

Jake Gristey

E-mail:	Jake.J.Gristey@noaa.gov	Address:	DSRC Rm. 2A115
Tel:	+1 303 497 5940		325 Broadway
Web:	cires.colorado.edu/researcher/jake-j-gristey		Boulder
D.O.B.:	12 Nov 1991		CO, USA
Nationality:	British		80305

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 hon.
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 Earth System Research Laboratories, 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

2019	Invited talks ARM/ASR PI Meeting. Washington, D.C., USA.
2016	Satellite Applications Workshop. University of Surrey, UK.
2016	Royal Meteorological Society. Reading, UK.
	Talks
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 Editorial Board of Frontiers in Remote Sensing: Review Editor Libera satellite mission: science team member NASA ACCP radiation: science definition team
-	Journal article reviewer J Climate, J Geophys Res, Atmos Chem Phys, Q J Roy Meteor Soc, J Adv Model Earth Sy, Remote Sensing, Atmos Meas Tech, J Atmos Ocean Tech.
-	Professional memberships Royal Meteorological Society, American Geophysical Union, European Geosciences Union.
-	Blog posts https://socialnetwork.blog/author/jakegristey/

PEER REVIEW PUBLICATIONS

- 2020 (1) **Gristey, J. J.** et al.: Influence of aerosol embedded within shallow cumulus clouds on the three-dimensional surface solar irradiance distribution, *In prep.*
- 2020 (2) **Gristey, J. J.** et al.: On the relationship between shallow cumulus cloud field properties and three-dimensional surface solar irradiance, *In prep.*
- 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. LeBlanc, 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.*, *Under revision.*
- 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.*, *Under revision.*
- 2020 (5) **Gristey, J. J.**, I. B. Glenn, G. Feingold, 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.*, *Accepted.*
- 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. LeBlanc, 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.