DANIEL J. VARON

Curriculum Vitae | 27 February 2020
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EDUCATION

Harvard University 2015-pres
PhD in Environmental Science and Engineering, expected May 2020
Secondary field in Computational Science and Engineering
Professor Daniel Jacob
MSc in Applied Mathematics

McGill University 2009-2014
BSc in Physics, First Class Honours
Professor Shaun Lovejoy, Professor Tracy Webb
BA in English Literature, First Class Honours

PROFESSIONAL EXPERIENCE

GHGSat, Inc. 2016–pres
Research Scientist

PUBLICATIONS

2020 **Varon, D. J.**, D. J. Jacob, J. McKeever, and D. Jervis: Quantifying time-averaged methane emissions from individual coal mine vents with GHGSat-D satellite observations. *Environmental Science and Technology*, submitted.

2020 Zhang, Y., R. Gautam, S. Pandey, M. Omara, J. D. Maasakkers, P. Sadavarte, D. Lyon, H. Nesser, M. P. Sulprizio, **D. J. Varon**, R. Zhang, D. Houweling, D. Zavala-Araiza, R. A. Alvarez, A. Lorente, S. P. Hamburg, I. Aben, & D. J. Jacob: Quantifying methane emissions from the largest oil producing basin in the U.S. from space. *Science Advances*, in review.

2019 **Varon, D. J.**, J. McKeever, D. Jervis, J. D. Maasakkers, S. Pandey, S. Houweling, I. Aben, T. Scarpelli, and D. J. Jacob: Satellite discovery of anomalously large methane point sources from oil/gas production. *Geophys. Res. Lett.*, doi:10.1029/2019GL083798, 2019.

2019 Cusworth, D. H., D. J. Jacob, **D. J. Varon**, C. Chan Miller, X. Liu, K. Chance, A. K. Thorpe, R. M. Duren, C. E. Miller, D. R. Thompson, C. Frankenberg, L. Guanter, and C. A. Randles: Potential of next-generation imaging spectrometers to detect and quantify methane point sources from space. *Atmos. Meas. Tech.*, doi:10.5194/amt2019-202, 2019.

2018 **Varon, D. J.**, D. J. Jacob, J. McKeever, D. Jervis, B. O. A. Durak, Y. Xia, Y. Huang: Quantifying methane point sources from fine-scale satellite observations of atmospheric methane plumes. *Atmos. Meas. Tech.*, doi:10.5194/amt-11-5673-2018, 2018.

2013 Lovejoy, S., D. Schertzer, **D. J. Varon**: Do GCMs predict the climate... or macroweather? *Earth System Dynamics* 4, 439-454. doi:10.5194/esd-4-439-2013, 2013.

INVITED TALKS

2019 Satellite discovery of anomalously large methane point sources from oil/gas production. (U14C-10) American Geophysical Union Fall Meeting, San Francisco, CA, 9-13 December.

2019 Quantifying methane point sources with fine-scale satellite observations. SRON Netherlands Institute for Space Research, Utrecht, Netherlands, 24 May.

2019 Quantifying methane point sources with fine-scale satellite observations. University of Michigan Department of Climate and Space Sciences and Engineering, Kort Group meeting, Ann Arbor MI, 5 April.

2019 Quantifying methane point sources with fine-scale satellite observations. NASA Jet Propulsion Laboratory Greenhouse Gas Measurements Workshop, Pasadena CA, 22 February.

CONFERENCE PRESENTATIONS

Oral presentations

2019 Quantifying methane emissions from individual point sources with the GHGSat-D satellite instrument. (A53F-03) American Geophysical Fall Meeting, San Francisco, CA, 9-13 December.

2019 Quantifying methane emissions from individual coal mine vents with GHGSat-D satellite observations. 15th International Workshop on Greenhouse Gas Measurements from Space, Sapporo, JP, 3-5 June.

2019 Quantifying methane emissions from individual coal mine vents with GHGSat-D satellite observations. Industrial Methane Measurements Conference, Rotterdam, NL, 22-23 May.

2018 Quantifying methane point sources from fine-scale (GHGSat) satellite observations of atmospheric methane plumes. 14th International Workshop on Greenhouse Gas Measurements from Space, Toronto, ON, 8-10 May.

2017 Quantifying methane point sources from fine-scale (GHGSat) satellite observations of atmospheric methane plumes. (A32D-07) American Geophysical Union Fall Meeting, New Orleans, LA, 11-15 December.

Selected poster presentations

2018 Quantifying methane emissions from individual coal mine vents with GHGSat-D satellite observations. (A43R-3443) American Geophysical Union Fall Meeting, Washington, DC, 10-14 December.

HONOURS & AWARDS

2019 Member of the Sigma Xi Honor Society
2018 AGU Outstanding Student Presentation Award
2017 Harvard University Certificate of Distinction in Teaching
2015 Stonington Graduate Fellowship of Environmental Science and Engineering
2014 McGill University Dean's Honour List

TEACHING EXPERIENCE

2017 Harvard EPS133 *Atmospheric Chemistry*
Overall teaching score of 4.7/5.0 based on student reviews
Awarded Harvard Certificate of Distinction in Teaching

PROFESSIONAL AND OUTREACH ACTIVITIES

Reviewer Atmospheric Measurement Techniques, Environmental Science and Technology

Member American Geophysical Union, European Geophysical Union

Organizer Building an inclusive community in EPS/ESE: Addressing gender-based discrimination and harassment. Department-wide event, February 2018

SELECTED PRESS

The Economist	Using satellites to spot industry's methane leaks
New York Times	A methane leak, seen from space, proves to be far larger than thought
Forbes	Detection of methane leak from space could herald a revolution
Bloomberg	Satellite studying volcanoes finds giant oilfield methane plume