ÉMILIE BEAUDON
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Education

University of Oulu, Oulu, Finland	Chemistry	PhD. 2013
J. Fourier University, Grenoble, France	Earth Sciences	MSc. 2004

Appointments

Oct.2013 – present	Postdoctoral researcher, BPCRC, The Ohio State University, Columbus OH, USA
Oct.2012 – Oct. 2013	Postdoctoral researcher, Arctic Centre, Rovaniemi, Finland
Apr.2007 – Oct. 2012	Doctoral Student, Arctic Centre and University of Oulu, Finland
Oct.2006 – 2007	Drilling engineer, Prosonic Corporation, Toulon, France
Jul.2006 – Oct.2006	GIS technician, IDS-France Group, Evry, France
Oct.2004 – Dec.2005	Glaciologist of the 55th overwintering mission in DDU station, Antarctica (IPEV)

Peer-reviewed publications

16. Gabrielli, P., Wegner, A., Sierra-Hernandez, M.R., **Beaudon, E**., Davis, E.M., Barker, J., Thompson, L.G., (2020) Early atmospheric contamination on the top of the Himalayas since the onset of the European Industrial Revolution. *PNAS*, in press.

15. Sierra-Hernandez, M.R., **Beaudon, E.**, Gabrielli, P., Thompson, L.G., (2019) 21st Century Asian air pollution impacts glacier in northwestern Tibet. *Atmospheric Chemistry and Physics*, 19, 1–12.

14. Thompson, L.G., Yao, T.D., Davis, M., Mosley-Thompson, Wu, G., Porter, S., Xu, B., Lin, P-N., Wang, N., **Beaudon, E.**, Duan, K., Sierra-Hernandez, M.R., and Kenny, D., (2018) Ice Core Records of Climate Variability on the Tibetan Plateau with Emphasis on the Guliya Ice Cap, western Kunlun Mountains. *Quaternary Science Reviews,* 188, 1-14.

13. Sierra-Hernandez, M.R., Gabrielli, P., **Beaudon, E.**, Wegner, A., Thompson, L.G., (2018) Atmospheric Depositions of Natural and Anthropogenic Trace Elements on the Guliya Ice Cap (Northwestern Tibetan Plateau) during the last 340 years. *Atmospheric Environment*, 176, 91-102.

12. Thompson, L. G., Davis, M. E., Mosley-Thompson, E., **Beaudon, E.**, Kutuzov, S., Lin, P-N., Mikhalenko V. N., Mountain, K. R., (2017) Impacts of recent warming and the 2015/16 El Niño on tropical Peruvian ice fields. *Journal of Geophysical Research: Atmospheres*, 122.

11. Beaudon, E., Gabrielli, P., Sierra-Hernandez, M.R., Wegner, A., Thompson, L.G., (2017) Central Tibetan Plateau atmospheric trace metals contamination: a 500-year record from the Puruogangri ice core, *Science of the Total Environment*, D-17-02397.

10. Aarons, S.M., Aciego, S.M., Arendt, C.A., Blakwoski, M.A., Steigmeyer, A., Gabrielli, P., Sierra-Hernandez, R., **Beaudon, E.**, Delmonte, B., Baccolo, G., Pratt, K., May, N., (2017) Dust composition changes from Taylor Glacier (East Antarctica) during the last Glacial-Interglacial transition: a multi-proxy approach, *Journal of Quaternary Science Review*, D-16-00282.

9. Vega, C.P., Pohjola, V.A., **Beaudon, E.**, Claremar, B., van Pelt, W.J.J., Pettersson, R., Issakson, E., Martma, T., Schwikowski, M. and Bøggild, C.E., (2015) A synthetic ice core approach to estimate ion relocation in an ice field site experiencing periodical melt; a case study on Lomonosovfonna, Svalbard, *The Cryosphere*, 9, 5053-5095.

8. Ruppel, M. M., Isaksson, E., Ström, J., **Beaudon, E.**, Svensson, J., Pedersen, C. A., and Korhola, A., (2014) Unexpected increase in elemental carbon values over the last 30 years observed in a Svalbard ice core, *Atmospheric Chemistry and Physics. Discussions*, 14, 11447–11460.

7. **Beaudon, E.**, Moore, J.C., Martma, T., Pohjola, V.A., Van de Wal, R., Kohler, J., Isaksson, E., (2013) A 300 years environmental and climate archive for western Spitsbergen from Holtedahlfonna ice core, *Journal of Glaciology*, Vol. 59, No. 218.

6. Moore, J. C., **Beaudon, E.**, S. Kang, D. Divine, E. Isaksson, V. A. Pohjola, and R. S. W. van de Wal, (2012) Statistical extraction of volcanic sulphate from non-polar ice cores, *Journal of Geophysical Research***,** 117, D03306.

5. Möller, M., Möller, R., **Beaudon, E.**, Mattila, O.-P., Finkelnburg, R., Braun, M., Grabiec, M., Jonsell, U., Luks, B., Puczko, D., Scherer, D. and Schneider, C., (2011) Snowpack characteristics of Vestfonna and De Geerfonna (Nordaustlandet, Svalbard) – a spatiotemporal analysis based on multiyear snow-pit data, *Geografiska Annaler, Series A: Physical Geography*, 93, 273–285.

4. Beaudon, E., Arppe, L., Jonsell, U., Martma, T., Möller, M., Pohjola, V.A., Scherer, D. and Moore, J.C., (2011) Spatial and temporal variability of net accumulation from shallow cores from Vestfonna ice cap (Nordaustlandet, Svalbard), *Geografiska Annaler: Series A, Physical Geography*, 93, 287–299.

3. Beaudon, E., (2010) Ionic budget of winter snow on Vestfonna ice cap (Svalbard), *Arctic Centre Series*.

2. Beaudon, E. and Moore, J., (2009) Frost flower chemical signature in winter snow on Vestfonna ice cap (Nordaustlandet, Svalbard), *The Cryosphere*, 3 (2), 147–154.

1. Beaudon, E., Martelat, J.E., Amórtegui, A., Lapierre, H., Jaillard, E., (2005) Métabasites de la Cordillère Occidentale d'Equateur, témoins du soubassement océanique des Andes d'Equateur, *C.R. Géosciences, Tectonique*, 337, 6, 625-634.

PhD thesis

Beaudon, E. Glaciochemical Evidence of Spatial and Temporal Environmental Variability across Svalbard, (2012) *Arctic Centre Reports* 58, Lapland University Press: Rovaniemi 2012. ISBN 978-952-484-562-5.

Selected research grants and awards (among 5)

2016 NSF AGS-Rapid #1603377
Characterizing the Chemical and Physical Signature of the 2015-16 El Niño in the Quelccaya Ice Cap Snow and Ice to Calibrate Past ENSO Reconstructions, (project summary), $96,300
PI: L. Thompson; co-PI: E. Beaudon.

2013 Byrd Postdoctoral Fellowship
Atmospheric Trace Elements in the Puruogangri Ice Core: 500 years of Tibetan Plateau Environmental and Contamination Histories, $68,000 total value

Finnish Cultural Foundation
Chemistry of Soluble and Insoluble Particles in Snow and Ice from Vestfonna Ice Cap: New Clues for Modelling the Atmospheric Circulation in the Barents Region, €26,000. PI: E. Beaudon

Glaciology field campaigns

In the past 15 years, I participated to 12 glaciological expeditions in Antarctica (14-month winter-over), the European Alps, the high Arctic (Svalbard and Jan Mayen) and in the Peruvian Andes.

Synergistic Activities

1. Within the past four years, E. Beaudon has been a **guest lecturer** to local (e.g.: Case Western University, Cleveland, Ohio, (2019)), domestic (e.g.: Lamont-Doherty Earth Observatory, New York (2014)) and international scientific audiences (e.g.: PEEX 1st Science Conference, Helsinki, Finland (2015))
2. E. Beaudon provides professional services as a **reviewer for several journals** including Geophysical Research Letter, Encyclopedia of Sustainability, The Cryosphere, Atmospheric Environment, Journal of Asian Earth Sciences, Journal of Glaciology, Polar Science and Science of the Total Environment.
3. E. Beaudon served as an **instructor** of the *Arctic Physical Processes* course proposed by the Arctic Studies Program of the University of Lapland, Rovaniemi, Finland (2009-2011)
4. Each year, E. Beaudon develops and participates to multiple and diverse science **outreach activities** from **showcasing science** to general public (e.g., WestFest, 2018-2019; at the Ohio History Connection Museum, 2017; the Steam Factory, 2016, 2019; Earth Day Event, Center of Science and Industry, 2014), being a **scientific advisor** (e.g.: within the Model United Nation event organized by Johns Hopkins University for talented middle school students, Columbus, 2014-2015), **designing and performing a live experimental show** about ice properties (Finland, 2009-2010), to touring conference (e.g.: "2005 in Antarctica", Australia-France, 2006)
5. E. Beaudon's research was featured in **newspapers and magazines interviews** (e.g.: Columbus Dispatch (2016); Kemia Lehti (2011); Lapin Kansa (2011); Sunnuntai, Kaleva Lehti (2010); Uusi Rovaniemi Lehti (2010); With Shared Voices (2008) and on **radio and TV interviews** (e.g.: TV Globo, Brazil, 2008; Radio Suisse Romande, Switzerland, 2008)