using a numerical weather prediction model. *Atmos. Chem. Phys.*, 18, 5129-5145.

2017 (10) **Gristey, J. J.**, J. C. Chiu, R. J. Gurney, S.-C. Han, and C. J. Morcrette: Determination of global Earth outgoing radiation at high temporal resolution using a theoretical constellation of satellites. *J. Geophys. Res. Atmos.*, 122, 1114-1131.

2014 (11) **Gristey, J. J.**, S. T. Smith, and D. J. Brayshaw: Use of the CASCADE agent-based model to examine the UK energy system with climate reanalysis data. *Proceedings of the British Conference of Undergraduate Research*, 1, 4.