

Andrei V Kurbatov

Curriculum Vitae

July 2014

Address: Climate Change Institute & University of Maine
136 Sawyer Environmental Research Building
Orono, ME 04469-5764 USA.

Phone: +1 207 581 2840

Cell: +1 207 409-5607

Email: akurbatov@maine.edu

WWW: <http://climatechange.umaine.edu>

Research Interests:

- Impacts of volcanism on Earth's climate system.

Professional Preparation:

- **State University of New York**, Buffalo, New York USA. November, 2000
 - *Ph.D.*: Geology.
 - *Dissertation*: Geodynamics of Kamchatka Peninsula, Russia.
 - *Concentration*: Paleoseismology & tephrochronology.
 - *Advisor*: Marcus I. Bursik.
- **State University of New York**, Buffalo, New York USA. February, 1997
 - *M.A.*: Geology.
 - *Thesis*: Investigation of the May 18, 1980, Blast Surge Deposit at Mount St. Helens Volcano, USA.
 - *Concentration*: Tephrostratigraphy, volcanology, and physical modeling of the blast surge deposits.
 - *Advisor*: Marcus I. Bursik.
- **Moscow State University**, Moscow, Russia. June, 1989
 - *Diploma*: Geology.
 - *Concentration*: Stratigraphic correlation of Jurassic coral-reef formations of southern Uzbekistan Mesozoic limestones based on paleontological and microfacies analyses.
 - *Advisors*: Nikolai V. Beznosov & Irina A. Mikhailova.

Appointments:

- **Climate Change Institute**, University of Maine, Orono, Maine, USA
 - *Associate Research Professor* July 1, 2013 — present
 - *Assistant Research Professor* October 1, 2006 — June 30, 2013
 - *Research Associate* January 15, 2001 — September 30, 2006
- **School of Earth and Climate Sciences**, University of Maine, Orono, Maine, USA
 - *Associate Research Professor* July 1, 2013 — present
 - *Assistant Research Professor* January 1, 2012 — June 30, 2013
- **Department of Geology**, State University of New York, Buffalo, New York USA

- *Research Assistant* January 1994 — December 2000
- **Texaco E & P Inc.**, NAP-West region, Denver, Colorado USA.
 - *Summer intern* May — August, 1998
- **Institute of Volcanic Geology & Geochemistry**, Kamchatka, Russia
 - *Research Scientist* 1991 — 1993
- **Laboratory of Seismology (OMSP)**, Kamchatka, Russia
 - *Scientific Associate* 1992 — 1993
- **Institute of Volcanology**, Kamchatka, Russia
 - *Research Associate* 1989 — 1991
- **Geological Survey of Uzbekistan**, Tashkent, Uzbekistan
 - *Field Assistant* July –August, 1988
 - *Field Assistant* May –September, 1987

Field Experience:

- **Tupungatito volcano**, Chile January — February, 2012
 - Ice coring
- Expedition Leader: **Allan Hills**, Antarctica November, 2010 — January, 2011
 - Ice coring and mapping
- **Tupungatito volcano**, Chile February-March, 2010
 - Ice coring
- Expedition Leader: **Allan Hills**, Antarctica November — December, 2009
 - Ice coring and mapping
- **Kangerlussuaq**, Greenland August, 2009
 - Sampling YDB boundary
- Expedition Leader: **Kangerlussuaq**, Greenland September, 2008
 - Sampling glacial / interglacial transition
- **Kangerlussuaq**, Greenland July, 2008
 - Sampling YD boundary
- **Detroit Plateau**, Antarctic Peninsula November -December, 2007
 - Recovery of 133 meters ice core as part of IPY project with Chile and Brazil
- **Detroit Plateau**, Antarctic Peninsula February, 2007

- Ice core site selection and snow sampling
- **East Antarctica**, Antarctica November, 2006- January 2007
 - Ice coring for the US-ITASE
- **Mt. Etna**, Italy September, 2006
 - Ice core drilling in the lava cave
- **Cordillera Darwin**, Chile February, 2006
 - Ice core drilling
- **Cordillera Darwin**, Chile March, 2005
 - Ice core site selection
- **Tasman Glacier**, Mt. Cook, New Zealand October, 2004
 - Ice core drilling project
- **Mt. Moulton and Allan Hills**, Antarctica, January, 2004
 - Blue ice area project
- **Tasman Glacier**, Mt. Cook, New Zealand November, 2003
 - Ice core site selection
- **Santorini volcano**, Santorini Is., Greece June, 2002
 - Field excursion
- Expedition Leader: **Vestnik Bay, Vahil**, Kamchatka, Russia August, 1999
 - Tephrochronological dating of shoreline landforms
- **Northern Hispaniola**, Dominican Republic January 21 - 22, 1999
 - Field excursion
- **Karymsky, Avachinsky volcano**, Kamchatka, Russia July - August, 1997
 - Tephrochronological work
- **San Francisco Volcanic Field**, Arizona USA July - August, 1996
 - Erosion monitoring network
- **Mount St. Helens volcano**, Washington USA May - June, 1995
 - Blast surge deposit mapping
- **Avachinsky volcano**, Kamchatka, Russia September, 1994
 - Tephrochronological work

- **Mount St. Helens volcano**, Washington USA May, 1994
 - Field reconnaissance
- **Karaginskiy and Bering Islands**, Russia July - September, 1993
 - Tephrochronological dating of shoreline landforms
- **First International Tsunami expedition**, Kamchatka, Russia July, 1993
 - Mapping tsunami deposits in Ust'-Kamchatsk and Khalaktirka Bay areas
- **Paleotsunami and Paleoearthquakes**, Washington, USA June, 1993
 - Field excursion
- **Kreshenii Ognem Cape**, Kamchatka, Russia September, 1992
 - Dating of seismogenic landslide using tephrochronology
- Expedition Leader: **Ksudach, Avachinskiy Volcanoes**, Kamchatka, Russia July - August, 1991
 - Tephrochronological work
- **Shiveluch volcano, Ossora, Ust' Kamchatsk**, Kamchatka, Russia June - September, 1990
 - Tephrochronological work
- **Kluchevskoi and Bezimianny volcanoes**, Kamchatka, Russia January - March, 1990
 - Monitoring of volcanic activity
- **Ebeco volcano**, Paramushir Island, Russia September, 1989
 - Monitoring of volcanic activity and reconstruction of eruption history
- **Ksudach, Zheltovsky, Avachinsky volcanoes**, Kamchatka, Russia June - August, 1989
 - Tephrochronological work
- **Dinosaur tracks in Central Asia**, Uzbekistan, Turkmenistan, Tadzhikistan September, 1988
 - Field excursion
- **South West Gissar Mountains**, Uzbekistan June - August, 1988
 - Geological mapping
- **Kandalaksha Bay**, White Sea, Russia September, 1987
 - Biology Field Camp

- **South West Gissar Mountains**, Uzbekistan June - August, 1987
 - Stratigraphy and paleontology
- **Scientific Cruise onboard the 'Feodosija' ship**, Black Sea, Russia May, 1987
 - Marine Geology Field Camp
- **Geological Mapping**, Moscow Region, Russia June, 1986
 - Field Camp
- **Satino training and research station**, Moscow Region, Russia August, 1985
 - Field Camp
- **Russian platform - Crimea**, Russia, Ukraine June, 1985
 - Geology Field Camp

Teaching

- **ERS 602**, Volcanoes & Climate Spring, 2014
- **ERS 602**, Atmospheric chemistry Fall, 2011
- **ERS 221**, Geologic Problems I (Independent Study) Fall, 2011
 - Ashley Suttter
- **REU**, Research Experience for Undergraduates Summer, 2011
 - Daniel Lesser,
- **ERS 602**, Independent study: Selected topics in Geology Fall, 2010
 - Peter Acton
- **Capstone project**, Independent study: Selected topics in Geology Fall, 2010
 - Eileen Carr
- **ERS 602**, Independent study: Selected topics in Geology Fall, 2009
 - Kristin Schild
- **INT 500**, Visiting speaker seminar series Fall, 2009
 - Invited lecture
- **ERS 602**, introduction to numerical data analysis Spring, 2009
- **GLY 407** Geological Field Mapping, (UB Field Camp in Colorado, Arizona, Utah) May—June, 2000
 - Teaching Assistant
- **GLY 606**, Digital Data Analysis Spring, 1999
 - Co-Instructor

Funded Research Projects

- **National Science Foundation (NSF)**
 - **Co-PI, AGS-1401899** 6/1/2014 — 5/31/2017
Collaborative Research: P2C2–Pleistocene/Holocene Climate Reconstruction from a Pamir High Resolution Deep Ice-Core. \$590,831
 - **PI, PLR-1203640** 9/1/2012 — 8/31/2015
Searching for Abrupt Climate Change Precursors Using Ultra High Resolution Ice Core Analysis. \$797,560
 - **PI, PLR-1142007** 8/1/2012 — 7/31/2015
Collaborative Research: Developing an Antarctic Tephra Database for Interdisciplinary Paleoclimate Research (AntT). \$365,095
 - **Co-PI, PLR-1042883** 6/15/2011 — 5/31/2014
Roosevelt Island Climate Evolution Project (RICE): US Deep Ice Core Glaciochemistry Contribution. \$815,937
 - **Co-PI, EAR-1027960** 10/01/2010 — 9/30/2013
CDI-Type I: CiiWork: an interactive workbench for integration, exploration, and analysis of chronological information. \$451,743
 - **PI, PLR-0838843** 7/1/2009 — 6/30/2013
Collaborative Research: Exploring A 2 Million+ Year Ice Climate Archive-Allan Hills Blue Ice Area (2MBIA). \$407,668
 - **Co-PI, ANT-0837883** 6/1/2009 — 5/31/2013
Collaborative Research: Antarctic Climate Reconstruction Utilizing the US ITASE ICE Core Array (ARRA). \$725,700
 - **Co-PI, ATM-0754644** 8/15/2008 — 8/14/2011
Collaborative Research: Asian Ice Core Array (AICA)–Reconstruction of Past Physical and Chemical Climate over Asia. \$415,336
 - **Co-PI, ANT-0636740** 7/1/2007 — 6/30/2011
Collaborative Research: Microparticle/tephra analysis of the WAIS Divide ice core. \$591,434
 - **Co-PI, ANT-0636506** 7/1/2007 — 6/30/2010
Collaborative Proposal: 2000+ Year Detailed, Calibrated Climate Reconstruction from a South Pole Ice Core Set in an Antarctic - Global Scale Context. \$203,858
 - **Co-PI, ARC-240878** 5/15/2003 — 5/14/2006
A New Mt. Logan Ice Core Record - Change in Climate and Chemistry of the Atmosphere for the North Pacific. \$423,407
 - **Co-PI, ATM-139491** 10/1/2002 — 9/31/2005
Paleoclimate from Mount Everest Ice Cores. \$397,005
- **National Oceanographic & Atmospheric Administration (NOAA)**
 - **Co-PI, Office of Global Programs** 9/01/2005 — 8/31/2006
Abrupt Climate Change, Part II.
 - **Co-PI, Office of Global Programs** 9/01/2004 — 8/31/2005
Abrupt Climate Change, Part I.

- **W.M. Keck Foundation**

- **Co-PI,** **7/1/2008 — 7/30/2011**
Major Advances in the Field of Climate Change Reconstruction Using Ice
Cores

- **The Heinz Endowments**

- **Co-PI,** **10/25/2011 — 10/25/2013**
BreatheProject & 10 Green

Professional Associations

- **American Geophysical Union** 1994 — present
- **Geographical Society of Russia** 1989 — 1993

Honors and Awards

- **Antarctica Service Medal,** NSF March 1, 2006
- **Graduate Pegrum Award,** Department of Geology, SUNY at Buffalo May, 2000
- **Director's List,** Intensive English Language Institute, SUNY at Buffalo May, 1994
- **Outstanding Young Scientist Research award,** Institute of Volcanology November, 1992

Computer Skills

- **Languages:** C, C++, Java, L^AT_EX, Matlab, NCL, Perl, Python, R.
- **Applications:** Generic Mapping Tools (GMT), ERDAS Imagine, common database, spreadsheet, and presentation software.
- **Operating Systems:** Linux, Mac OS X, Windows

Languages

- Fluent in Russian and English
- Introductory level of Spanish

Special Training

- NCL workshop, University of Maine, Orono, ME April 23-25, 2014
- Polar bear safety training for Arctic researchers seminar by Andy McMullen with BearWise Inc., organized by Polar Field Services Inc. April 19, 2014
- NCL workshop, NCAR, Boulder, CO June, 2013
- Global Positioning System (GPS), UNAVCO November, 2009
- Snowmobile safety training, United States Antarctic Program and 2010 November, 2009
- Ground Penetrating Radar (GPR), CRELL September, 2009
- First Aid training Red Cross June, 2009

- “Crevasse Rescue”, United States Antarctic Program November, 2006
- “Snow School”, United States Antarctic Program January, 2004
- Java Programming, UNIX-SL275, SUN Microsystems June 21 - 26, 1998
- Field Work Safety, Moscow State University August, 1985
- Nuclear, Chemical, Biological and Natural disaster management, Moscow State University 1984 — 1985

Synergistic Activities

Actively involved in incorporating research results of the Climate Change Institute into development of cyberinfrastructure that will simplify public access to published CCI results and data sets.

p301dx web site: <http://cs.umaine.edu/~chaw/p301/>;

IceReader web site: <http://www.icereader.org>;

10green web site: <http://www.10green.org>.

Member of the Ice core Working Group (ICWG).

US Coordinator for Polar to Tropical Connections project.

PTC web site: <http://www.polartropical.org>.

Co-convener of AGU Session December, 2011.

V11D Tephra in Ice Cores: Characterization, Transport, and Sources.

Organizer of NCAR NCL workshop at the University of Maine (April 23-25, 2014).

Co-organizer of Harold W. Borns Symposium, University of Maine (2009-2012).

Harold W. Borns Symposium web site:

<http://climatechange.umaine.edu/research/overview>

Actively participated in high school and UMaine student tours of ice core facilities of Climate Change Institute.

Featured in “Last Extinction”. Produced by NOVA, PBS airdate: March 31, 2009.

web site <http://www.pbs.org/wgbh/nova/clovis/>.

Graduate and Postdoctoral Sponsors

Marcus I. Bursik, State University of New York at Buffalo, NY

Gregory A. Zielinski, Climate Change Institute, University of Maine

Graduate Student Advisees

Nicole Spaulding (Ph.D., September 1, 2009—April 25, 2013)

Donna Kalteyer (M.S., August 1, 2013—expected, 2015)

Graduate committee member

Elena Korotkikh (M.S. 2007), Sharon Sneed (Ph.D. 2013), Bess Koffman (Ph.D. 2013)

Mariusz Potocki (Ph.D., expected 2014), Elena Korotkikh (Ph.D., expected 2014),

Thomas Beers (M.S., expected 2014)

Meetings and Workshops

- **IDPO Community Workshop on Ice Coring, UC-Irvine, CA** Feb. 26 —27, 2014
- **South Pole Ice Core Workshop, UC-Irvine, CA** Feb. 25 —26, 2014
- **Cyberinfrastructure for Polar sciences, Minneapolis, MN** Sept. 10 —12, 2013
- **RICE project workshop, Wellington, New Zealand** July 22 —24, 2013
- **Harold W. Borns symposium, Orono, Maine USA** Apr. 22 —23, 2013
- **South Pole planning workshop, Boulder, Colorado USA** February 21 —22, 2013
- **WAIS cores, La Jolla, CA USA** Sept. 10 —12, 2012
- **Harold W. Borns symposium, Orono, Maine USA** Apr. 5 —6, 2012
- **Ice Drilling Science Community planning workshop** Apr. 15 —16, 2011
- **Harold W. Borns symposium, Orono, Maine USA** Apr. 7 — 8, 2011
- **CASA-PTC meeting, Castine, Maine USA** Jun. 14 — 16, 2010
- **Harold W. Borns symposium, Orono, Maine USA** May 6 — 7, 2010
Is tropical tephra present in the WAIS Divide ice core?
- **Harold W. Borns symposium, Orono, Maine USA** May 7 — 8, 2009
Quest for the Oldest Ice on Earth.
- **AICA meting, San Francisco, CA USA** Dec. 13, 2008
Recovery ice core from Fedchenko glacier, Pamir, Tadjhikistan.
- **ITASE meting, Castine, Maine USA** Sep. 3 — 6, 2008
Update on CASA initiative.
- **Harold W. Borns Symposium, Orono, Maine USA** May 8 — 9, 2008
Update on CASA (Climate of Antarctica and Southern America) initiative.
- **Agassiz Symposium, Orono, Maine USA** May 10 — 11, 2007
Searching for the new Northern Hemisphere climate proxies.
- **Volcanic Flows and Falls, Buffalo, New York USA** May 11 — 12, 2006
Tephra Study in the Siple Dome A Ice Core, Antarctica.
- **WAIS Meeting, Algonkian Meeting Center in Sterling, Virginia USA** Sep. 28 —
Oct. 1, 2005
Can sulfate signatures in ice cores verify the source volcano?
- **Agassiz Symposium, Orono, Maine USA** May 5 — 6, 2005
Siple Dome A tephra at 1261 C.E. and possible link with 1259 event.
- **Siple Dome Principal Investigator Meeting, Reno, NV** Feb. 24, 2004
Volcanic ash records in the Siple Dome Ice Core.
- **ITASE Workshop, Castine, Maine USA** Jun. 1 — 3, 2003
- **Agassiz Symposium, Orono, Maine USA** May 8 — 9, 2003
Volcanic Signals in the SDMA Ice Core, Antarctica.
- **Antarctic Proposal Workshop for New Investigators** Aug. 26 — 27, 2002
NSF, Arlington, Virginia USA.

- **Agassiz Symposium, Orono, Maine USA** **May 20 — 21, 2002**
Explosive Volcanism Recorded in Siple Dome Ice Core, Antarctica.
- **Siple Dome Science Meeting, Arlington, Virginia USA** **Mar. 18 — 19, 2002**
- **AGU Chapman Conference: Volcanism and the Earth's Atmosphere** **June, 2002**
Santorini, Greece.
- **Volcanic record in the Siple Dome Ice Cores. Science Meeting,** **April 19-20, 2001**
Biosphere-2, Arizona USA.

Publications

I have co-authored 62 publications . A list of these appears on pages 10–14.

Research Articles

1. Koffman, B. G., K. J. Kreutz, D. J. Breton, E. J. Kane, D. A. Winski, S. D. Birkel, A. V. Kurbatov, and M. J. Handley (2014). Centennial-scale variability of the Southern Hemisphere westerly wind belt in the eastern Pacific over the past two millennia. *Clim. Past* **10**, 11256–1144.
2. Korotkikh, E. V., P. A. Mayewski, D. Dixon, A. V. Kurbatov, and M. Handley (2014). Recent increase in Ba concentrations as recorded in a South Pole ice core. *Atmospheric Environment* **89**, 683–687.
3. Mayewski, P. A., S. B. Sneed, S. D. Birkel, A., and K. A. Maasch (2014). Holocene warming marked by abrupt onset of longer summers and reduced storm frequency around Greenland. *Journal of Quaternary Science* **29**(1), 99–104.
4. Koffman, B. G., K. J. Kreutz, A. V. Kurbatov, and N. W. Dunbar (2013). Impact of known local and tropical volcanic eruptions of the past millennium on the WAIS Divide microparticle record. *Geophysical Research Letters* **40**(17), 4712–4716.
5. Kraus, S., A. Kurbatov, and M. Yates (2013). Geochemical signatures of tephros from Antarctic Peninsula volcanoes. *Andean Geology* **40**(1), 1–40.
6. Spaulding, N. E., J. A. Higgins, A. V. Kurbatov, M. L. Bender, S. A. Arcone, S. Campbell, N. W. Dunbar, L. M. Chimiak, D. S. Introne, and P. A. Mayewski (2013). Climate archives from 90 to 250 ka in horizontal and vertical ice cores from the Allan Hills Blue Ice Area, Antarctica. *Quaternary Research* **80**(3), 562–574.
7. Breton, D., B. Koffman, A. Kurbatov, and G. Kreutz K.J. and Hamilton (2012). Quantifying Signal Dispersion in a Hybrid Ice Core Melting System. *Environmental Science and Technology* **46**(21), 11922–11928.
8. Mayewski, P. A., K. A. Maasch, D. Dixon, S. B. Sneed, R. Oglesby, E. Korotkikh, M. Potocki, B. Grigholm, K. Kreutz, A. V. Kurbatov, N. Spaulding, J. C. Stager, K. C. Taylor, E. J. Steig, J. White, N. A. N. Bertler, I. Goodwin, J. C. Simões, R. Jaña, S. Kraus, and J. Fastook (2012). West Antarctica's sensitivity to natural and human-forced climate change over the Holocene. *Journal of Quaternary Science* **28**(1), 40–48.
9. Spaulding, N., V. Spikes, G. Hamilton, P. Mayewski, N. Dunbar, R. Harvey, J. Schutt, and A. Kurbatov (2012). Ice motion and mass balance at the Allan Hills blue ice area, Antarctica, with implications for paleoclimate reconstructions. *Journal of Glaciology* **58**(208), 399–406.
10. Dunbar, N. W. and A. V. Kurbatov (2011). Tephrochronology of the Siple Dome ice core, West Antarctica: correlations and sources. *Quaternary Science Reviews* **30**(13-14), 1602 – 1614.

11. Korotkikh, E. V., P. A. Mayewski, M. J. Handley, S. B. Sneed, D. S. Introne, A. V. Kurbatov, N. W. Dunbar, and W. C. McIntosh (2011). The last interglacial as represented in the glacio-chemical record from Mount Moulton Blue Ice Area, West Antarctica. *Quaternary Science Reviews* **30**(15-16), 1940–1947.
12. Kurbatov, A. V., P. A. Mayewski, J. P. Steffensen, A. West, D. J. Kennett, J. P. Kennett, T. E. Bunch, M. Handley, D. S. Introne, S. S. Que Hee, C. Mercer, M. Sellers, F. Shen, S. B. Sneed, J. C. Weaver, J. H. Wittke, T. W. Stafford Jr., J. J. Donovan, S. Xie, J. J. Razink, A. Stich, C. R. Kinzie, and W. S. Wolbach (2010). Discovery of a nanodiamond-rich layer in the Greenland ice sheet. *Journal of Glaciology* **56**(199), 747–757.
13. Bursik, M., S. E. Kobs, A. Burns, O. Braitseva, L. Bazanova, I. Melekestsev, A. V. Kurbatov, and D. Pieri (2009). Volcanic plumes and wind: Jetstream interaction examples and implications for air traffic. *Journal of Volcanology and Geothermal Research* **186**, 60–67.
14. Grigholm, B, P. A. Mayewski, A. V. Kurbatov, G. Casassa, A. Staeding, M. Handley, S. Sneed, and D. Introne (2009). Chemical composition of fresh snow from Glaciar Marinelli, Tierra del Fuego, Chile. *Journal of Glaciology* **55**(193), 769–776.
15. Kurbatov, A. V., G. A. Zielinski, N. W. Dunbar, P. A. Mayewski, E. A. Meyerson, S. B. Sneed, and K. C. Taylor (2006). A 12,000 year record of explosive volcanism in the Siple Dome Ice Core, West Antarctica. *Journal of Geophysical Research (Atmospheres)* **111**(10), D12307.
16. Bertler, N. et al. (2005). Snow chemistry across Antarctica. *Annals of Glaciology* **41**(1), 167–179.
17. Pruetz, L. E., K. J. Kreutz, M. Wadleigh, P. A. Mayewski, and A. Kurbatov (2004). Sulfur isotopic measurements from a West Antarctic ice core: implications for sulfate source and transport. *Annals of Glaciology* **39**, 161–168.
18. Taylor, K., R. B. Alley, D. A. Meese, M. Spencer, E. Brook, N. W. Dunbar, R. Finkel, A. J. Gow, A. V. Kurbatov, and G. Lamorey (2004). Dating the Siple Dome (Antarctica) ice core by manual and computer interpretation of annual layering. *Journal of Glaciology* **50**(170), 453–461.
19. Bursik, M. I., A. V. Kurbatov, M. F. Sheridan, and A. W. Woods (1998). Transport and deposition in the May 18, 1980, Mount St. Helens blast flow. *Geology* **26**(2), 155–158.
20. Melekestsev, I. and A. Kurbatov (1998). Frequency of Large Paleearthquakes at the Northwestern Coast of the Bering Sea and in the Kamchatka Basin During Late Pleistocene/Holocene Time. *Volc. Seis.* **19**, 257–267.
21. Woods, A., M. Bursik, and A. V. Kurbatov (1998). The interaction of ash flows with ridges. *Bulletin of Volcanology* **60**(1), 38–51.
22. Minoura, K., V. Gusiakov, A. Kurbatov, S. Takeuti, J. Svendsen, S. Bondevik, and T. Oda (1996). Tsunami sedimentation associated with the 1923 Kamchatka earthquake. *Sedimentary Geology* **106**(1-2), 145–154.
23. Melekestsev, I., A. Kurbatov, M. Pevzner, and L. Sulerzhitskiy (1995). Prehistoric Tsunamis and Large Earthquakes on the Kamchatskiy Peninsula, Kamchatka, Based on Tephrochronological Data. *Volc. Seis.* **16**(4-5), 449–460.
24. Melekestsev, I., V. Dvigalo, V. Kirianov, A. Kurbatov, and I. Nesmachnyi (1994a). Ebeko Volcano, Kuril Islands: Eruptive History and Potential Volcanic Hazards. Part I. *Volc. Seis.* **15**(3), 339–354.
25. Melekestsev, I., V. Dvigalo, V. Kirianov, A. Kurbatov, and I. Nesmachnyi (1994b). Ebeko Volcano, Kuril Islands: Eruptive History and Potential Volcanic Hazards. Part II. *Volc. Seis.* **15**(4), 411–430.

Submitted papers

1. Borisova, A. Y., K. P. Jochum, S. Gouy, N. W. Dunbar, and A. V. Kurbatov (2014, submitted). The Allan Hills tephra (Victoria Land, Antarctica): Evidence for a hot spot origin and deep carbonated crust assimilation. *Geology*.

2. Sneed, S. B., P. A. Mayewski, W. Sayre, M Handley, A. V. Kurbatov, K. C. Taylor, P. Bohleber, and D. Wagenbach (in review, 2014). Validation of micrometer resolution chemical analysis of ice cores by LA-ICP-MS. *Journal of Glaciology*.

Book chapters

1. Kraus, S. and A. V. Kurbatov (2010b). "Chemical Fingerprint of Bulk Tephra from Late Pleistocene/Holocene Volcanoes in the Northern Antarctic Peninsula Area". In: *EARTH SCIENCES IN THE 21-ST CENTURY*. Nova Science Publishers, Inc. New York, pp.1–59.

Papers in conference proceedings

1. Koffman, B. G., K. J. Kreutz, E. Kane, D. Winski, A. Kurbatov, M. Handley, and D. J. Breton (2013). Centennial-Scale Shifts in the Position of the Southern Hemisphere Westerly Wind Belt Over the Past Millennium. In: *Abstract 1811597 presented at 2013 Fall Meeting, AGU, San Francisco, Calif.*
2. Wijk, K. van, L. T. Otheim, H Marshall, A. Kurbatov, and N. E. Spaulding (2013). Laser ultrasonic characterization of ice cores. In: *Abstract 1813047 presented at 2013 Fall Meeting, AGU, San Francisco, Calif.*
3. Dunbar, N. W., A. Kurbatov, and W. C. McIntosh (2012a). Antarctic Tephrochronology: A Maturing Record of Visible Layers and Cryptotephra. In: *Abstract V31F-06 presented at 2012 Fall Meeting, AGU, San Francisco, Calif.*
4. Dunbar, N. W., A. Kurbatov, and W. McIntosh (2012b). "Further development the robust Antarctic volcanic record using tephra layers from the WAIS Divide WDC06A Ice Core". WAIS Divide Science Meeting, Scripps Seaside Forum, La Jolla, CA, USA.
5. Koffman, B. G., K. Kreutz, A. Kurbatov, N. Dunbar, and D. Breton (2012). "The WAIS Divide microparticle record illuminates the nature of past volcanic eruptions and indicates variability in Southern Hemisphere westerly wind intensity". WAIS Divide Science Meeting, Scripps Seaside Forum, La Jolla, CA, USA.
6. Alencar, A., S. Corrêa, H. Evangelista, J. C. Simões, R. Jaña, A. Kurbatov, and P. A. Mayewski (2011). Primeiro registro de COV para a atmosfera do Platô Detroit, Península Antártica. In: *XIII Congresso Brasileiro de Geoquímica/III Simpósio de Geoquímica dos Países do Mercosul*.
7. Dunbar, N. W., A. V. Kurbatov, W. C. McIntosh, and B. Koffman (2011). Antarctic tephrochronology: From visible layers to cryptotephra. In: *International Symposium on Antarctic Earth Sciences (ISAES XI)*. Edinburgh, Scotland, UK.
8. Koffman, B. G., K. J. Kreutz, D. Breton, N. W. Dunbar, and A. Kurbatov (2011). Depositional phasing of volcanic aerosols in the WAIS Divide ice core over the past 2400 years. In: *Abstract V11D-2539 presented at 2011 Fall Meeting, AGU, San Francisco, Calif.*
9. Kraus, S., A. V. Kurbatov, and M. Yates (2011). Geochemical signatures of tephtras from Antarctic Peninsula volcanoes. In: *20 years Antarctic research station GARS O'Higgins*.
10. Kreutz, K. J., B. G. Koffman, D. J. Breton, N. W. Dunbar, and A. Kurbatov (2011). Seasonal to centennial-scale variability of microparticle concentration and size distribution in the WAIS Divide ice core over the past 2.4 ka. In: *Abstract PP23B-1846 presented at 2011 Fall Meeting, AGU, San Francisco, Calif.*
11. Potocki, M, P. A. Mayewski, A Kurbatov, M Handley, J. C. Simões, and R. Jaña (2011). Detailed glaciochemical records from a Northern Antarctic peninsula site - Detroit Plateau. In: *Abstract PP43B-1822 presented at 2011 Fall Meeting, AGU, San Francisco, Calif.*
12. Spaulding, N., A. Kurbatov, P. Mayewski, M. Bender, J. Higgins, V. Spikes, D. Introne, and S. Sneed (2011). Exploration and Development of the Climate Archive of the Allan Hills, Antarctica. In: *XVIII International Union for Quaternary Research*. (INQUA) Conference. Bern, Switzerland. <http://www.inqua2011.ch/>.

13. Dunbar, N. W., A. V. Kurbatov, B. G. Koffman, and K. J. Kreutz (2010). Tephra Record of Local and Distal Volcanism in the WAIS Divide Ice Core. In: *WAIS Divide Science Meeting*. La Jolla, CA.
14. Grigholm, B, P. M. V. Aizen, E. Aizen, K. Kreutz, S. Kaspari, K. Fujita, N. Takeuchi, C. Wake, and A. Kurbatov (2010). Asian Ice Core Array (AICA): Late Holocene Atmospheric Dust Reconstruction over Asia. In: *Eos Trans. AGU. Fall Meet. Suppl. Abstract*.
15. Koffman, B. G., K. J. Kreutz, D. J. Breton, N. W. Dunbar, A. V. Kurbatov, P. A. Mayewski, and M. L. Wells (2010). Microparticle Concentration in the WAIS Divide Ice Core over the Past 2.3 ka: Seasonal Variation and Volcanic Input. In: *WAIS Divide Science Meeting*. La Jolla, CA.
16. Korotkikh, E., P. Mayewski, M. Handley, S. Sneed, D. Introne, and A. Kurbatov (2010). The Last Interglacial represented in the glaciochemical record from Mount Moulton Blue Ice Area, West Antarctica. In: *Eos Trans. AGU. Fall Meet. Suppl. Abstract*.
17. Alencar, A., H. Evangelista, M. Cataldo, S. Coorreira, J. Simoes, I. Wainer, R. Jana, A. Kurbatov, M. Potocki, and P. Mayewski (2009). Atmospheric anionic and VOCs composition from Detroit Plateau, Antarctic Peninsula. In: *Eos Trans. AGU. Fall Meet. Suppl. Abstract A31C0125A*.
18. Kreutz, K., B. Koffman, P. Mayewski, A. Kurbatov, M. Wells, M. Handley, and S. Sneed (2008). Modeling Glacial-Interglacial Changes in Dust and Sea Salt Concentrations in West Antarctic Deep Ice Cores: Implications for Southern Hemisphere Atmospheric Dynamics. In: *Eos Trans. AGU. Fall Meet. Suppl. Abstract*.
19. Dunbar, N., W. McIntosh, A. Kurbatov, and T. Wilch (2007). Integrated tephrochronology of the West Antarctic region- implications for a potential tephra record in the West Antarctic Ice Sheet (WAIS) Divide Ice Core. In: 10th International Symposium on Antarctic Earth Sciences.
20. Kurbatov, A., P. A. Mayewski, and B. Abdul Jawad (2005). Ice Core Dating Software for Interactive Dating of Ice Cores. In: *Eos Trans. AGU. Fall Meet. Suppl. Abstract*.
21. Osterberg, E., A. Kurbatov, P. Mayewski, K. Kreutz, and D. Fisher (2005). Sub-annual Ice-Core Record of Major Ion and Heavy Metal Variability and Sources in the North Pacific Free Troposphere, Mt. Logan, Yukon, Canada. *EOS, TRANSACTIONS, American Geophysical Union* **86**(52), Abstract PP31C-08.
22. Dunbar, N. W., W. C. McIntosh, A. Kurbatov, and G. Zielinski (2004). Tephrochronology of Antarctic blue ice areas and ice cores. In: *IAVCEI*. Pucon, Chile: International Volcanological Congress.
23. Kurbatov, A. V., N. W. Dunbar, and G. Zielinski (2003). Evaluation of Tephra Found in the Law Dome Ice Core, East Antarctica. In: *Eos Trans. AGU. Fall Meet. Suppl. Abstract*.
24. Meyerson, E. A., P. A. Mayewski, S. B. Sneed, A. V. Kurbatov, K. J. Kreutz, G. A. Zielinski, K. C. Taylor, E. J. Brook, and E. J. Steig (2003b). Bipolar Synchronicity and Latitudinal Timing of Holocene Climate Change. In: *Eos Trans. AGU. Ed. by A. Fall Meet. Suppl. Vol. 84*, 46, pp.PP52A-0947.
25. Meyerson, E. A., P. A. Mayewski, S. Sneed, A. Kurbatov, K. Kreutz, K. Taylor, G. Lamorey, J. Rhoades, D. Meese, and R. Alley (2002). Holocene-Glacial History of the Amundsen Sea Low. In: *Eos Trans. AGU*, pp.B10.
26. Zielinski, G., N. Dunbar, A. Kurbatov, and D. Voisin (2001). Holocene Volcanic Records in the Siple Dome Ice Cores. In: *Eos Trans. AGU*, pp.1056.
27. Kurbatov, A., L. Bian, M. Bursik, V. Churikov, S. Hughes, and V. Kirianov (1999). New data from paleoseismic studies of the southern Kamchatka Peninsula, Russia. In: *Eos Trans. Vol. 80*, 46. AGU Fall Meet. Suppl., Abstract, pp.F926.
28. Kurbatov, A. V., M. Bursik, I. Melekestsev, and L. Sulerzhitsky (1999). Uplifted marine terraces on the east side of Bering basin along the shorelines of Bering and Karaginskiy islands: Indicators of large earthquakes in the KamchatkaAleutian region? In: *Penrose Conference*:

- Subduction to Strike-Slip Transitions on Plate Boundaries*. Puerto Plata, Dominican Republic, pp.46.
29. Bursik, M., O. Braitseva, L. Bazanova, I. Melekestsev, A. Kurbatov, A. Burns, and D. Pieri (1998). Models of transport of tephra and aerosol from Kamchatkan volcanoes. In: *International Seismic Volcanic Workshop on Kamchatkan-Aleutian Subduction Processes*. Russian Academy of Sciences. Petropavlovsk-Kamchatskiy, pp.14–15.
 30. Bursik, M., A. Kurbatov, M. Sheridan, and A. Woods (1997). Effects of m-scale topographic features on sedimentation from the Mount St. Helens blast surge cloud. In: *IAVCEI, Puerto Vallarta, Mexico, General Assembly: Gobierno de Jalisco, Guadalajara, Mexico*.
 31. Kurbatov, A., M. Bursik, I. Melekestsev, L. Bazanova, and L. Sulerzhitsky (1997). Neotectonics of Khalaktirka beach (Kamchatka, Russia) for the last 3500 years based on tephrochronology. In: *Eos Trans.* Vol. 78. 46. AGU Fall Meet. Suppl., Abstract, pp.F640.
 32. Bazanova, L., O. Braitseva, I. Melekestsev, T. Churikova, M. Bursik, and A. Kurbatov (1995). Explosive eruptions of Kamchatka: ash clouds of the most recent eruptions of Avachinskiy and Ksudach volcanoes. In: *Eos Trans. AGU.* 76(46). Fall Meet. Suppl., Abstract F540-F541.
 33. Woods, A., M. Bursik, and A. V. Kurbatov (1995). Dynamics of large ash flows: models, experiments, data. In: *Eos Trans.* Vol. 76. Fall Meet. Suppl., Abstract F680 46. AGU.
 34. Melekestsev, I., A. Kurbatov, L. Sulerzhitskiy, and M. Pevzner (1994). Sravnenie skorostei podnyatii poberezhya Kamchatskogo zaliva Tihogo okeana i o. Karaginskogo. In: *Tezisi [abs.] Vserossiiskogo Sovechaniya po izucheniu Chetvertichnogo perioda (In Russian)*, pp.164.