Claire Pettersen

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Education

PhD Atmospheric and Oceanic Sciences *June 2014 – Dec 2017*
University of Wisconsin, Madison
Dissertation: Snowfall over the Central Greenland Ice Sheet

MS Atmospheric and Oceanic Sciences *Sept 2011 – May 2014*
University of Wisconsin, Madison

MS Materials Science and Engineering *Sept 2001 – May 2004*
University of Wisconsin, Madison

BA Physics and Astronomy *Sept 1996 – June 2000*
Carleton College

Experience

University of Michigan:

Climate and Space Sciences and Engineering

Assistant Professor *2022 – Present*

* Examine cloud and precipitation processes using radar and radiometer (ground-based, satellite)
* Principal Investigator and member of the NASA PMM Science Team
* Principal Investigator of the Precipitation Imaging Package instrument for NASA GPM-GV
* Key personnel for instrumentation and analysis for Marquette, Michigan instrument suite

University of Wisconsin-Madison:

Space Science and Engineering Center

Instrumentation Innovator *2018 – 2022*
Associate Instrumentation Innovator *2013 – 2018*
Assistant Instrumentation Innovator *2009 – 2013*

* Co-Investigator of the CIMSS Lake Effect Snow study for NOAA GOES-16
* Significant involvement in instrumentation and science for NSF ICECAPS project in Greenland
* Instrument lead and scientist for NSF high-latitude snowfall study in Norway and Sweden
* Integral part of the initial testing team for the climate-observing system CLARREO
* Field and science support for the Scanning High-Resolution Interferometer Sounder

Project IceCube

Engineering Manager *2007 – 2009*
Winterover Experiments Researcher *2006 – 2007*
Digital Optical Module Test Engineer *2004 – 2006*

* Managed, performed analysis of, and oversaw testing of all optical modules at UW site
* Lead engineer for the pressure sphere and gel components of the optical modules
* Operated and maintained the IceCube and AMANDA detectors at the South Pole Station
* Participated in drilling and deployment activities during the Antarctic Summer season
* Aided in the testing of 1000+ optical modules

Research Support

Active Awarded Grants

* **NOAA OAR Observations (PI Pettersen)** – High-impact Observations for Enhancing Great Lakes Snowfall Forecasting, $557,260, 2021-2023
* **NOAA OAR Observations (**PI Wood, **Co-I Pettersen)** – Particle Imaging and Ceilometer Observations for Snowfall Properties and Blizzard Parameters, $457,635, 2021-2023

* **NASA Future Investigators in Earth Science (**PI L'Ecuyer, **CoI/Science PI Pettersen**, FI Shates**)** – Characterizing Precipitation Structure and Processes in the Satellite Radar Blind Zone, $135,000, 2021 – 2024
* **NASA New (Early Career) Investigator Program (PI Pettersen)** – Leveraging enhanced imaging with ground validation observations to aid global snow remote sensing, $379,529, 2021-2024
* **NASA PMM Science Team 2018 (PI Pettersen)** – Leveraging GPM and Ground-Based Measurements to Examine High-Latitude Extreme Precipitation, $323,850, 2019-2022
* **SSEC 2022 (PI Pettersen)** – Precipitation Imaging Package (PIP) Instrument Development, $95,792, 2019-2022
* **NASA GPM Ground Validation (PI Pettersen)** – Marquette, Michigan Instrument Suite: Deployment, Maintenance, and Analysis, $146,200, 2018-2022

Completed Awarded Grants

* **NASA Michigan Technological University Subaward** (**PI Pettersen**) – Snowfall in the GPM Era: Assessing GPM Snowfall and Ice Microphysical Retrievals Using Independent Spaceborne and Ground-Based Observations, $44,192, 2019-2020
* **NASA PMM Science Team 2015 (**PI Wood, **Co-I Pettersen)** – Assessing precipitation microphysical structure aloft using cold-season ground validation observations, $286,932, 2016-2019
* **NOAA CIMSS (**PI L'Ecuyer, **Co-I Pettersen)** – An Enhanced Lake-Effect Snow Nowcasting Tool Using Synergistic GOES-R, NEXRAD, and Ground-Based Snowfall Microphysics Observations, $281,852, 2017-2021

Pending Competitive Grants

* **NASA PMM Science Team 2021 (PI Pettersen)** – High-latitude precipitation characteristics during atmospheric river events utilizing GPM and ground-based observations, $432,947, 2022-2025

Field Work – Ground-based and Airborne Campaigns

* **NOAA** Enhanced snow suite deployments, Gaylord, MI; Buffalo, NY – PI	*Planned (2021)*
* **NASA** Precipitation field deployment, Norway – PI and Instrument Lead	*Planned (2021)*
* **NASA** Pluvio Deployment, Marquette, MI – PI and Instrument Lead (Nov, April)	*2017 – present*
* **NASA** Lake Effect Snow Suite, Marquette, MI – Co-I and Instrument Lead (Jan)	*2014 – present*
* **NSF** High-Latitude Snow Suite, Norway – Instrument Lead (Oct, June)	*2016 – 2018*
* **NOAA** GOES16 CalVal ER2, Armstrong – SHIS Science Support (March)	*2017*
* **NASA** SNPP CalVal ER2, Iceland – SHIS Science Support (March)	*2015*
* **NASA** HS3 Global Hawk, Wallops – SHIS Science Support (July – Sep)	*2012 – 2014*
* **NASA** SNPP CalVal ER2, Armstrong – SHIS Science Support (May)	*2013*
* **NSF** ICECAPS Winter Over – Instrument Technician (Feb – May)	*2012*
* **NSF** IceCube DOM Deployment – Instrument Lead (Nov – Dec)	*2005 – 2009*
* **NSF** IceCube Winter Over – Instrument Technician (Feb – Nov)	*2006 – 2007*

Teaching Experience

* **Instructor** – Department of Atmospheric and Oceanic Sciences	
* AOS 340: *Physics of the Atmosphere and Ocean II*	*Spring 2021*
* **Guest Lecturer** – Department of Atmospheric and Oceanic Sciences	
* AOS 453: *Synoptic Lab II: Mesoscale Meteorology*	*2021*
* AOS 660: *Introduction to Physical Oceanography*	*2020*
* AOS 640: *Radiation in the Atmosphere and Ocean*	*2018*
* AOS 425: *Global Climate Processes*	*2017, 2018*
* AOS 340: *Physics of the Atmosphere and Ocean II*	*2015, 2016, 2017*
* **PhD Committees**	
* Julia Shates (*co-advisor*, Department of Atmospheric and Ocean Sciences)	*2018 – present*
* Samantha Hartke (Water Resources Engineering and Science)	*2021 – present*

Computer and Instrumentation Expertise

* Operating Systems: Windows, Apple, Unix, Linux

* Programming (primary): python
* Programming (limited experience): IDL, Fortran, MatLab, LabView
* Applications: LabView, Sigma Plot, Mathematica, Microsoft Office Suite (Word, Excel, PPT)
* Instrumentation: radars, passive microwave, passive infrared, lidar, radiosonde, in-situ snow cameras, optical and video disdrometers, snow accumulation, meteorological equipment
* Analytical Equipment: Electron Microprobe with Wavelength Dispersive Spectroscopy, Transmission Electron Microscope with Energy Dispersive Spectroscopy, Scanning Electron Microscope
* Hardware: Soldering, cable repair, analogue systems, NIM logic, waveguide systems, and basic mechanical, electrical, and thermal system experience/knowledge

Professional Service

Journal Reviewer

* MPDI journal article reviewer *2020 – present*
* AGU journal article reviewer *2019 – present*
* Elsevier journal article reviewer *2018 – present*
* EGU journal article reviewer *2018 – present*
* IEEE journal article reviewer *2018 – present*
* AMS journal article reviewer *2017 – present*

Proposal Reviewer

* NASA grant proposal panelist *2017 – present*
* DOE grant proposal panelist *2020 – present*
* NSF grant proposal panelist *2021 – present*

Conference Session Convener

* AMS Polar Meteorology and Climatology *2019, 2021*
* GPM Ground Validation Conference *2020*
* AMS Cloud Physics and Radiation *2018*
* AMS Annual Meeting *2017*
* AGU Annual Meeting *2016, 2017*
* AMS Radars *2015, 2017*

Committees

* AMS Radars 2021 Conference PSD Subcommittee *2020 – present*
* NASA GPM Particle Size Distribution Working Group (co-Chair) *2019 – present*
* NASA GPM Ground Validation Conference (co-Chair) *2020*
* AOS Polar Faculty Hiring Committee *2019 – 2020*
* AOSS Poster Reception, Instigator and Organizer *2011 – 2019*
* SSEC Equity and Diversity Committee *2010 – 2019*
  * Chair (*2012 – 2016*)
* UW AOS Colloquium Committee *2014 – 2018*

Awards

* NASA PMM Annual Science Team Award (co-recipient) *2019*
* UW Atmospheric and Oceanic Sciences: Recognition of Contributions *2018*
* Women in Science and Engineering Leadership Institute Grants *2015, 2016*
* NASA Group Achievement Award: HS3 Campaign *2015*
* AOS Excellence Award: Colloquium Student Service Award *2015*
* IceCube Neutrino Observatory: Service Award *2009*
* Antarctic Service Medal, Wintered Over Distinction *2007*
* Sigma Xi Scientific Honor Society *2000*

Publications (◆ denotes researcher and student mentees)

Submitted or In Review

26 Anderson, J., Connelly, R. and 10 others (including **Pettersen, C.**): Exploring the Seasonality of Lake Enhanced Snow Events Across Michigan's Upper Peninsula, **Weather and Forecasting**, *submitted*

25 **Pettersen, C.**, Henderson, S.A., Mattingly, K.S., Bennartz, R., and Breeden, M.L.: The Critical Role of Euro-Atlantic Blocking in Promoting Precipitation in Central Greenland, **JGR: Atmospheres**, *submitted*

24 Guy, H.◆, Brooks I.M. and 10 others (including **Pettersen, C.**): Controls on surface aerosol number concentrations and aerosol limited cloud regimes over the central Greenland Ice Sheet, **The Cryosphere**, *in review*

2021

23 Tokay, A., von Lerber, A., **Pettersen, C.**, Kulie, M.S., Moisseev, D.N., and Wolff, D.B.: Retrieval of Snow Water Equivalent by Precipitation Imaging Package (PIP) over Northern Great Lakes, **Journal of Oceanic and Atmospheric Technology**, *in press*

22 Mateling, M.E.◆, **Pettersen, C.**, Kulie, M.S., Mattingly, K.S., Henderson, S.A., and L'Ecuyer, T.S.: The influence of atmospheric rivers on cold-season precipitation in the upper Great Lakes region, **JGR: Atmospheres**, 2021, doi: 10.1029/2021JD034754

21 Shates, J.◆, **Pettersen, C.**, L'Ecuyer, T.S., Cooper, S.J., Kulie, M.S., and Wood, N.B.: High-latitude precipitation: Snowfall regimes at two distinct sites in Scandinavia, **Journal of Applied Meteorology and Climatology**, 2021, doi: 10.1175/JAMC-D-20-0248.1

20 **Pettersen, C.**, Bliven, L.F., Kulie, M.S., Wood, N.B., Shates, J., Mateling, M.E., Petersen, W.A., Ritzman, J., von Lerber, A., and Wolff, D.B.: The Precipitation Imaging Package: Phase partitioning capabilities, **Remote Sensing**, 2021, doi: 10.3390/rs13112183

19 Kulie, M.S., **Pettersen C.**, and 17 others: "Snowfall regimes in the Upper Great Lakes: Lessons learned from a multi-sensor snowfall observatory", **Bulletin of the American Meteorological Society**, 2021, doi: 10.1175/BAMS-D-19-0128.1

18 Butterworth, B.J., Desai, A.R. and 25 others (including **Pettersen, C.**): "Connecting Land-Atmosphere Interactions to Surface Heterogeneity in CHEESEHEAD 2019", **Bulletin of the American Meteorological Society**, 2021, doi: 10.1175/BAMS-D-19-0346.1

2020

17 McIlhattan, E.A.◆, **Pettersen, C.**, Wood, N.B., and L'Ecuyer, T.S.: Satellite Observations of Snowfall Regimes over the Greenland Ice Sheet, **The Cryosphere**, 2020, doi: 10.5194/tc-2019-223

16 **Pettersen, C.**, Bliven, L.F., von Lerber, A., Wood, N.B., Kulie, M.S., Mateling, M.E., Moisseev, D.N., Munchak, S.J., Petersen, W.A., and Wolff, D.B.: The Precipitation Imaging Package: Assessment of microphysical and bulk characteristics of snow, **Atmosphere**, 2020, doi: 10.3390/atmos11080785

15 Mattingly, K.S., Mote, T.L., Fettweis, X., van As, D., Van Tricht, K., Lhermitte, S., **Pettersen, C.**, and Fausto, R.S.: Strong Summer Atmospheric Rivers Trigger Greenland Ice Sheet Melt through Spatially Varying Surface Energy Balance and Cloud Regimes, **Journal of Climate**, 2020, doi: 10.1175/JCLI-D-19-0835.1.

14 **Pettersen, C.**, Kulie, M.S., Bliven, L.F., Merrelli, A.J., Petersen, W.A., Wagner, T.J., Wolff, D.B., and Wood, N.B.: A composite analysis of snowfall modes from four winter seasons in Marquette, Michigan, **Journal of Applied Meteorology and Climatology**, 2020, doi: 10.1175/JAMC-D-19-0099.1.

2019

13 Bennartz, R., Fell, F., **Pettersen, C.**, Shupe, M.D., and Schuettemeyer, D.: Spatial and temporal variability of snowfall over Greenland from CloudSat observations**, Atmospheric Chemistry and Physics**, 2019, doi: 10.5194/acp-2018-1045.

12 Schirle, C.E.◆, Cooper, S.J., Wolff, M.A., **Pettersen, C.**, Wood, N.B., L'Ecuyer, T.S., Ilmo, T., Nygård, K.: Estimation of Snowfall Properties at a Mountainous Site in Norway Using Combined Radar and In Situ Microphysical Observations**, Journal of Applied Meteorology and Climatology**, 2019, doi: 10.1175/jamc-d-18-0281.1.

2018

11 **Pettersen, C.**, Bennartz, R., Merrelli, A.J., Shupe, M.D., Turner, D.D., and Walden, V.P.: Precipitation regimes over central Greenland inferred from 5 years of ICECAPS observations, **Atmospheric Chemistry and Physics**, 2018, doi: 10.5194/acp-18-4715-2018.

2017

10 Aartsen, M.G. and 100+ others (including **Pettersen, C.**): The IceCube Neutrino Observatory: instrumentation and online systems, **Journal of Instrumentation**, 2017, doi: 10.1088/1748-0221/12/03/P03012.

2016

9 Pettersen, C., Bennartz, R., Merrelli, A.J., Shupe, M.D., and Turner, D.D.: Microwave signatures of ice hydrometeors from ground-based observations above Summit, Greenland, **Atmospheric Chemistry and Physics**, 2016, doi: 10.5194/acp-16-4743-2016.

2014

8 Best, F.A., Adler, D.P., **Pettersen, C.**, Revercomb, H.E., Gero, P.J., Taylor, J.K., and Knuteson, R.O.: Results from recent vacuum testing of an on-orbit absolute radiance standard (OARS) intended for the next generation of infrared remote sensing instruments, **SPIE Remote Sensing**, 2014, doi: 10.1117/12.2069338.

2013

7 Bennartz, R.B., Shupe, M.D., Turner, D.D., Walden, V.P., Steffen, K., Cox, C.J., Miller, N.B., and **Pettersen, C.**: July 2012 Greenland melt extent enhanced by low-level liquid clouds, **Nature**, 2013, doi: 10.1038/nature12002.

2012 and earlier

6 Best, F.A., Adler, D.P., **Pettersen C**., Revercomb, H.E., Gero, P.J., Taylor, J.K., and Knuteson R.O., Perepezko JH.: On-orbit absolute radiance standard for the next generation of IR remote sensing instruments, **International Society for Optics and Photonics**, 2012, doi: 10.1364/FTS.2013.FW4D.5.

5 Pettersen, C., Best, F.A., Adler, D.P., Revercomb, H.E., Gero, P.J., Taylor, J.K., Knuteson, R.O. and Perepezko, J.H.: "On-Orbit Absolute Radiance Standard for Future IR Remote Sensing Instruments – Overview of Recent Technology Advancements", **Fourier Transform Spectroscopy**, 2011, doi: 10.1364/FTS.2011.JPDP3.

4 Best, F.A., Adler, D.P., **Pettersen, C.**, Revercomb, H.E. and Perepezko, J.H.: "On-orbit absolute temperature calibration using multiple phase change materials: overview of recent technology advancements", **Multispectral, Hyperspectral, and Ultraspectral Remote Sensing Technology, Techniques, and Applications III** (Vol. 7857, p. 78570J), 2010, doi: 10.1117/12.869564.

3 Pettersen, C. and Cooper, R.F.: " Float-reaction between liquid bronze and magnesium aluminosilicate and ZnO-doped magnesium aluminosilicate glass–ceramic-forming glassmelts", **Journal of Non-Crystalline Solids**, 2008, doi: 10.1016/j.jnoncrysol.2008.01.007.

2 Achterberg, A. and 100+ others (including **Pettersen, C.**): "First year performance of the IceCube neutrino telescope", **Astroparticle Physics**, 2006, doi: 10.1016/j.astropartphys.2006.06.007.

1 Veum, M, **Pettersen, C.**, Mach, P., Crowell, P.A., and Huang, C.C.: "Studies of a Free-Standing Liquid Crystal Film Using a Vibrating Drumhead Tensiometer" **Physical Review E**, 2000, doi: 10.1103/PhysRevE.61.R2192.

Data Sets

*** Pettersen, C.** and Merrelli**,** A.J.: **"**Microwave radiometer snow categorization tool for Summit, Greenland, 2010 – 2015", 2018, **Arctic Data Center**, doi:10.18739/A2R28Q.

***** Hudak, D., Kulie, M.S., and **Pettersen, C.**: "GPM Ground Validation Environment Canada (EC) Micro Rain Radar (MRR) GCPEx V2", 2015, **NASA**, doi: 10.5067/GPMGV/GCPEX/MRR/DATA203.

***** Petersen, W.A., **Pettersen, C.**, Kulie, M.S., Gatlin, P.N, and Wingo, M.T.: "GPM Ground Validation NASA Micro Rain Radar (MRR) GCPEx V2", 2015, **NASA**, doi: 10.5067/GPMGV/GCPEX/MRR/DATA204.

Research Presentations

2021

* **Pettersen et al.**, "The Critical Role of Euro-Atlantic Blocking in Promoting Snowfall in Central Greenland", **Atmospheric Blocking Workshop**, 2021, *Poster*

* **Pettersen et al.**, "The Precipitation Imaging Package: Assessment of Microphysical and Bulk Characteristics of Snow and Phase Partitioning", **3rd International Summer Snowfall Workshop**, 2021, *Poster*

* **Pettersen**, “Clouds and Blocking: Snowfall Processes Over the Greenland Ice Sheet”, **NOAA Physical Sciences Laboratory Seminar**, 2021, *Oral* (**Invited**)
* **Pettersen et al.**, “The Critical Role of Euro-Atlantic Blocking in Promoting Snowfall in Central Greenland”, **AMS PMO**, 2021, *Poster*
* **Pettersen**, “Observing, Characterizing, and Quantifying Processes in Snowfall Regimes”, **Department of Climate and Space Sciences and Engineering, University of Michigan Seminar**, 2021, *Oral* (**Invited**)
* **Pettersen** and Kulie “Lake-effect snow in the U.P.”, **Michigan Sea Grant Speaker Series**, 2021, *Oral* (**Invited**)

2020

* **Pettersen et al.**, “Lake-Effect Snow Quantitative Precipitation Estimation Nowcasting through Blended GOES, NEXRAD, and PIP Observations”, **AGU**, 2020, *Poster*
* **Pettersen**, “From neutrinos to snowfall: A tale of two ice sheets”, **College of Idaho Natural Sciences and Mathematics Colloquium**, 2020, *Oral* (**Invited**)
* **Pettersen et al.**, “The influence of atmospheric rivers on cold season precipitation”, **NASA PMM STM**, 2020, *Poster*
* **Pettersen**, “Cloud, Seasonal, and Blocking Influences on Snowfall over the Greenland Ice Sheet”, **Department of Atmospheric Sciences, University of Illinois Seminar**, 2020, *Oral* (**Invited**)
* **Pettersen et al.**, “Upper Great Lakes Snowfall Characteristics: Perspectives from an Enhanced Instrument Suite”, **UW SSEC/ANL-CELS Joint Workshop**, 2020, *Oral*
* **Pettersen et al.**, “Long term dataset applications (including international partners and DOE)”, **PMM Cal/Val** Symposium, 2020, *Oral*

2019

* **Pettersen et al.,** “A Composite Analysis of Snowfall Modes from Four Winter Seasons in Marquette, Michigan”, **AGU**, 2019, *Poster*
* **Pettersen et al.**, “The Influence of Atmospheric Rivers on High-Latitude Wintertime Precipitation”, **NASA PMM STM**, 2019, *Oral*
* **Pettersen et al.**, “Cyclones, Blocks, and their Impact on Precipitation Processes over Central Greenland”, **AMS PMO**, 2019, *Oral*
* **Pettersen et al.**, “Analyses of Two Distinct Precipitation Regimes over Central Greenland Inferred from Ground-Based and Satellite Observations”, **AMS PMO**, 2019, *Poster*
* **Pettersen**, “From neutrinos to snow: A tale of two ice sheets”, **University of Wisconsin – Women in Tech**, 2019, *Oral* (**Invited**)

2018

* **Pettersen and Wood**, “Snowfall Modes Diagnosed from GV Observations: Implications for Satellite Snowfall Retrievals”, **NASA PMM STM**, 2018, *Poster*
* **Pettersen et al.**, “Analyses of two distinct precipitation regimes over central Greenland inferred from 5 years of ICECAPS observations”, **AMS CPR**, 2018, *Oral*
* **Pettersen et al.**, “A Composite Analysis of Snowfall Modes from Four Winter Seasons in Marquette, Michigan”, **AMS CPR**, 2018, *Poster*

2017

* **Pettersen et al., “**Ground based remote sensing retrievals and observations of snowfall in the Telemark region of Norway**”, AGU**, 2017, *Poster*
* **Pettersen et al., “**Enhancing our Understanding of Snowfall Modes with Ground-Based Observations**”, AMS Radars**, 2017, *Oral*
* **Pettersen et al., “**Enhancing our Understanding of Snowfall Modes with Ground-Based Observations: From the Great Lakes to Norway**”, Norwegian Meteorologisk Institutt**, 2017, *Oral* (**Invited**)
* **Pettersen et al., “**Enhancing our Understanding of Snowfall Modes with Ground-Based Observations: From the Great Lakes to Norway**”, UW AOS Department Seminar**, *Oral*
* **Pettersen et al., “**Dry Precipitation on the Greenland Ice Sheet: A study of Properties and Characteristics**”, AMS**, 2017, *Oral*

2016

* **Pettersen et al., “**Enhancing our Observations of Snowfall Modes from Satellite with Ground-Based Instruments**”, AGU**, 2016, *Oral*

* **Pettersen and Wood, "**Constraints on precipitation microphysics from cold-season ground validation observations**", NASA PMM STM**, 2016, *Poster*
* **Pettersen et al., "**Dry Precipitation on the Greenland Ice Sheet: A study of Properties and Characteristics**", ICCP**, 2016, *Poster*
* **Pettersen and Kulie, "**Snowfall Modes as observed from Ground-Based Observations: Large-Scale, Lake Effect, and Orographically Enhanced**"**, **NWS Duluth, MN**, 2016, *Oral* (**Invited**)

2015

* **Pettersen et al.,** "Lake Effect Snow: A Combined Micro Rain Radar and Microphysical Analysis" **AMS Radars**, 2015, *Poster*
* **Pettersen et al.,** "Microwave signatures of ice hydrometeors from ground-based observations above Summit, Greenland", **GRC/GRS**, 2015, *Poster*

2014

* **Pettersen et al.,** "Identifying Ice Hydrometeor Signatures above Summit, Greenland Using a Multi-Instrument Approach", **AGU**, 2014, *Poster*

2013

* **Pettersen et al.,** "Case Study of Mixed-Phase to Ice Precipitation in the Arctic", **AGU**, 2013, *Poster*

2012 and earlier

* **Pettersen et al.**, "Performance Demonstration of Miniature Phase Transition Cells in Microgravity as a Validation for their use in the Absolute Calibration of Temperature Sensors On-Orbit", **AGU**, 2012, *Poster*
* **Pettersen et al.**, "Validation of an Absolute Temperature Calibration Scheme for use in an On-Orbit Absolute Radiance Standard (OARS)", **IRS**, 2012, *Poster*
* **Pettersen et al.,** "Performance Demonstration of Miniature Phase Transition Cells in Microgravity as a Validation for their use in the Absolute Calibration of Temperature Sensors On-Orbit", **AGU**, 2011, *Poster*
* **Pettersen et al.**, **"**On-Orbit Absolute Radiance Standard for Future IR Remote Sensing Instruments – Overview of Recent Technology Advancements", **OSA FTS**, 2011, *Oral*
* **Best, Pettersen et al.**, **"**On-Orbit Absolute Radiance Standard for CLARREO", **AGU**, 2010, *Poster*