

Prof. Vladimir Aizen

Professor at Department of Geography, College of Science, University of Idaho, USA

University of Idaho
Department of Geography, College of Science
1707 Borah Ave.
Moscow, ID 83843, USA
E-mail: aizen@uidaho.edu
Website: www.sci.uidaho.edu/cae/index.html

Field of Expertise: Glaciology, Hydrology and Climatology. Global and regional climate and environmental change analysis, alpine ice-coring research and isotope-geochemistry, land-surface and remote sensing data analysis; Water and chemical cycle study in alpine watersheds

Educational background

Certified Professional Hydrologist No. 1451, American Institute of Hydrology, USA, 1997
PhD in Glaciology at the Russian Academy of Sciences, Moscow, Russia, 1988
MSc in Geography at the Kyrghyz State University, Bishkek, Kyrghyz Republic, 1981
BSc in Engineering Hydrology at Tashkent Engineering Institute of Hydro-Melioration, Tashkent, Uzbekistan, 1975

Professional experience

2001 - present: Professor at the Department of Geography, College of Science, University of Idaho, Moscow, USA
1994 - 2001: Associate Professor at the Donald Bren School of Environmental Science & Management and Department of Geography, University of California, Santa Barbara, USA.
1996 - 1997: Visiting Professor at the Niigata and Morioka University, Japan.
1994 -1996: Visiting Researcher at the Department of Geological Sciences, University of California, Santa Barbara, U.S.A.
1993: Visiting Researcher at the Scott Polar Research Institute, University of Cambridge, U.K.
1982 - 1993: Senior Scientist at the Institute of Geography of the Russian Academy of Sciences, Moscow, Russia.
1975 - 1982 : Associate Researcher and Head of Ala Archa Glaciological Station, Republic of Kyrgyzstan.

Main research activities

2008-2012. NSF Collaborative Project (ATM-0754479; ATM- 0754644): "Asian Ice Core Array (AICA): Reconstruction of Past Physical and Chemical Climate over Central Asia" (PI)
2008-2011. NASA Collaborative Project (#NNX08L68G): "Diagnosis of changes in alpine water storages and land surface degradation in Pamir mountains and Amu Dariya River basin" (PI).
2007-2010. NASA Project (#NNX07AQ676): "Estimation of seasonal snow cover, glacial and lake area changes at the Ob/Yenisey river heads during the last 40 years using NASA ESE products and in situ data" (PI).

2007-2010. NSF IPY (#AP0636475) Collaborative Project: "2000+ Year Detailed, Calibrated Climate Reconstruction from a South Pole Ice Core Set in an Antarctic - Global Scale Context" (Co-PI).

2005-2012. CADIP (Central Asia Deep Ice-Coring Project). Nine countries international project based on multi-national funds (Leader and Chief Scientist).

2005-2009. NASA Project (#NNG05GR45G): "Estimation of seasonal snow cover and glacial area changes in central Asia (Tien Shan) during the last 60 years using NASA ESE products and in-situ data" (PI).

2004. NSF/EPSCoR Project: "Major Research and Facilities" (PI).

2003-2005. Idaho National Laboratory Project: "Education Outreach Activities in Global Climate/Environmental Changes and Vadose Zone Science and Technology" (PI).

2003-2006. NSF Project: "Effect of Changes in Climate, Snow Pack, Glaciers, and Permafrost on River Runoff in Tien Shan, Central Asia" (PI).

2002-2003. The USA National Geographic Society Project. "Dynamics of southern monsoons and regime of the south-eastern Tibenian glaciers" (PI).

2001-2005. Idaho National Laboratory Project: "Research/Educational Grant in Hydrology (Water quantity & Quality) (PI).

2000-2001. NSF Project: "Field ice-core drilling project in Tien Shan, Central Asia" (PI).

2000-2005. DOE Project: "Ice-coring Paleo-climatic and glaciological reconstructions in Central Asia." (PI).

1999-2000. NATO Collaborative linkage project: "Long-term environmental changes in Central Asia" (Project Coordinator).

1998-2000. DOE Project: "Glaciological and meteorological monitoring at high altitudes firn fields" (PI).

1997-2000. NSF Project: "Simulation of Snow and Glacier Runoff in Central Asia Alpine Watersheds" (PI)

1996. Japan Society for the Promotion of Science (JSPS) Project: "Dynamic of precipitation in Central Asia and Japan in relation with the global climatic change" (PI).

1993-1994. British Arctic and Antarctic Survey: "Russian Arctic Data Base Project" (work with archive data).

1988-1991. USSR Academy of Sciences Project. "Tien Shan, Tibet, Himalayas glacio-climatological research " (PI).

1975-1988. USSR Hydromet and USSR Academy of Sciences. Glacier mass-balance monitoring in Tien Shan and Pamir representative glaciers (long-term government project).

List of selected publications

Aizen E.M., Joswiak, D.R., V.B. Aizen, N.Takeuchi, S. Sneed. A 100 yr ice core record of anthropogenic activity, volcanic eruptions, and biomass burning from the Siberian Altai. *Journal of Geophysical Research* (in review).

Aizen, V.B., E.M. Aizen, A.B. Surazakov. Tien Shan Climate and Glaciers in the last 50 years. *Journal of Glaciology* (in review).

Aizen, E.M., V.B. Aizen, P.A. Mayewski, D.R. Joswiak, S. Kaspari, S. Sneed, A.B. Surazakov, B. Grigholm, A. Finaev. 2008. Stable-Isotope and Chemical Time Series from Fedchenko Glacier Firn Core (Pamir). *J. of Glaciology* (in press #07J087).

Surazakov, A.B., V. B. Aizen, S.A.Nikitin. 2007. Glacier Area and River Runoff Changes in the Head of Ob River Basins During the Last 50 Years. *Environmental Research Letters*, <http://dx.doi.org/10.1088/1748-9326/2/4/045017>.

- Aizen, V.B., E.M. Aizen, V. A. Kuzmichenok. 2007. Glaciers and Hydrological Changes in the Tien Shan: Simulation and Prediction, *Environmental Research Letters*, <http://dx.doi.org/10.1088/1748-9326/2/4/045019>.
- Aizen, V.B., E.M. Aizen, D. R. Joswiak, K. Fujita, N. Takeuchi, S.A. Nikitin. 2006. Climatic and atmospheric circulation pattern variability from ice-core isotope/geochemistry records (Altai, Tien Shan and Tibet), *Annals of Glaciology*, V.43, pp.49-60.
- Aizen, V.B., E.M. Aizen, A.B. Surazakov, V.A. Kuzmichenok. 2006. Assessment of Glacial Area and Volume Change in Tien Shan (Central Asia) During the Last 150 years Using Geodetic, Aerial Photo, ASTER and SRTM Data. *Annals of Glaciology*, V.43, pp.202-213.
- Aizen, V.B., E.M. Aizen, V.A. Kuzmichenok. 2006. Simulation and stochastic forecasting of water cycle components in Central Asian alpine basins. *First NEESPI Special Issue in J. Global and Planetary Changes* V56, № 3-4, pp. 341-358.
- Aizen, V.B., E.M. Aizen, K. Fujita, S. Nikitin, K. Kreutz, N. Takeuchi. 2005. Stable-isotope time series and precipitation origin from firn cores and snow samples, Altai glaciers, Siberia. *Journal of Glaciology*, V.51, No. 175, pp. 637-654.
- Aizen, V.B., E.M. Aizen, J.M Melack, K.J. Kreutz, L.D. Cecil. 2004. Association between Atmospheric Circulation Patterns and Firn-ice Core Records from the Inilchek Glacierized Area, Central Tien Shan, Asia. *Journal of Geophysical Research-Atmospheres*, Vol. 109, No. D8, D08304.
- Aizen, V.B, E. M.Aizen, J. M. Melack, T. Nakamura, S. Kobayashi. 2002. Estimation of the energy used to melt snow in Tien Shan mountains and Japanese Islands. Pergamon Elsevier Science, *Global and Planetary Change*, V. 32, Issue 4, pp. 349-359.
- Aizen, V. B., E. M. Aizen, V. N. Nikitin. 2002. Glacier regime on the northern slope of the Himalaya (Xixibangma glaciers). Pergamon Elsevier Science, *Quaternary International*, V. 97-98, pp. 27-39.
- Aizen, E.M, V.B.Aizen, J. M. Melack, T. Nakamura, T. Ohta. 2001. Precipitation and Atmospheric Circulation Patterns at Mid-Latitudes of Asia. *International Journal of Climate*, 21, pp. 535-556.
- Aizen, E.M, V. B.Aizen, J. M. Melack, and A. N. Krenke. 2000. Heat exchange during snow ablation in plains and mountains of Eurasia. *J. Geophysical Research-Atmospheres*. Vol. 105, No. D22, pp. 27,013-27,022.
- Aizen, V.B., E. M. Aizen , G. E. Glazirin, and H. A. Loaiciga. 2000. Simulation of daily runoff in Central Asian alpine watersheds. *J. Hydrology*. No. 186, 229-251.

Total over 200 publications. Full list of publication is available upon request.