

# Andrey A. Grachev

## Conference Papers and Presentations

Conference proceedings (in descending order by year)

### 2015

- Grachev A.A., Leo L.S., Di Sabatino S., Fernando H.J.S., Pardyjak E.R., Fairall C.W. (2015) The turbulence structure of katabatic flows below and above wind-speed maximum. *European Geosciences Union, General Assembly 2015*, Vienna, Austria, 12–17 April 2015, Session AS1.7, Atmospheric processes over complex terrain, Paper EGU2015-7763 (<http://meetingorganizer.copernicus.org/EGU2015/EGU2015-7763.pdf>)
- Grachev A.A., Uttal T., Konopleva-Akish E.A., Persson P.O.G., Fairall C.W., Crepinsek S.M., Albee R., Makshtas A.P., Repina I.A. (2015) Similarity in turbulent mixing and dissipation for scalars measured in Arctic at the Tiksi observatory. *European Geosciences Union, General Assembly 2015*, Vienna, Austria, 12–17 April 2015, Session AS2.3, Boundary Layers in High Latitudes: Exploring Physics and Chemistry across Scales, Paper EGU2015-7604 (<http://meetingorganizer.copernicus.org/EGU2015/EGU2015-7604.pdf>)
- Konopleva E.A., Grachev A.A., Uttal T., Persson P.O.G., Crepinsek S.M. (2015) Observation and analysis of the zero-curtain effect in Tiksi (Siberia). *43rd NOAA ESRL Global Monitoring Annual Conference*, May 19-20, 2015, Boulder, Colorado, USA (<http://www.esrl.noaa.gov/gmd/annualconference/abstracts/28-150327-C.pdf>)
- Crepinsek S.M., Uttal T., Grachev A.A., Konopleva E.A., Persson P.O.G., (2015) inhomogeneity of conductive heat fluxes around the Tiksi meteorological tower. *43rd NOAA ESRL Global Monitoring Annual Conference*, May 19-20, 2015, Boulder, Colorado, USA (<http://www.esrl.noaa.gov/gmd/annualconference/abstracts/35-150330-B.pdf>)
- Konopleva-Akish E.A., Grachev A.A., Uttal T., Persson P.O.G., Crepinsek S.M., Albee R. (2015) Flux-profile relationships under stable conditions at Arctic terrestrial sites. *American Meteorological Society, 13th Conference on Polar Meteorology and Oceanography*, May 31 - June 4, 2015, Whistler, British Columbia, Canada ([http://cmos.in1touch.org/client/relation\\_roster/clientRelationRosterDetails.html?clientRelationId=425823&clientRelationRosterId=113](http://cmos.in1touch.org/client/relation_roster/clientRelationRosterDetails.html?clientRelationId=425823&clientRelationRosterId=113))

### 2014

- Grachev A.A., Uttal T., Persson P.O.G., Stone R.S., Crepinsek S.M., Albee R., Makshtas A.P., Kustov V.Y., Repina I.A., Artamonov A.Y. (2014) Comparison of surface fluxes and boundary-layer measurements at Arctic terrestrial sites. *European Geosciences Union, General Assembly 2014*, Vienna, Austria, 27 April - 02 May 2014, Session AS2.3, Boundary Layers in High Latitudes and Over Snow and Ice: Physics and Chemistry, Paper EGU2014-9259 (<http://meetingorganizer.copernicus.org/EGU2014/EGU2014-9259.pdf>)

- Leo L.S., Di Sabatino S., Fernando H.J.S., Grachev A., Pardyjak E., Jensen D. (2014) Turbulence characteristics in katabatic flows: some results from MATERHORN-1. *European Geosciences Union, General Assembly 2014*, Vienna, Austria, 27 April - 02 May 2014, Session, NP6.3 Turbulence in the Atmosphere, Paper EGU2014-12150 (<http://meetingorganizer.copernicus.org/EGU2014/EGU2014-12150.pdf>)
- Grachev A.A., Andreas E.L., Fairall C.W., Guest P.S., Persson P.O.G. (2014) Similarity theory based on Dougherty-Ozmidov scaling. *American Meteorological Society, 21st Symposium on Boundary Layers and Turbulence*, 9-13 June 2014, Leeds, UK, Paper 8B.9 (Abstract: <https://ams.confex.com/ams/21BLT/webprogram/Paper248540.html>), (Presentation: [https://ams.confex.com/ams/21BLT/webprogram/Handout/Paper248540/Grachev et al 2014 AMS BLT \(SHEBA Ozmidov\) v1.pdf](https://ams.confex.com/ams/21BLT/webprogram/Handout/Paper248540/Grachev%20et%20al%202014%20AMS%20BLT%20(SHEBA%20Ozmidov)%20v1.pdf))
- Leo L.S., Di Sabatino S., Grachev A.A., Hocut C.M., Hoch S., Jensen D., Pardyjak E.R., Fernando H.J.S. (2014) Characteristics of katabatic flows along a gentle slope of Granite Mountain during MATERHORN. *American Meteorological Society, 16th Conference on Mountain Meteorology*, 17-22 August, 2014, San Diego, CA, USA (<https://ams.confex.com/ams/16MountMet/webprogram/Paper251355.html>)
- Kirk K.B., Gold A.U., Morrison D., Lynds S., Buhr Sullivan S.M., Grachev A.A., Persson P.O.G. (2014) Arctic climate curriculum: engaging high school students with authentic data in a flexible, relevant, and easy-to-use format. *Geological Society of America, Annual Meeting*, Vancouver, British Columbia, Canada 19–22 October 2014, Paper No. 213-4 ([https://gsa.confex.com/gsa/2014AM/finalprogram/abstract\\_246555.htm](https://gsa.confex.com/gsa/2014AM/finalprogram/abstract_246555.htm))
- Grachev A.A. (2014) Urban and suburban studies from ship-based measurements in the Houston region. *2014 Weather Information Service Engine (WISE) International Workshop*, Seoul, South Korea, 17–19 November 2014 (<http://workshop.wise2020.org/2014/>).
- Grachev A.A., Uttal T., Persson P.O.G., Crepinsek S.M., Fairall C.W., Albee R., Makshtas A.P., Kustov V.Y., Repina I.A., Artamonov A.Y. (2014) Scaling properties of turbulent mixing for scalars measured at Arctic terrestrial sites. *AGU Fall Meeting*, San Francisco CA, 15-19 December, 2014, Session A41M Atmospheric Boundary Layer Processes and Turbulence I.

## 2013

- Uttal U., Grachev A.A., Repina I.A., Persson P.O.G., Key J. (2013) An observational Arctic Flux Network supporting the international arctic systems for observing the atmosphere and global cryosphere watch. *Davos Atmosphere and Cryosphere Assembly (DACA-13)*, July 8–12, 2013, Davos, Switzerland (#1271; Session C4.3b: Atmospheric boundary layers in complex terrain and over ice, snow and vegetated surfaces; Wednesday, 10 July 2013, 10:15–11:45)
- Leo L.S., Di Sabatino S., Grachev A.A., Hocut C.M., Fernando H.J.S., Pardyjak E.R., Jensen D., Hoch S.W., Whiteman C.D. (2013) Spatial and temporal evolution of katabatic flows in MATERHORN 1. *Davos Atmosphere and Cryosphere Assembly (DACA-13)*, July 8–12,

2013, Davos, Switzerland (#1230, Session C4.3d: Atmospheric boundary layers in complex terrain and over ice, snow and vegetated surfaces; Wednesday, 10 July 2013, 16:15–17:45)

- Choukulkar A., Brewer A., Williams C.R., Grachev A.A., Fairall C.W. (2013) Ship-based Observations of Turbulence and Mass Flux Transport in the Indian Ocean from the DYNAMO Field Program. *AGU Fall Meeting*, San Francisco CA, 9–13 December 2013, Session Title: A31F. The Madden-Julian Oscillation: Its Initiation, Identification, and Structure I Posters (cosponsored by AMS) (Poster # A31F-0157).
- Crepinsek S.M., Uttal T., Sandoval C., Persson P.O.G., Grachev A.A. (2013) Comparison of Heat Flux Measurements and Calculations at an Arctic Site. *AGU Fall Meeting*, San Francisco CA, 9–13 December 2013, Session Title: C44B. Modeling of the Cryosphere: Energy and Mass Balance of Snow, Ice and Permafrost III (Oral presentation # C44B-05).
- Fairall C.W., Williams C., Grachev A.A., Brewer A., Choukulkar A. (2013) Ship-based Observations of Turbulence and Stratocumulus Cloud Microphysics in the SE Pacific Ocean from the VOCALS Field Program. *AGU Fall Meeting*, San Francisco CA, 9–13 December 2013, Session Title: A43G. The Southern Ocean: Clouds, Aerosols, and the Air-Sea Interface II Posters (Poster # A43G-0363).
- Uttal T., Grachev A.A., Makshtas A.P., Repina I.A., Persson P.O.G., Laurila T.J., Crepinsek S.M. (2013) Measurements of Physical and Gas Exchanges between the Atmosphere and Surface at the Tiksi Hydrometeorological Observatory. *AGU Fall Meeting*, San Francisco CA, 9–13 December 2013, Session Title: C13A. Physical and Chemical Air-Snow-Ice Interactions: From the Micro to the Global Scale III Posters (Poster # C13A-0653).

## 2012

- Grachev A.A., Uttal T., Persson P.O.G., Stone R.S., Repina I.A., Artamonov A.Y., Albee R. (2012) Boundary-layer measurements and surface fluxes in Arctic at the Eureka (Canada) and Tiksi (Russia) climate observatories. *European Geosciences Union, General Assembly 2012*, Vienna, Austria, 22–27 April 2012, Session: AS2.3, Boundary Layers in High Latitudes: Physical and Chemical Processes Including Atmosphere-Ice Chemical Interactions (AICI), Paper EGU2012-2535 (Abstract: <http://meetingorganizer.copernicus.org/EGU2012/EGU2012-2535.pdf>), (Presentation: [http://presentations.copernicus.org/EGU2012-2535\\_presentation.pdf](http://presentations.copernicus.org/EGU2012-2535_presentation.pdf))
- Persson P.O.G., Stone R.S., Grachev A.A., Matrosova L.E. (2012) Processes affecting the annual surface energy budget at high-latitude terrestrial sites. *European Geosciences Union, General Assembly 2012*, Vienna, Austria, 22–27 April 2012, Session: AS2.3, Boundary Layers in High Latitudes: Physical and Chemical Processes Including Atmosphere-Ice Chemical Interactions (AICI), Paper EGU2012-3265 (<http://meetingorganizer.copernicus.org/EGU2012/EGU2012-3265.pdf>)
- Grachev A.A., Andreas E.L., Fairall C.W., Guest P.S., Persson P.O.G. (2012) Upper limit of applicability of the local similarity theory in the stable atmospheric boundary layer.

*European Geosciences Union, General Assembly 2012*, Vienna, Austria, 22–27 April 2012, Session: NP6.3/AS2.4, Turbulence in the Atmosphere, Paper EGU2012-3256 (Abstract: <http://meetingorganizer.copernicus.org/EGU2012/EGU2012-3256.pdf>), (Presentation: [http://presentations.copernicus.org/EGU2012-3256\\_presentation.pdf](http://presentations.copernicus.org/EGU2012-3256_presentation.pdf))

Grachev A.A., Uttal T., Persson P.O.G., Stone R.S., Repina I.A., Artamonov A.Y., Albee R., Matrosova L.E. (2012) Comparison of arctic surface fluxes at the Eureka (Canada) and Tiksi (Russia) climate observatories. *International Polar Year (IPY) 2012 Conference*, 22-27 April 2012, Montréal, Canada, Session 1.2.1 Atmospheric, physical and chemical processes in the Polar Regions / Poster Session A, (<http://132.246.11.198/2012-ipy/pdf-all/ipy2012arAbstract02275.pdf>)

Matrosova L.E., Persson P.O.G., Uttal T., Grachev A.A., Albee R. (2012) Annual cycles of radiative energy fluxes and surface characteristics at Eureka, Canada. *International Polar Year (IPY) 2012 Conference*, 22-27 April 2012, Montréal, Canada, Session 1.2.1 Atmospheric, physical and chemical processes in the Polar Regions / Poster Session A, (<http://132.246.11.198/2012-ipy/pdf-all/ipy2012arAbstract00859.pdf>)

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Grachev A.A., Uttal T., Persson P.O.G., Stone R.S., Repina I.A., Artamonov A.Y., Albee R. (2012) Surface fluxes and boundary-layer measurements in Arctic at the Eureka (Canada) and Tiksi (Russia) climate observatories. *40th Annual NOAA ESRL Global Monitoring Annual Conference*, May 14-17, 2012, Boulder Colorado, Poster P-61 ([http://www.esrl.noaa.gov/gmd/publications/annual\\_meetings/2012/abstracts/100-120409-B.pdf](http://www.esrl.noaa.gov/gmd/publications/annual_meetings/2012/abstracts/100-120409-B.pdf))

Persson P.O.G., Shupe M., Grachev A.A., Stone R.S., Solomon A. (2012) Using remote sensing observations for understanding variability of arctic surface energy fluxes. *16th International Symposium for the Advancement of Boundary-Layer Remote Sensing (ISARS)*, 5-8 June 2012, Boulder CO, Paper S05-2.

Grachev A.A., Andreas E.L, Fairall C.W., Guest P.S., Persson P.O.G. (2012) Stable boundary layer studies over arctic sea ice during SHEBA. *16th International Symposium for the Advancement of Boundary-Layer Remote Sensing (ISARS)*, 5-8 June 2012, Boulder CO, Paper S05-4.

Grachev A.A., Andreas E.L, Fairall C.W., Guest P.S., Persson P.O.G. (2012) The critical Richardson number and limit of applicability of Monin-Obukhov similarity theory in the stable atmospheric boundary layer, *American Meteorological Society, 20th Symposium on Boundary Layers and Turbulence*, 9-13 July 2012, Boston, MA, Paper 3B.5 (<https://ams.confex.com/ams/20BLT18AirSea/webprogram/Paper209287.html>)

Grachev A.A., Uttal T., Persson P.O.G., Stone R.S., Albee R. (2012) Boundary-layer measurements and surface fluxes in the Canadian Arctic at Eureka observatory, *International Meeting: Results of the First Year of Atmospheric Observations at The International Tiksi Hydrometeorological Observatory*, 18-20 September 2012, Arctic and Antarctic Research Institute, St. Petersburg, Russia  
([http://www.esrl.noaa.gov/psd/events/2012/tiksi/pdf/Grachev\\_surfaceflux\\_SPb2012.pdf](http://www.esrl.noaa.gov/psd/events/2012/tiksi/pdf/Grachev_surfaceflux_SPb2012.pdf))

Artamonov A.Y., Repina I.A., Makshtas A.P., Grachev A.A., Uttal T., Albee R. (2012) The preliminary results of Boundary-layer measurements in Tiksi, *International Meeting: Results of the First Year of Atmospheric Observations at The International Tiksi Hydrometeorological Observatory*, 18-20 September 2012, Arctic and Antarctic Research Institute, St. Petersburg, Russia  
([http://www.esrl.noaa.gov/psd/events/2012/tiksi/pdf/Artamonov\\_boundarylayer\\_SPb2012.pdf](http://www.esrl.noaa.gov/psd/events/2012/tiksi/pdf/Artamonov_boundarylayer_SPb2012.pdf))

Grachev A.A. (2012) Mixing lengths and z-less concept in the stable atmospheric boundary layer, *AGU Fall Meeting*, San Francisco CA, 3-7 December, 2012, Session: A13P. Atmospheric Boundary Layer Processes and Turbulence VII  
(<http://abstractsearch.agu.org/meetings/2012/FM/A13P-01.html>).

## 2011

Grachev A.A., Albee R., Persson P.O.G., Uttal T. (2011) Multi-year measurements of turbulent surface fluxes in Canadian Arctic at Eureka observatory. *European Geosciences Union, General Assembly 2011*, Vienna, Austria, 03–08 April 2011, Session: AS2.4, Boundary Layers in High Latitudes: Physical and Chemical Processes over Snow, Ice, Ocean and Land, Paper EGU2011-12574 (<http://meetingorganizer.copernicus.org/EGU2011/EGU2011-12574.pdf>).

Grachev A.A., Albee R., Persson P.O.G., Uttal T. (2011) Long-term measurements of turbulent surface fluxes and carbon dioxide in Canadian Arctic at Eureka climate observatory. *American Meteorological Society, 11th Conference on Polar Meteorology and Oceanography*, 2-5 May, 2011, Boston, MA, Paper P2.5  
(<http://ams.confex.com/ams/11Polar/webprogram/Paper188863.html>)

Grachev A.A., Albee R., Persson P.O.G., Uttal T. (2011) Turbulent surface fluxes and transfer of carbon dioxide in Canadian Arctic at Eureka observatory. *International conference "Climate Changes in Polar and Subpolar Regions"*, A.M. Obukhov Institute of Atmospheric Physics, Russian Academy of Sciences, 17-19 May 2011, Moscow, Russia.

Grachev A.A., Andreas E.L., Fairall C.W., Guest P.S., Persson P.O.G. (2011) Turbulent fluxes over sea ice in Arctic during SHEBA experiment. *International conference "Climate Changes in Polar and Subpolar Regions"*, A.M. Obukhov Institute of Atmospheric Physics, Russian Academy of Sciences, 17-19 May 2011, Moscow, Russia.

Matrosova L.E., Persson P.O.G., Uttal T., Grachev A.A., Albee R. (2011) Annual cycles of radiative energy balances in Eureka, Canada. *World Climate Research Programme (WCRP) Open Science Conference "Climate Research in Service to Society"*, 24-28 October Denver, CO, USA, Posters Session C5, poster M180B ([http://www.wcrp-climate.org/conference2011/posters/C5/C5\\_Matrosova\\_M180B.pdf](http://www.wcrp-climate.org/conference2011/posters/C5/C5_Matrosova_M180B.pdf)).

## 2010

Persson P.O.G., Grachev A.A., Fairall C.W., Brooks I.M., Birch C., Solomon A., Wheeler C. (2010) Turbulent fluxes over arctic sea ice: Measurements, interactions, and comparisons to models. *US CLIVAR/SeaFlux Workshop "Surface Fluxes: Challenges for High Latitudes"*, March 17–19 2010, National Center for Atmospheric Research (NCAR), Boulder CO (<http://vintage.joss.ucar.edu/events/2010/seaflux/abstracts/GrachevAbstract.pdf>).

Grachev A.A., Albee R., Fairall C.W., Hare J.E., Persson P.O.G., Uttal T. (2010) Analysis of surface fluxes at Eureka climate observatory in Arctic. *European Geosciences Union, General Assembly 2010*, Vienna, Austria, 02–07 May 2010, Session: AS2.4, Boundary Layers in High Latitudes: Physical and Chemical Processes, Observational and Monitoring Programs, Modeling and Analysis, Paper EGU2010-13141 (<http://meetingorganizer.copernicus.org/EGU2010/EGU2010-13141.pdf>).

Grachev A.A., Andreas E.L., Fairall C.W., Guest P.S., Persson P.O.G. (2010) Outlier problem for gradient-based scaling in the stable boundary layer. *American Meteorological Society, 19th Symposium on Boundary Layers and Turbulence*, August 2–6, 2010, Keystone, CO, Paper 11A.5 ([http://ams.confex.com/ams/19Ag19BLT9Urban/techprogram/paper\\_173354.htm](http://ams.confex.com/ams/19Ag19BLT9Urban/techprogram/paper_173354.htm)).

## 2009

Hare J., Grachev A., Bariteau L., Fairall C., Wolfe D., Pezoa S. (2009) Comparisons and contrasts of recent shipboard mean and covariance flux observations. *American Meteorological Society, 89th Annual Meeting, 16th Conference on Air-Sea Interaction*, 11–15 January 2009, Phoenix AZ, Paper 2.3 ([https://ams.confex.com/ams/89annual/techprogram/paper\\_145760.htm](https://ams.confex.com/ams/89annual/techprogram/paper_145760.htm)).

Grachev A.A., Bariteau L., Fairall C.W., Hare J.E., Helmig D., Hueber J., Lang E.K. (2009) Turbulent transfer and mixing of trace gases in the Houston urban area and the surrounding coastal zone of Gulf of Mexico during TexAQS 2006. *American Meteorological Society, 89th Annual Meeting, 16th Conference on Air-Sea Interaction*, 11–15 January 2009, Phoenix, AZ, Paper 11B.5 ([https://ams.confex.com/ams/89annual/techprogram/paper\\_144167.htm](https://ams.confex.com/ams/89annual/techprogram/paper_144167.htm)).

Grachev A.A., Albee R., Fairall C.W., Hare J.E., Persson P.O.G., Uttal T. (2009) Turbulent fluxes and transfer of carbon dioxide in Arctic at the SEARCH station Eureka, Canada. *European Geosciences Union, General Assembly 2009*, Vienna, Austria, 19-24 April 2009, Session: AS2.4, Boundary Layers in High Latitudes: Physical and Chemical Processes, Observational and Monitoring Programs, Modeling and Analysis, Paper EGU2009-11110 (<http://meetingorganizer.copernicus.org/EGU2009/EGU2009-11110.pdf>).

Andreas E. L, Persson P.O.G., Grachev A.A., Jordan R.E., Guest P.S., Fairall C.W., Horst T.W. (2009) Announcing the SHEBA Bulk Turbulent Flux Algorithm. *American Meteorological Society, 10th Conference on Polar Meteorology and Oceanography*, Madison, WI, 18–21 May 2009, 11 p. ([http://ams.confex.com/ams/10POLAR/techprogram/paper\\_152590.htm](http://ams.confex.com/ams/10POLAR/techprogram/paper_152590.htm)).

## 2008

Grachev A.A., Persson P.O.G., Fairall C.W., Uttal T. (2008) Boundary-layer measurements and surface fluxes at Study of Environmental Arctic Change (SEARCH) sites in Northern Canada. *European Geosciences Union, General Assembly 2008*, Vienna, Austria, 13-18 April 2008, Session: AS2.04 Boundary Layer and Chemical Processes in High Latitudes: Observations and Modeling, Paper EGU2008-A-11389 (<http://meetings.copernicus.org/www.cosis.net/abstracts/EGU2008/11389/EGU2008-A-11389.pdf>).

Grachev A.A., Andreas E.L, Fairall C.W., Guest P.S., Persson P.O.G. (2008) Gradient-based z-less similarity in the stable atmospheric boundary layer (the SHEBA data). *European Geosciences Union, General Assembly 2008*, Vienna, Austria, 13-18 April 2008, Session: AS2.04 Boundary Layer and Chemical Processes in High Latitudes: Observations and Modeling, Paper EGU2008-A-11407 (<http://meetings.copernicus.org/www.cosis.net/abstracts/EGU2008/11407/EGU2008-A-11407.pdf>).

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Grachev A.A., Andreas E.L, Fairall C.W., Guest P.S., Persson P.O.G. (2008) Small-scale atmospheric turbulence in very stable conditions. *American Meteorological Society, 18th Symposium on Boundary Layers and Turbulence*, 9-13 June 2008, Stockholm, Sweden, Paper 4.4 ([https://ams.confex.com/ams/18BLT/techprogram/paper\\_139926.htm](https://ams.confex.com/ams/18BLT/techprogram/paper_139926.htm)).

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Andreas E.L, Grachev A.A., Fairall C.W., Persson P.O.G., Guest P.S., Horst, T.W., Jordan R.E. (2008) A new bulk flux algorithm to predict turbulent surface fluxes over summer sea ice and the marginal ice zone. *8th Annual Meeting of the European Meteorological Society Annual Meeting, 7th European Conference on Applied Climatology*, Amsterdam, The Netherlands, 29 September – 03 October 2008, Session: AW3 Formulation, validation and forecasting of Small-scale Processes in Atmospheric Models, Paper EMS2008-A-00090

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## 2007

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## 2006

Grachev A.A., Andreas E.L., Fairall C.W., Guest P.S., Persson P.O.G. (2006) Stable boundary layer over sea ice: the SHEBA results. *NATO Advanced Research Workshop* (invited speaker), 18–22 April 2006, Dubrovnik, Croatia.

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## 2005

Andreas E.L., Persson P.O.G., Jordan R.E., Horst T.W., Guest P.S., Grachev A.A., Fairall C.W. (2005) Parameterizing the turbulent surface fluxes over summer sea ice. *American Meteorological Society, 8th Conference on Polar Meteorology and Oceanography*, San Diego CA, 9–13 January 2005, Paper J1.15 ([http://ams.confex.com/ams/Annual2005/techprogram/paper\\_83848.htm](http://ams.confex.com/ams/Annual2005/techprogram/paper_83848.htm)).

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