Christopher William O'Dell

Senior Research Scientist
Cooperative Institute for Research in the Atmosphere
Colorado State University
Fort Collins, CO 80523

970-491-8973
970-491-8449 fax
Christopher.ODell@colostate.edu

EDUCATION

University of Wisconsin-Madison	*Madison, WI*	*Ph.D. Physics, 12/2001*
University of Wisconsin-Madison	*Madison, WI*	*M.A. Physics, 3/2001*
University of Dayton	*Dayton, OH*	*B.A. Physics, 5/1995*

PAST RESEARCH AND PROFESSIONAL EXPERIENCE

Assistant Professor ***Colorado State University, Dept. of Atmopspheric Science*** ***8/2012-6/2015***

As an assistant professor, I taught classes, advised students, conducted scholarly research, and performed service to the university. I primarily taught classes on atmospheric radiation and remote sensing. I advised several students and one postdoctoral research, in addition to supervising several research scientists. I continued my research on the remote sensing of greenhouse gases and their associated surface-based sources and sinks, in addition to research on long-term changes in clouds as determined from passive microwave remote sensing.

Research Scientist (II/III) ***Colorado State University, CIRA*** ***6/2009-7/2012***

Research primarily involving remote sensing of greenhouse gases using passive near infrared measurements, such as from the Greenhouse gases Observing SATellite (GOSAT), and the upcoming OCO-2 mission (expected launch in 2013). Assessment of climate feedbacks from satellite measurements, in particular from cloud and energy flux observations. Team leader of the Orbiting Carbon Observatory Level-2 carbon dioxide retrieval algorithm, in partnership with the Jet Propulsion Laboratory.

Research Scientist II ***Colorado State University, Dept. of Atmospheric Science*** ***5/2007-6/2009***

Remote sensing and data assimilation of weather and climate variables. Worked extensively with space-based passive microwave retrievals of water vapor, cloud water, and rainfall. Also interested in radiative transfer related to variational data assimilation and retrieval theory in the microwave, infrared, and solar parts of the electromagnetic spectrum.

Visiting Scientist ***European Centre for Medium-Range Weather Forecasts*** ***10/2006-3/2007***

Investigations of the feasibility and implementation of data assimilation of precipitation-affected microwave radiances over land into the ECMWF model, as well as implementation of assimilation of microwave radiances over ocean from several new sensors, including the TRMM Microwave Imager (TMI) and the Advanced Microwave Scanning Radiometer for EOS (AMSR-E). This work involved employing advanced radiative transfer methods, variational retrieval theory, adjoint methods, the analysis of passive microwave satellite data, and working with a complex, global NWP model.

Assistant Scientist ***University of Wisconsin-Madison, Atmospheric and Oceanic Sciences Dept.*** ***2003-9/2006***

Development and utilization of accurate atmospheric radiative transfer algorithms to aid in a variety of applications, including remote sensing of trace gases, clouds and precipitation, as well as satellite data assimilation for NWP models. A spin-off of this work was the development of a new radiative transfer algorithm, the Successive Order of Scattering (SOI) model, which because of its speed and accuracy is now in use by a number of research groups world-wide.

Postdoctoral Scientist ***University of Massachusetts-Amherst, Department of Astronomy*** ***2002-2003***

Design and development of bolometric cameras for use in high-resolution millimeter-wave astronomy, ultimately for use on the Large Millimeter Telescope (LMT) in Mexico.

Graduate Student ***University of Wisconsin-Madison, Department of Physics*** ***1997-2001***

Studies of the Cosmic Microwave Background radiation (CMB) through the design, construction, and operation of customized microwave telescopes. My Ph.D. work led to the most restrictive upper limit on the polarization of the CMB on large angular scales at that time.

AWARDS & HONORS

- CIRA (CSU) Director's Award, 2017
- CSU Distinguished Administrative Professional Award, 2012.
- ECMWF Hydrology Satellite Application Facility Grant Recipient, 2006.
- NASA Graduate Student Research Fellow, 1998-2001.
- National Science Foundation Graduate Student Fellow, 1995-1998.
- Society of Physics Students Outstanding Leadership Scholarship Winner, 1995.
- Full scholarship recipient at the University of Dayton, 1991-1995.
- U.S. National Merit Scholar, 1991.

TEACHING/OUTREACH

- AT652, Atmospheric Remote Sensing (Fall 2016, Co-Taught).

- AT622, Atmospheric Radiation (Spring 2013 and Spring 2015), http://reef.atmos.colostate.edu/~odell/AT622/.
- AT786, Discussion of the IPCC's 5th Assessment Report (Fall 2014), http://reef.atmos.colostate.edu/~odell/at786/.
- AT721, Advanced Topics in Radiative Transfer (Spring 2014), http://reef.atmos.colostate.edu/~odell/at786/.
- AT652. Atmospheric Remote Sensing (Fall 2013), http://reef.atmos.colostate.edu/~odell/at786/.
- Co-taught AT652 (graduate-level class), Remote Sensing, Colorado State University, Fall 2010.
- Taught 3 weeks of AOS-740, Advanced Topics in Atmospheric Radiation, UW-Madison, AOS Dept., 2005 (graduate-level class). In additional to usual topics, much time was spent teaching modern retrieval theory.
- Taught 5 weeks of AOS-640, Atmospheric Radiation, UW-Madison, AOS Dept., 2004 (graduate-level class).
- Taught 4 weeks of AOS-340, Atmospheric Radiation, UW-Madison, AOS Dept., 2005 (undergraduate-level class).
- Production and hosting of the ``Perpetual Notion Machine," a bi-weekly science radio program on station WORT, http://www.perpetualnotionmachine.org/, Madison, WI., 2000-2002.
- Tutored several disadvantaged students in introductory physics for the TRIO-SSS program at the UW-Madison, http://www.education.wisc.edu/trio, 2000-2001.
- Teaching assistant for introductory Electricity and Magnetism at the UW-Madison, 1997.
- Teaching assistant for mechanics and electrodynamics laboratory course at the University of Dayton, 1994-1995.
- Teaching assistant for summer intensive physics course at the University of Dayton, 1992.

PUBLICATIONS

2019

Reuter, M., Buchwitz, M., Schneising, O., Krautwurst, S., **O'Dell, C.W.**, Richter, A., Bovensmann, H. and Burrows, J.P., 2019: Towards monitoring localized CO2 emissions from space: co-located regional CO2 and NO2 enhancements observed by the OCO-2 and S5P satellites, *Atmos. Chem. Phys. , 19*, 9371-9383, https://doi.org/10.5194/acp-19-9371-2019.

Crowell, S., Baker, D., Schuh, A., Basu, S., Jacobson, A. R., Chevallier, F., Liu, J., Deng, F., Feng, L., Chatterjee, A., Crisp, D., Eldering, A., Jones, D. B., McKain, K., Miller, J., Nassar, R., Oda, T., **O'Dell, C.W.**, Palmer, P. I., Schimel, D., Stephens, B., and Sweeney, C., 2019: The 2015–2016 Carbon Cycle As Seen from OCO-2 and the Global *In Situ* Network, *Atmos. Chem. Phys., 19,* 9797-9831, https://www.atmos-chem-phys.net/19/9797/2019/.

Kulawik, S. S., **O'Dell, C.W.**, Nelson, R. R., and Taylor, T. E., 2019: Validation of OCO-2 error analysis using simulated retrievals, *Atmos. Meas. Tech., 12*, 5317-5334, https://doi.org/10.5194/amt-12-5317-2019.

Chevallier, F., Remaud, M., O'Dell, C.W., Baker, D., and Cozic, A., 2019: Objective evaluation of surface- and satellite-driven carbon dioxide atmospheric inversions. *Atmos. Chem. Phys., 19,* 14233-14251, https://doi.org/10.5194/acp-19-14233-2019.

Nelson, R.R., and **O'Dell, C.W.**, 2019: The impact of improved aerosol priors on near-infrared measurements of carbon dioxide. *Atmospheric Measurement Techniques*, *12*(3), 1495-1512, https://doi.org/10.5194/amt-12-1495-2019.

Kiel, M., **O'Dell, C.W.**, Fisher, B., Eldering, A., Nassar, R., MacDonald, C. G., and Wennberg, P. O., 2019: How bias correction goes wrong: Measurement of X_{CO2} affected by erroneous surface pressure estimates, *Atmos. Meas. Tech., 12*, 2241-2259, https://doi.org/10.5194/amt-12-2241-2019.

Eldering, A., Taylor, T. E., **O'Dell, C. W.**, and Pavlick, R., 2019: The OCO-3 mission; measurement objectives and expected performance based on one year of simulated data, *Atmos. Meas. Tech.,* 12, 2341-2370, https://doi.org/10.5194/amt-12-2341-2019.

2018

Buchwitz, M., Reuter, M., Schneising, O., Noël, S., Gier, B., Bovensmann, H., Burrows, J. P., Boesch, H., Anand, J., Parker, R. J., Somkuti, P., Detmers, R. G., Hasekamp, O. P., Aben, I., Butz, A., Kuze, A., Suto, H., Yoshida, Y., Crosp, D., and **O'Dell, C.W.**, 2018: Computation and analysis of atmospheric carbon dioxide annual mean growth rates from satellite observations during 2003–2016, *Atmos. Chem. Phys*., https://doi.org/10.5194/acp-17355-2018.

Grasso, L., Lindsey, D. T., Noh, Y. J., **O'Dell, C.W.**, Wu, T. C., & Kong, F., 2018: Improvements to Cloud-Top Brightness Temperatures Computed from the CRTM at 3.9 μ m. *Monthly Weather Review*, *146*(11), 3927-3944.

O'Dell, C. W., Eldering, A., Wennberg, P. O., Crisp, D., Gunson, M. R., Fisher, B., Frankenberg, C., Kiel, M., Lindqvist, H., Mandrake, L., Merrelli, A., Natraj, V., Nelson, R. R., Osterman, G. B., Payne, V. H., Taylor, T. E., Wunch, D., Drouin, B. J., Oyafuso, F., Chang, A., McDuffie, J., Smyth, M., Baker, D. F., Basu, S., Chevallier, F., Crowell, S. M. R., Feng, L., Palmer, P. I., Dubey, M., García, O. E., Griffith, D. W. T., Hase, F., Iraci, L. T., Kivi, R., Morino, I., Notholt, J., Ohyama, H., Petri, C., Roehl, C. M., Sha, M. K., Strong, K., Sussmann, R., Te, Y., Uchino, O., and Velazco, V. A., 2018: Improved retrievals of carbon dioxide from Orbiting Carbon Observatory-2 with the version 8 ACOS algorithm, *Atmos. Meas. Tech.*, 11, 6539-6576, https://doi.org/10.5194/amt-11-6539-2018.

Moore, B., Crowell, S., Rayner, P., Kumer, J., **O'Dell, C.W.**, O'Brien, D., Utembe, S., Polonsky, I., Schimel, D. and Lemen, J., 2018: The Potential of the Geostationary Carbon Cycle Observatory (GeoCarb) to Provide Multi-scale Constraints on the Carbon Cycle in the Americas. *Frontiers in Environmental Science*, *6*, 109.

2017

Kataoka, F., Crisp, D., Taylor, T., **O'Dell, C.W**., Kuze, A., Shiomi, K., Suto, H., Bruegge, C., Schwandner, F., Rosenberg, R. and Chapsky, L., 2017: The Cross-Calibration of Spectral Radiances and Cross-Validation of CO2 Estimates from GOSAT and OCO-2. *Remote Sensing*, *9*(11), p.1158.

Kulawik, S. S., **O'Dell, C.**, Payne, V. H., Kuai, L., Worden, H. M., Biraud, S. C., Sweeney, C., Stephens, B., Iraci, L. T., Yates, E. L., and Tanaka, T., 2017: Lower-tropospheric CO_2 from near-infrared ACOS-GOSAT observations*, Atmos. Chem. Phys. (online*), 17(8).

Wunch, D., Wennberg, P. O., Osterman, G., Fisher, B., Naylor, B., Roehl, C. M., **O'Dell, C.W.**, Mandrake, L., et al., 2017: Comparisons of the Orbiting Carbon Observatory-2 (OCO-2) X_{CO2} measurements with TCCON, *Atmos. Meas. Tech.,* 10, 2209-2238, https://doi.org/10.5194/amt-10-2209-2017.

Eldering, A., Wennberg, P., Crisp, D., Schimel, D., Gunson, M.R., Chatterjee, A., Liu, J., Schwandner, F.M., Sun, Y., **O'Dell, C.W.**, Frankenberg, C., Taylor, T., Fisher, B., Osterman, G.B., Wunch, D., Hakkarainen, J., Tamminen, J. and Weir, B., 2017: Evaluating the flux of carbon dioxide to and from the atmosphere: The Orbiting Carbon Observatory. *Science*, 358 (6360), p. eaam5745.

Schwandner, F.M., Gunson, M.R., Miller, C.E., Carn, S.A., Eldering, A.E., Krings, T., Schimel, D.S., Nguyen, H.M., Crisp, D., **O'Dell, C.W.**, Osterman, G.B., Wunch, D., Wennberg, P.O., Roehl, C.M., Iraci, L.T., and J.R. Podolske, 2017: Space-Borne Detection of Localized Carbon Dioxide Sources. *Science*, 358 (6360), p. eaam5782.

Chatterjee, A., Gierach, M.M., Sutton, A.J., Feely, R.A., Crisp, D., Eldering, A., Gunson, M.R., **O'Dell, C.W.**, Stephens, B.B., and Schimel, D.S., 2017: Influence of El Nino on atmospheric CO_2 over the tropical Pacific Ocean: findings from NASA's OCO-2 mission. *Science*, 358 (6360), p. eaam5776.

Liu, J., Bowman, K.W., Schimel, D.S., Parazoo, N.C., Jiang, Z., Lee, M., Bloom, A.A., Wunch, D., Frankenberg, C., Sun, Y. and **O'Dell, C.W.**, 2017. Contrasting carbon cycle responses of the tropical continents to the 2015–2016 El Niño. *Science*, *358*(6360), p.eaam5690.

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Manaster, A., **O'Dell, C.W**., and Elsaesser, G., 2017: Evaluation of Cloud Liquid Water Path Trends Using a Multi-Decadal Record of Passive Microwave Observations, *J. Clim.*, 30 (15), 5871-5884, DOI: 10.1175/JCLI-D-16-0399.1.

Elsaesser, G.S., **O'Dell, C.W.**, Lebsock, M.D., Bennartz, R., Greenwald, T.J. and Wentz, F.J., 2017. The Multisensor Advanced Climatology of Liquid Water Path (MAC-LWP). *Journal of Climate*, *30*(24), pp.10193-10210.

Crisp, D., Pollock, H.R., Rosenberg, R., Chapsky, L., Lee, R.A.M., Oyafuso, F.A., Frankenberg, C., **O'Dell, C.W.**, Bruegge, C.J., Doran, G.B., Eldering, A., Fisher, B.M., Fu, D., Gunson, M.R., Mandrake, L., Osterman, G.B., Schwandner, F.M., Sun, K., Taylor, T.E., Wennberg, P.O., and D.Wunch., 2017. The On-Orbit Performance of the Orbiting Carbon Observatory-2 (OCO-2) Instrument and its Radiometrically Calibrated Products., *Atmos. Meas. Tech.*, 10, 59-81, doi:10.5194/amt-10-59-2017.

Eldering, A., **O'Dell, C.W.**, Wennberg, P., Crisp, D., Gunson, M. Viatte, C., Avis, C., Braverman, A., Castano, R., Chang, A., Chapsky, L., Cheng, C., Connor, B., Dang, L., Doran, G., Fisher, B., Frankenberg, C., Fu, D., Granat, R., Hobbs, J., Lee, R., Mandrake, L., McDuffie, J., Miller, C., Myers, V., Natraj, V., O'Brien, D., Osterman, G., Oyafuso, F., Payne, V., Pollock, H., Polonsky, I., Roehl, C., Rosenberg, R., Schwandner, F**.**, Smyth, M., Tang, V., Taylor, T., To, C., Wunch, D., and J. Yoshimizu (2016), The Orbiting Carbon Observatory-2: First 18 months of Science Data Products. *Atmos. Meas. Tech.*, 10, 549-563, doi:10.5194/amt-10-549-2017, 2017.

Lee, R.A., **O'Dell, C.W.**, Wunch, D., Roehl, C.M., Osterman, G.B., Blavier, J.F., Rosenberg, R., Chapsky, L., Frankenberg, C., Hunyadi-Lay, S.L. and Fisher, B.M., 2017. Preflight spectral calibration of the Orbiting Carbon Observatory 2. *IEEE Transactions on Geoscience and Remote Sensing*, *55*(5), pp.2499-2508.

2016

Nelson, R.R., Crisp, D., Ott, L.E. and **O'Dell, C.W**., 2016. High‐accuracy measurements of total column water vapor from the Orbiting Carbon Observatory‐2. *Geophysical Research Letters*, *43*(23).

Frankenberg, C., Kulawik, S.S., Wofsy, S.C., Chevallier, F., Daube, B., Kort, E.A., **O'Dell, C.,** Olsen, E.T. and Osterman, G., 2016. Using airborne HIAPER Pole-to-Pole Observations (HIPPO) to evaluate model and remote sensing estimates of atmospheric carbon dioxide. *Atmos. Chem. Phys.*, *16* (12), pp.7867-7878.

Nelson, R. R., **O'Dell, C. W.**, Taylor, T. E., Mandrake, L., and Smyth, M., 2016: The potential of clear-sky carbon dioxide satellite retrievals, *Atmos. Meas. Tech.*, 9, 1671-1684, doi:10.5194/amt-9-1671-2016.

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Taylor, T. E., **O'Dell, C. W.**, Frankenberg, C., Partain, P. T., Cronk, H. Q., Savtchenko, A., Nelson, R. R., Rosenthal, E. J., Chang, A. Y., Fisher, B., Osterman, G. B., Pollock, R. H., Crisp, D., Eldering, A., and Gunson, M. R., 2016: Orbiting Carbon Observatory-2 (OCO-2) cloud screening algorithms: validation against collocated MODIS and CALIOP data, *Atmos. Meas. Tech.*, 9, 973-989.

Kulawik, S., Wunch, D., **O'Dell, C.W.,** Frankenberg, C., Reuter, M., Oda, T., Chevallier, F., Sherlock, V., Buchwitz, M., Osterman, G., Miller, C. E., Wennberg, P. O., Griffith, D., Morino, I., Dubey, M. K., Deutscher, N. M., Notholt, J., Hase, F., Warneke, T., Sussmann, R., Robinson, J., Strong, K., Schneider, M., De Mazière, M., Shiomi, K., Feist, D. G., Iraci, L. T., and Wolf, J., 2016: Consistent evaluation of ACOS-GOSAT, BESD-SCIAMACHY, CarbonTracker, and MACC through comparisons to TCCON, *Atmos. Meas. Tech.*, 9, 683-709.

2015

Houweling, S., Baker, D., Basu, S., Boesch, H., Butz, A., Chevallier, F., Deng, F., Dlugokencky, E.J., Feng., L., Ganshin, A., Hasekamp, O., Jones, D., Maksyutov, S., Marhsall, J., Oda, T., **O'Dell, C.W.**, Oshchepkov, S., Palmer, P.I., Peylin, P., Poussi, Z., Reum, F., Takagi, H., Yoshida, Y., & Zhuralev, R., 2015: An intercomparison of inverse models for estimating sources and sinks of CO2 using GOSAT measurements. *JGR-Atmospheres*, 120 (10), 5253-5266.

Zhou, M., Dils, B., Wang, P., Detmers, R., Yoshida, Y., **O'Dell, C.W.**, Feist, D.G., Velazco, V.A., Schneider, M. and Mazière, M.D., 2016. Validation of TANSO-FTS/GOSAT XCO 2 and XCH 4 glint mode retrievals using TCCON data from near-ocean sites. *Atmospheric Measurement Techniques*, *9*(3), pp.1415-1430.

[1] This article was featured on the cover of the journal.

Lindqvist, H., **O'Dell, C.W**., Basu, S., Boesch, H., Chevallier, F., Deutscher, N., Feng, L., Fisher, B., Hase, F., Inoue, M. and Kivi, R., 2015. Does GOSAT capture the true seasonal cycle of carbon dioxide. *Atmos. Chem. Phys*, *15*, pp.13023-13040.

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2014

Reuter, M., M. Buchwitz, M. Hilker, J. Heymann, O. Schneising, D. Pillai, H. Bovensmann, J.P. Burrows, H. Boesch, R. Parker, O. Hasekamp, **C.W. O'Dell**, Y. Yoshida, C. Gerbig, T. Nehrkorn, N.M. Deutscher, T. Warneke, J. Notholt, F. Hase, R. Kivi, R. Sussmann, T. Machida, H. Matsueda, and Y. Sawa, 2014: Satellite-inferred European sink larger than expected. *Atmos. Chem. Phys.*, 14, 13739-13753.

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Frankenberg, C., **C.W. O'Dell**, J. Berry, L. Guanter, J. Joiner, P. Kohler, R. Pollock, and T.E. Taylor, 2014: Prospects for chlorophyll fluorescence remote sensing from the Orbiting Carbon Observatory-2. *Remote Sens. Env.,* 147 (5), 1-12.

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2013

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Vidot, J., R. Bennartz, **C.W. O'Dell**, R. Preusker, R. Lindstrot, and A.K. Heidinger, 2009: CO2 Retrieval over Clouds from the OCO Mission: Model Simulations and Error Analysis. *J. Atmos. Oceanic Technol*., 26 (6), 1090-1104.

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C.W. O'Dell, F.J. Wentz, and R. Bennartz, 2008: Cloud liquid water path from satellite-based passive microwave observations: a new climatology over the global oceans. *J. Climate*, 21, 1721-1739.

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C. O'Dell, P. Bauer, and R. Bennartz, 2007: A fast cloud overlap parameterization for microwave radiance assimilation. *J. Atmos. Sci.*, 64 (11), 3896-3909.

M.J. Kim, M. Kulie, **C.W. O'Dell**, and R. Bennartz, 2007: Scattering of ice particles at microwave frequencies: A physically based parameterization. *J. Appl. Meteorol. Clim*., 46 (5), 615-633.

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A.K. Heidinger, **C.W. O'Dell**, T. Greenwald, & R. Bennartz, 2006: The Successive Order of Interaction Radiative Transfer Model, Part I: Model Development. *J. Appl. Meteorol. Clim*., 45 (10), pp. 1388-1402.

C.W. O'Dell, A.K. Heidinger, T. Greenwald, & R. Bennartz, 2006: The Successive Order of Interaction Radiative Transfer Model, Part II: Model Performance and Applications. *J. Appl. Meteorol. Clim*., 45 (10), pp. 1403-1413.

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T. Greenwald, R. Bennartz, **C.W. O'Dell**, & A. Heidinger, 2005: Fast computation of microwave radiances for data assimilation using the "successive order of scattering" method. *J. Appl. Meteorol.,* 44(6), pp. 960-966.

PRE-2005 (CMB WORK)

P.C. Farese, G. Dall'Oglio, J.O. Gundersen, B.G. Keating, S. Klawikowski, L. Knox, A. Levy, P.M. Lubin, **C.W. O'Dell**, A. Peel, L. Piccirillo, J. Ruhl, and P.T. Timbie, 2004: COMPASS: An Upper Limit on Cosmic Microwave Background Polarization at an Angular Scale of 20'. *Astrophysical Journal*, 610(2), pp. 625-634.

P.C. Farese, G. Dall'Oglio, J.O. Gundersen, B.G. Keating, S. Klawikowski, L. Knox, A. Levy, **C.W. O'Dell**, A. Peel, L. Piccirillo, J. Ruhl, and P.T. Timbie, 2003: COMPASS: COMPASS: an instrument for measuring the polarization of the CMB on intermediate angular scales. *New Astron. Rev.*, 47 (11-12), pp. 1033-1046.

C.W. O'Dell, B.G. Keating, A. de Oliveira-Costa, M. Tegmark, and P.T. Timbie, 2003: CMB polarization at large angular scales: Data analysis of the POLAR experiment. *Physical Review D.*, 68(4), 042002.

A. de Oliveira-Costa, M. Tegmark, **C.W. O'Dell**, B.G. Keating, P.T. Timbie, G. Efstathiou, and G. Smoot, 2003: Large-scale polarization of the microwave background and foreground. *Physical Review D.*, 68(8), 083003.

B.G. Keating, **C.W. O'Dell**, J.O. Gundersen, N. Stebor, L. Piccirillo, and P.T. Timbie, 2003: An Instrument for Investigating the Large Angular Scale Polarization of the Cosmic Microwave Background. *Astrophys. J. Suppl.*, 144(1), pp. 1-20.

C.W. O'Dell, D. Swetz, and P.T. Timbie, 2002: Calibration of Millimeter-Wave Polarimeters Using a Thin Dielectric Sheet. *IEEE Trans. Micr. Theory and Tech.*, 50(9), pp. 2135-2141.

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SUBMITTED PUBLICATIONS

PRESENTATIONS

"Space-based measurements of CO2: past, present and future," Noble Seminar Series, Atmospheric Physics Group, Dept. of Earth, Atmosphere, and Planetary Physics, January 28th, 2019 (invited).
https://www.physics.utoronto.ca/research/eapp/atmosp-monday-seminars/tba-49

"Updates to OCO-2 XCO2 data products, new science, and future perspectives," AGU Meeting, Washinging, D.C., December 13, 2018.

OCO-2 Algorithm Status update, Fall 2018 OCO-2 Science Team Meeting, Boulder, CO.

OCO-2 Algorithm Status update, Spring 2018 OCO-2 Science Team Meeting, Pasadena, CA.

"Are we there yet? A look at the status and prospects of inferring top-down carbon fluxes from passive CO_2 remote sensing", 14th international workshop of greenhouse gas measurements from space (IWGGMS), University of Toronto, Toronto, CA, May 9, 2018.

"How good are CO2 measurements from space? And are they good enough", Carbon and Human Emissions (CHE) 1st general assembly, Reading, UK, February 6, 2018 (invited).

Unlisted: AGU 2017, 2016. EGU 2016 (invited). IWGGMS 2016, 2017. GMAC 2017, A. Andrews meeting (NOAA) 2017. OCO2 meetings (multiple), ACT-America STM (July 2017), ECMWF CHE Meeting (2/2018). Invited Talk GSFC May 2016.

"The First Year of OCO-2 XCO2 Observations: Bias Correction and Comparison to Models. " AGU Fall Meeting, Dec 14-18, 2015 (Talk).

"Evaluation of OCO-2 Measurement Spatial Variability with CO_2 LIDAR," ACT-America Team Meeting, Newport News, CA, Aug 12-13, 2015 (Invited Talk).

"OCO-2 XCO_2 Retrievals: Status Report and Bias Correction," 11th International Workshop on Greenhouse Gas Measurements from Space (IWGGMS 11), Pasadena, CA, Jun 16-18, 2015 (Talk).

"The OCO-2 Level-2 Full-Physics Retrieval," OCO-2 Science Team Meeting, Pasadena, CA, Feb 24-26, 2015 (Talk).

"Evaluation of land-surface models with GOSAT carbon dioxide measurements," 5th North American Carbon Program meeting, Washington, DC, Jan 26-29, 2015 (Poster).

"Evaluation of land-surface models with GOSAT carbon dioxide measurements," AGU Fall meeting, San Francisco, CA, Dec 15-19, 2014 (Talk).

"The Ability of Satellite-based CO_2 Measurements to Constrain Carbon Cycle Science: From Greenhouse Gases (GHG) Observing SATellite (GOSAT) to Orbiting Carbon Observatory (OCO-2)," NOAA Earth System Research Laboratory Global Monitoring Division Annual Conference (GMAC), Boulder, CO, May 20-21, 2014 (Talk).

"The Potential of GOSAT Column CO2 to Constrain Carbon Inversion Systems," 10th International Workshop on Greenhouse Gas Measurements from Space, (IWGGMS 10), Noordwijk, Netherlands, May 5-7, 2014 (Talk).

"Preliminary Tests of the Launch Ready Version of OCO-2, XCO2 Retrieval Algorithm," 10th International Workshop on Greenhouse Gas Measurements from Space (IWGGMS 10), Noordwijk, Netherlands, May 5-7, 2014 (Talk).

"Overview of the OCO-2 X_{CO2} Retrieval Algorithm," OCO-2 Science Team Meeting, Pasadena, CA, January 28-30, 2014.

"The Why and How of Satellite Measurements of Carbon Dioxide and other Greenhouse Gases," presentation to CMMAP summer interns, 26 July 2013.

"Towards a better understanding of climate and climate change through satellite remote sensing," presentation to the Northern Colorado Astronomical Society, 2 May 2013.

"An overview of ACOS Build 3.3 XCO_2 retrievals from GOSAT and first validation results," 9th International Workshop on Greenhouse Gas Measurements from Space, Yokohama, Japan, 29 May – 1 June 3013 (Talk).

"Overview of the OCO-2/GOSAT B3.3 Product," OCO-2 Science Team Meeting, Pasadena, CA, 27-29 March 2013 (Talk).

"Ground-based assessment of retrieved aerosol properties from GOSAT observations in multiple carbon dioxide retrieval algorithms," in Session A41N, American Geophysical Union 2012 Fall Meeting, San Francisco, CA, 5-9 Dec 2012, Non-Referred. (Invited Talk)

"Aerosol information content analysis of multi-angle high spectral resolution measurements and its benefit for high accuracy greenhouse gas retrievals," in Session A33I, American Geophysical Union 2012 Fall Meeting, San Francisco, CA, 5-9 Dec 2012, Non-Referred. (Poster)

"Assessment of errors in the ACOS/GOSAT B2.10 XCO2 retrievals using a combination of methods," 8th International Workshop on Greenhouse Gas Measurements from Space, Pasadena, CA, 18-20 June 2012 (Invited Talk).

"The ACOS XCO2 retrieval: Lessons learned from GOSAT," The GOSAT Workshop 2012: Towards GOSAT-2 Mission, Tokyo, Japan, 29 Feb – 1 March, http://www.prime-pco.com/gosat2012/index.html. (Invited Talk).

"Evaluation of the ACOS XCO_2 retrieval algorithm with the OCO Orbit Simulator," 7th International Workshop on Greenhouse Gas Measurements from Space, Edinburgh, Scotland, 16-18 May, 2011.

"Measuring carbon dioxide concentrations from the Orbiting Carbon Observatory: radiative transfer challenges & solutions," 13th AMS Conference on Atmospheric Radiation, Portland, OR, 28 June – 2 July 2010.

"The OCO 'Full-Physics' Retrieval Algorithm," OCO Science Team Meeting, Pasadena, CA, 14 April 2010.

"Surface Pressure Retrievals from GOSAT over the Australian Desert: First Results from the ACOS Algorithm," with D. O'Brien and R. Mitchell, Sixth International Workshop on Greenhouse Gas Measurements from Space, Kyoto, Japan, 26-27 January 2010.

"The Atmospheric CO2 Observations from Space (ACOS) Full Physics retrieval algorithm," with the ACOS team, 2009 Fall AGU Meeting, San Francisco, CA, 14-18 December 2009.

"ACOS Level-2 retrievals from Greenhouse Gases Observing SATellite (GOSAT) data," 2nd ACOS/GOSAT Technical Interface Meeting, Tsukuba, Japan, 10-12 November 2009.

"A Reexamination of 'On the Determination of Climate Feedbacks from ERBE Data'," T. Wong and C.W. O'Dell, 12th CERES Science Team Meeting, Fort Collins, CO, 3-5 November 2009.

"Orbiting Carbon Observatory Full-Physics Algorithm Overview," OCO Science Team Meeting, Buellton, CA, 23 February 2009.

"Activities towards assimilation of precipitation-affected microwave radiances over land at ECMWF," with P. Bauer, P. Lopez, and A. Geer, invited presentation at ECWMF, Reading, United Kingdom, 26 February 2007.

"Trends and variability of cloud liquid water path from satellite-based passive microwave observations," with F.J. Wentz and R. Bennartz, 12th AMS Conference on Atmospheric Radiation, Madison, WI, 9-14 July 2006.

"A fast and accurate cloud overlap parameterization for microwave data assimilation," with R. Bennartz and P. Bauer, 12th AMS Conference on Atmospheric Radiation, Madison, WI, 9-14 July 2006.

*"*Climate studies with the SSM/I microwave sensors, 1987-2004,*"* invited presentation at Environment Canada, Dorval QC, 13 February 2006.

"Satellite-based microwave remote sensing of snowfall at the surface: Precipitation Phase Discrimination & Radar / Satellite Comparisons of Light Frozen Precipitation in Baltic Sea Region,*"* 8th International Conference on Precipitation. 8-11 August 2004.

"Fast passive microwave radiative transfer in precipitating clouds: Towards direct radiance assimilation," 8th International TOVS Study Conference, Sainte Adèle, Canada, 29 October - 4 November 2003.

"CMB polarization observations with the POLAR and COMPASS experiments," APC Polarization Workshop, Paris College de France, March 2002.

"Observations of Polarization in the Cosmic Microwave Background: A Progress Report for the POLAR Experiment", 197th meeting of the American Astronomical Society, San Diego, CA, December 2000.