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Profile

Currently at the AORI (University of Tokyo) Paleoclimate isotopic modeling with GCMs

Water isotopes ($\delta^{18}\text{O}$, δD , ^{17}O -excess and tritium) ^{10}Be in ice core



Work experience



April 2022 - : Assistant Professor at the Institute of Industrial Science (IIS), The University of Tokyo; Kashiwa, Japan.

Subject: Development of water isotope incorporated Earth System Model MIROC and first Euro-Japan intercomparison.

Supervisor: Kei Yoshimura (IIS).

Tasks: implementation of the water isotopes in coupled MIROC ESM, reconstruction of past millenium climate variations, set up of an inter-comparison project of isotope-enabled models, collaborations with research teams producing isotope observations, students supervision.



September 2021 - March 2022: Post-doctoral position at the Atmosphere and Ocean Research Institute (AORI), The University of Tokyo; Kashiwa, Japan.

Subject: Investigation of the climate variability during the LGM and the last deglaciation using isotope-enabled GCMs.

Supervisor: Ayako Abe-Ouchi (AORI).

Tasks: isotope-enabled simulations with ECHAM6-wiso with boundary fields from MIROC 4m simulations, simulations with isotope-enabled OGCM.



September 2019 - August 2021: FY2019-2020 JSPS Postdoctoral Fellowship for Research in Japan Award (Standard); Institute of Industrial Science (IIS), The University of Tokyo; Kashiwa, Japan.

Subject: Development of water isotope incorporated Earth System Model MIROC and first Euro-Japan intercomparison.

Supervisor: Kei Yoshimura (IIS). Financed by "Grant-in-Aid" for Scientific Research -KAKENHI-.

Tasks: team management to implement the water isotopes in a coupled GCM, set up of an inter-comparison project of isotope-enabled models, students supervision.



October 2015 - August 2019: Post-doctoral position at the Alfred Wegener Institute Centre for Polar and Marine Research (AWI); Bremerhaven, Germany

Subject: Implementation of water stable isotopes in the different modules (atmosphere, ocean, vegetation) of the MPI-ESM model (Max Plank Institute for Meteorology) in the framework of the PalMod initiative ("Paleo Modelling: A national paleo climate modelling initiative").

Supervisor: Martin Werner (AWI). Financed by the BMBF (Federal Ministry of Education and Research, Germany).

Tasks: water isotopes modeling in a fully-coupled GCM (Fortran), paleoclimate simulations, post-treatment and model-date comparisons (cdo, nco, netcdf library, python...), centralisation an updates of the model versions (Git, SVN).



November 2013 - October 2015: Post-doctoral position at the Laboratoire de Météorologie Dynamique (LMD, Jussieu); Paris-Jussieu, France

Subject: Implementation of tritium in the General Circulation Model LMDZ-iso to inferring the links between the stratospheric air inputs into the lower troposphere, the hydrological cycle and the climate. Supervisors: Camille Risi (LMD), Amaelle Landais (LSCE). Financed by the ERC COMBINISO.

Tasks: water isotopes modeling in a GCM (Fortran), post-treatment (nco, netcdf library, python...) and model-date comparisons (IAEA database, Antarctic traverses...), dynamics of tritium in the hydrological cycle, troposphere-stratosphere exchanges over Antarctica.



October 2010 - October 2013: PhD at the Laboratoire des Sciences du Climat et de l'Environnement (LSCE); Gif-sur-Yvette, France

Thesis subject: Beryllium-10 flux in Antarctica during the last 800 000 years and interpretation.
PhD advisors: Jean Jouzel and Grant Raisbeck. Defended the 07 October 2013.

Tasks: chemical extraction of beryllium-10 in ice cores, accelerator mass spectrometry (AMS, CEREGE), statistical analysis of data to extract information on solar activity cycles (Matlab, wavelet) and use of the synchronization tool Match Protocol, study of the climate variability in the past 800 000 years using isotopic and magnetic records in ice cores and marine sediments.



April 2010 - July 2010: Internship at the Laboratoire des Sciences du Climat et de l'Environnement (LSCE); Gif-sur-Yvette, France

Subject: Determination of isotopic fractionation coefficient of water stable isotopes at very low temperatures. Supervisors: Jean Jouzel et Amaelle Landais.

Tasks: laser spectroscopy, mass spectrometry IRMS, study of stable water isotopes at very low temperature (isotopic fractionation).



April 2009 - July 2009: Internship at the Università di Trieste - Dipartimento di Scienze Geologiche, Ambientali e Marine (DiSGAM); Trieste, Italy

Subject: Study of climatic variations in Antarctica during the last glacial period using the stable isotopes of oxygen in the Talos Dome ice core. Supervisor: Barbara Stenni.

Tasks: preparation of ice samples and measurements of their oxygen-18 content by mass spectrometry (CO₂-water equilibration method), temperature reconstruction and analysis of fast climate variations.



June 2008 - July 2008: Internship at the Laboratoire des Sciences du Climat et de l'Environnement (LSCE); Gif-sur-Yvette, France

Subject: Determination of residence time of groundwater from the Kerrien sub-basin using the Tritium-Helium-3 method. Supervisors: Philippe Jean-Baptiste et Élise Fourré.

Extraction of tritium from water samples, measurement of tritium by mass spectrometry with the Tritium/Helium-3 method.

Education



October 2013: PhD degree in Earth Science at the Laboratoire des Sciences du Climat et de l'Environnement (LSCE); Gif-sur-Yvette, France - University Paris Sud XI



2008 - 2010: Master degree Physics and Environment - University Paris Sud XI



2005 - 2008: Bachelor's degree in Fundamental Physics - University Paris-Sud XI

Scientific and technical skills

Scientific :

Water isotopes (^{18}O , ^{17}O , D, T)
Beryllium-10 in the ice
Paleoclimate: PMIP, ice core, Past2k.

Languages:

French, English (working knowledge), Japanese (basic).

Technical:

High-performance computing environments
Implementation and modeling of water isotopes in GCMs (General Circulation Models)
Post-treatment and analyses of models outputs (nco, cdo, netcdf, ngtool, python)
Distributed version-control tools (git, SVN, GitLab)
Others softwares: Office, LaTeX, Igor Pro, Matlab

Miscellaneous

Sports and hobbies:

Running, Football, Squash, Swimming, Travel, Ski.

Leisure activities:

Cinema, Music (Rock), Reading.

Communications

Publications:

Landais, A., Stenni, B., Masson-Delmotte, V., Jouzel, **Cauquoin, A.**, J., Fourré, É., Minster, B., Selmo, E., Extier, T., Werner, M., Vimeux, F., Uemura, R., Crotti, I. and Grisart, A.: Inter-glacial Antarctic–Southern Ocean climate decoupling due to moisture source area shifts, *Nat. Geosci.*, **14**, 918–923, doi:10.1038/s41561-021-00856-4, 2021.

Kino, K., Okazaki, A., **Cauquoin, A.** and Yoshimura, K.: Contribution of the Southern Annular Mode to variations in water isotopes of daily precipitation at Dome Fuji, East Antarctica, *J. Geophys. Res. Atmos.*, **126**(23), e2021JD035397, doi:10.1029/2021JD035397, 2021.

Cauquoin, A. and Werner, M.: High-resolution nudged isotope modelling with ECHAM6-wiso: Impacts of updated model physics and ERA5 reanalysis data, *J. Adv. Model. Earth Syst.*, **13**(11), e2021MS002532, doi:10.1029/2021MS002532, 2021.

Breil, M., Christner, E., **Cauquoin, A.**, Werner, M. and Schädler, G.: Applying an isotope-enabled regional climate model over the Greenland ice sheet: effect of spatial resolution on model bias, *Clim. Past*, **17**, 1685–1699, doi:10.5194/cp-17-1685-2021, 2021.

Daux, V., Minster, B., **Cauquoin, A.**, Jossoud, O., Werner, M. and Landais, A.: Stable isotopic composition in French tap waters, *The Geological Society, London, Special Publications*, **507**, 47–61, doi:10.1144/SP507-2020-207, 2021.

Cauquoin, A., Werner, M. and Lohmann, G.: Water isotopes – climate relationships for the mid-Holocene and preindustrial period with an isotope-enabled version of MPI-ESM, *Clim. Past*, **15**, 1913–1937, doi:10.5194/cp-15-1913-2019, 2019.

Cauquoin, A., Risi, C. and Vignon, É.: Importance of the advection scheme for the simulation of water isotopes over Antarctica by atmospheric general circulation models: a case study for present-day and Last Glacial Maximum with LMDZ-iso. *Earth Planet. Sci. Lett.*, **524**, doi:10.1016/j.epsl.2019.115731, 2019.

Christner, E., Aemisegger, F., Pfahl, S., Werner, M., **Cauquoin, A.**, Schneider, M., Hase, F., Barthlott, S. and Schädler, G.: The climatological footprints of continental surface evaporation, rainout, and sub-cloud processes in δD of water vapor and precipitation in Europe. *J. Geophys. Res. Atmos.*, **123**, 4390–4409, doi:10.1002/2017JD027260, 2018.

Fourré, É., Landais, A., **Cauquoin, A.**, Jean-Baptiste, P., Lipenkov, V. and Petit, J.-R.: Tritium records to trace stratospheric moisture inputs in Antarctica. *J. Geophys. Res. Atmos.*, **123**, 3009–3018, doi:10.1002/2018JD028304, 2018.

Raisbeck, G. M., **Cauquoin, A.**, Jouzel, J., Landais, A., Petit, J.-R., Lipenkov, V. Y., Beer, J., Synal, H.-A., Oerter, H., Johnsen, S. J., Steffensen, J. P., Svensson, A. and Yiou, F.: An improved north-

south synchronization of ice core records around the 41 kyr ^{10}Be peak. *Clim. Past*, **13**, 217-229, doi:10.5194/cp-13-217-2017, 2017.

Cauquoin, A., Jean-Baptiste, P., Risi, C., Fourné, É. and Landais, A.: Modeling the global bomb-tritium transient signal with the AGCM LMDZ-iso: a method to evaluate aspects of the hydrological cycle. *J. Geophys. Res. Atmos.*, **121**, 12,612-12,629, doi:10.1002/2016JD025484, 2016.

Casado, M., **Cauquoin, A.**, Landais, A., Orsi, A., Israel, D., Pangui, E., Landsberg, D., Kerstel, E. and Doussin, J.-F.: Experimental determination and theoretical framework of kinetic fractionation at the water vapour - ice interface at low temperature. *Geochim. Cosmochim. Ac.*, **174**, 54-69. doi:10.1016/j.gca.2015.11.009, 2016.

Cauquoin, A., Jean-Baptiste, P., Risi, C., Fourné, E., Stenni, B. and Landais, A.: The global distribution of natural tritium in precipitation simulated with an Atmospheric General Circulation Model and comparison with observations. *Earth Planet. Sci. Lett.*, **427**, 160-170. doi:10.1016/j.epsl.2015.06.043, 2015.

Cauquoin, A., Landais, A., Raisbeck, G. M., Jouzel, J., Bazin, L., Kageyama, M., Peterschmitt, J.-Y., Werner, M., Bard, E. and ASTER Team: Comparing past accumulation rate reconstructions in East Antarctic ice cores using ^{10}Be , water isotopes and CMIP5-PMIP3 models. *Clim. Past*, **11**, 355-367, doi:10.5194/cp-11-355-2015, 2015.

Cauquoin, A., Raisbeck, G. M., Jouzel, J., Bard, E. and ASTER Team: No evidence for planetary influence on solar activity 330 000 years ago. *Astron. Astrophys.*, **561**, A132, doi:10.1051/0004-6361/201322879, 2014.

Cauquoin, A., Raisbeck, G., Jouzel, J. and Paillard, D.: Use of ^{10}Be to predict atmospheric ^{14}C variations during the Laschamp excursion: high sensitivity to cosmogenic isotope production calculations. *Radiocarbon*, **56**(1), 67-82, doi:10.2458/56.16478, 2014.

Capron, E., Landais, A., Buiron, D., **Cauquoin, A.**, Chappellaz, J., Debret, M., Jouzel, J., Leuenberger, M., Martinerie, P., Masson-Delmotte, V., Mulvaney, R., Parrenin, F. and Prié, F.: Glacial-interglacial dynamics of Antarctic firn columns: comparison between simulations and ice core air- $\delta^{15}\text{N}$ measurements, *Clim. Past*, **9**, 983-999, doi:10.5194/cp-9-983-2013, 2013.

Seminars (1st author):

Cauquoin, A., Abe-Ouchi, A., Obase, T. and Werner, M. Effects of LGM sea surface temperature and sea ice extent on the isotope-temperature slope at polar ice core sites, online poster, *JpGU 2022*, Chiba (Japan), June 2022.

Cauquoin, A., Werner, M., Shoji, S., Okazaki, A., Yoshimura, K., Lohmann, G. and Jungclaus, J. Transient simulation of the past 2000 years with the isotope-enabled coupled model MPI-ESM-wiso, oral, *JpGU 2022*, Chiba (Japan), May 2022.

Cauquoin, A., Werner, M., Shoji, S., Okazaki, A., Yoshimura, K., Lohmann, G. and Jungclaus, J. Transient simulation of the past 2000 years with the isotope-enabled coupled model MPI-ESM-wiso, oral, "Water Isotope: From Weather to Climate" workshop, Kashiwa (Japan local hub), November 2021.

Cauquoin, A., Werner, M. and Lohmann, G. Water stable isotopes changes in PMIP-type paleoclimate simulations from the fully coupled model MPI-ESM-wiso, poster, *PMIP 2020*, Nanjing (China), October 2020.

Cauquoin, A. and Werner, M. High-resolution isotopic simulations from ECHAM6-wiso nudged with ERA5 reanalyses: new products for isotopic model-data comparisons, online, *EGU 2020*, Vienna (Austria), May 2020.

Cauquoin, A., Werner, M. and Lohmann, G. Introduction to isotope-enabled Earth System Models: examples with MPI-ESM-wiso, oral, *15th International RSM workshop*, Chiba (Japan), November 2019.

Cauquoin, A. Isotope-enhanced Earth System Models: framework and some examples with MPI-ESM-wiso, invited talk at the *Institute of Tibetan Plateau, Chinese Academy of Science*, Beijing (China), October 21st 2019.

Cauquoin, A., Werner, M. and Lohmann, G. Water isotopes – climate relationships for the mid-Holocene and pre-industrial period simulated with MPI-ESM-wiso, oral, *SISAL 4th workshop*, Xi'an (China), October 2019.

Cauquoin, A., Werner, M. and Lohmann, G. Water stable isotopes – climate relationships during/ between the pre-industrial and mid-Holocene periods using the fully coupled model MPI-ESM-wiso, PICO, *EGU 2019*, Vienna (Austria), April 2019.

Cauquoin, A., Werner, M. and Lohmann, G. Modeling of water stable isotopes in the fully coupled Earth system model MPI-ESM: current status and perspectives, poster, *EGU 2018*, Vienna (Austria), April 2018.

Cauquoin, A., Werner, M. and Lohmann, G. Modeling of water stable isotopes in the fully coupled Earth system model MPI-ESM: current status and perspectives, poster, *PalMod International Open Science Conference*, Vienna (Austria), April 2018.

Cauquoin, A., Werner, M. and Lohmann, G. Modeling of water stable isotopes in the ECHAM6 atmospheric general circulation model: current status and perspectives, poster, *EGU 2017*, Vienna (Austria), April 2017.

Cauquoin, A., Jean-Baptiste, P., Risi, C., Fourré, É. and Landais, A. Modeling the global bomb tritium transient signal with the AGCM LMDZ-iso: a method to evaluate aspects of the hydrological cycles, oral, *DPG Bremen17*, Bremen (Germany), March 2017.

Cauquoin, A., Jean-Baptiste, P., Risi, C., Fourré, É., Stenni, B. and Landais, A. Implementation of tritium (HTO) in LMDZ-iso: tracing the water cycle and its link with stratospheric air intrusions, oral, *INQUA 2015*, Nagoya (Japan), July 2015.

Cauquoin, A., Landais, A., Raisbeck, G. M., Jouzel, J., Bazin, L., Kageyama, M., Peterschmitt, J.-Y., Werner, M., Bard, E. and ASTER Team. Comparing past accumulation rate reconstructions in East Antarctic ice cores using ^{10}Be , water isotopes and CMIP5-PMIP3 models, oral, *INQUA 2015*, Nagoya (Japan), July 2015.

Cauquoin, A., Jean-Baptiste, P., Risi, C., Fourré, É., Stenni, B. and Landais, A. Implementation of tritium in the LMDZ-iso General Circulation Model for the study of the relationships between stratospheric air inputs into the lower troposphere, water cycle and climate, poster, *International Symposium on Isotope Hydrology: Revisiting Foundations and Exploring Frontiers (IAEA)*, Vienna (Austria), May 2015.

Cauquoin, A., Jean-Baptiste, P., Risi, C., Fourré, É., Landais, A. and Stenni, B. Implementation of Tritium in the LMDZ-iso General Circulation Model: First Promising Results for the Study of the Relationships Between Stratospheric Air Inputs into the Lower Troposphere in Polar Regions, Water Cycle and Climate, poster, *AGU 2014*, San Francisco (USA), December 2014.

A. Cauquoin, A. Landais, C. Risi, É. Fourré, P. Jean-Baptiste, O. Magand, S. Guilbaud, A. Ekaykin, F. Prié, B. Minster and R. Winkler. Reconstituer les variations du climat, du cycle de l'eau et l'apport stratosphérique au cours des 50 dernières années sur le plateau Est Antarctique, poster, *Colloque Q9 AFEQ*, Lyon, March 2014.

Cauquoin, A., Raisbeck, G. M., Jouzel, J., Landais, A., Bard, E. and ASTER Team. Flux de béryllium-10 en Antarctique entre 200 et 800 kyr BP et sa synchronisation avec le signal paléomagnétisme dans les sédiments marins, oral, *SFIS JJC6*, Dunkerque, October 2013.

Cauquoin, A., Raisbeck, G.M., Jouzel, J., Bard E. and ASTER Team. Extended record of ^{10}Be at EPICA Dome C during the last 800 000 years and its synchronization with geomagnetic paleointensity variations from marine sediments, oral, *EGU 2013*, Vienna (Austria), April 2013.

Cauquoin, A., Raisbeck, G.M., Jouzel, J., Bard, E. and ASTER Team. Study of a highly resolved record of ^{10}Be from EPICA Dome C during MIS 9 as a proxy of solar variations, poster, *IPICS 2012*, Giens, October 2012.

Cauquoin, A., Raisbeck, G.M., Jouzel, J., Paillard, D. Effects of Laschamp geomagnetic excursion on ^{14}C production, poster, *Radiocarbon 2012*, Paris, July 2012.

Cauquoin, A., Raisbeck, G.M., Jouzel, J. Effects of Laschamp Excursion on Cosmogenic Isotope Production, poster, *Goldschmidt 2011*, Prague (Czech Republic), August 2011.

Seminars (co-author):

Kino, K., Okazaki, A., **Cauquoin, A.** and Yoshimura, K. Impacts of intermittent precipitation events on reconstructed Last Glacial Maximum surface temperature from water isotope signals in Dome Fuji ice cores, *JpGU 2022*, Chiba (Japan), May 2022.

Paul, A., Tharammal, T., **Cauquoin, A.** and Werner, M. Evaluating atmospheric simulations of the Last Glacial Maximum using oxygen isotopes in ice cores and speleothems, *EGU 2022*, Vienna (Austria), May 2022.

Yang, Y., **Cauquoin, A.**, Yoshimura, K. and Werner, M. Isotopic signals in precipitation and water vapor during the Hurricanes Irma & Maria, “*Water Isotope: From Weather to Climate*” workshop, Kashiwa (Japan local hub), November 2021.

Shi, X., Werner, M., **Cauquoin, A.** and Sun, Y. Preliminary results of an isotope-enabled earth system model AWIESM-wiso, “*Water Isotope: From Weather to Climate*” workshop, Bremerhaven (Germany local hub), November 2021.

Okazaki, A., **Cauquoin, A.**, Kino, K. and Yoshimura, K. Development of MIROC5-iso and its comparison with isotopic climate proxies, “*Water Isotope: From Weather to Climate*” workshop, Kashiwa (Japan local hub), November 2021.

Leroy-Dos Santos, C., Landais, A., Fourné, É., Agosta, C., **Cauquoin, A.** and Werner, M. From atmospheric water isotopes measurement to snow core interpretation in Adelie Land: A case study for GCMs with embedded isotopes in Antarctica, “*Water Isotope: From Weather to Climate*” workshop, online, November 2021.

Kino, K., Okazaki, A., **Cauquoin, A.** and Yoshimura, K. Contribution of the Southern Annular Mode to variations in water isotopes of daily precipitation at Dome Fuji, East Antarctica: A study with an isotope-enabled AGCM MIROC5-iso, “*Water Isotope: From Weather to Climate*” workshop, Kashiwa (Japan local hub), November 2021.

Bong, H., **Cauquoin, A.**, Chang, E.-C., Werner, M., Yeo, N. and Yoshimura, K. Inter-comparison of water isotope-enabled models and reanalysis nudging effects: step forward in SWING project, “*Water Isotope: From Weather to Climate*” workshop, Kashiwa (Japan local hub), November 2021.

Kino, K., Okazaki, A., **Cauquoin, A.** and Yoshimura, K. Impacts of large scale atmospheric circulation and its seasonality on water isotopes of daily precipitation at Dome Fuji Station: A study with an isotope-enabled AGCM MIROC5-iso, *JpGU 2021*, Yokohama (Japan), June 2021.

Paul, A., **Cauquoin, A.**, Mulitza, S., Tharammal, T. and Werner, M. Sensitivity of simulated oxygen isotopes in ice cores and speleothems to Last Glacial Maximum surface conditions, *vEGU 2021*, Vienna (Austria), April 2021.

Jungclaus, J., Alastrue de Asenjo, E., **Cauquoin, A.**, Fang, S.-W., Khodri, M., Lorenz, S., Ohgaito, R., Sam, T., Timmreck, C., Toohey, M., Werner, M., Yoshida, K., Zanchettin, D., and Zhang, Q.: Transient simulations over the Common Era in PMIP4/CMIP6, *vEGU 2021*, Vienna (Austria), April 2021.

Paul, A., Werner, M., **Cauquoin, A.**, García-Pintado, J., Kovacs, T., Merkel, U. and Tharammal, T. Simulated vs. reconstructed Last Glacial Maximum surface conditions: impact on oxygen isotopes in ice cores, speleothems and precipitation, *AGU 2020*, San Francisco (USA), December 2020.

Marti, O., Bassinot, F., Braconnot, P., Jungclaus, J., **Cauquoin, A.**, Lohmann, G., Shi, X. and Werner, M. Transient Holocene simulations compared to deep sea cores in the Indian ocean, *PMIP 2020*, Nanjing (China), October 2020.

Kino, K., Okazaki, A., **Cauquoin, A.**, and Yoshimura, K. LGM simulation with MIROC5-iso and impacts of the synoptic scale events on stable water isotopes in the Antarctic ice cores, *PMIP 2020*, Nanjing (China), October 2020.

Werner, M., Bonne, J.-L., **Cauquoin, A.** and Steen-Larsen, H. C. Key controls of water vapour isotopes during oceanic evaporation and their global impact, *EGU 2020*, Vienna (Austria), May 2020.

Stenni, B., Dreossi, G., Casado, M., Scarchilli, C., Landais, A., Del Guasta, M., Grigioni, P., Casasanta, G., Werner, M., Masiol, M., **Cauquoin, A.** and Ciardini, V., A Nine-year series of daily oxygen and hydrogen isotopic composition of precipitation at Concordia station, East Antarctica, *EGU 2020*, Vienna (Austria), May 2020.

Paul, A., Werner, M., **Cauquoin, A.**, García-Pintado, J., Merkel, U. and Tharammal, T. Sensitivity of isotopes in the hydrological cycle to simulated vs. reconstructed Last Glacial Maximum surface conditions, *EGU 2020*, Vienna (Austria), May 2020.

Kino, K., Okazaki, A., **Cauquoin, A.** and Yoshimura, K. Investigation of the response of water isotope records to the changes in orbital forcing with the isotope-enabled AGCM MIROC5-iso, *EGU 2020*, Vienna (Austria), May 2020.

- Werner, M., **Cauquoin, A.**, Gierz, P., Yuchen, S. and Lohmann, G. Stable water isotope changes in PMIP-type Paleoclimate simulations – results from the fully coupled ECHAM5/MPI-OM and MPI-ESM model, *US CLIVAR Water Isotopes and Climate Workshop*, Boulder (USA), October 2019.
- Fourré, É., Touzeau, A., Baroni, M., Landais, A., **Cauquoin, A.**, Servettaz, A., Magand, O., Curran, M., Sültenfuß, Jean-Baptiste, P., Bard, É. and Aster Team. Tritium variability in snow pits from East Antarctica, *27th International Union of Geodesy and Geophysics General Assembly*, Montreal (Canada), July 2019.
- Fourré, É., Landais, A., Leroy Dos Santos, C., Prié, F., Goursaud, S., **Cauquoin, A.** and others. Water isotopes recorded in Antarctica ice core cores: beyond past climatic reconstructions, tracers of hydrosphere-atmosphere interactions, *International Symposium on Isotope Hydrology: Advancing the understanding of water cycle processes (IAEA)*, Vienna (Austria), May 2019.
- Zhang, X., Barker, S., Knorr, G., Werner, M., **Cauquoin, A.**, Lohmann, G. and Sun, Y. What causes the mid-mid-brunes transition in benthic $\delta^{18}\text{O}$ stack?, *EGU 2019*, Vienna (Austria), April 2019.
- Werner, M., Lohmann, G. and **Cauquoin, A.** Assessing LGM changes of the Antarctic and Greenland ice sheets by explicit water isotope diagnostics, *PalMod International Open Science Conference*, Vienna (Austria), April 2018.
- Christner, E., Pfahl, S., Scholder-Aemisegger, F., Werner, M., **Cauquoin, A.**, Barthlott, S., Schneider, M., Steen-Larsen, H.-C., Schädler, G. and Kottmeier, C. Modeling stable water isotopes in the Arctic region with COSMO_{iso}, *CLM-Community assembly 2017*, Graz (Austria), September 2017.
- Fourré, É., Landais, A., **Cauquoin, A.**, Jean-Baptiste, P. and Petit, J.-R. Tritium records to trace stratospheric moisture inputs in Antarctica with stable water isotopes and other tracers, *EGU 2017*, Vienna (Austria), April 2017.
- Christner, E., Pfahl, S., Werner, M., **Cauquoin, A.**, Scholder-Aemisegger, F., Barthlott, S., Schneider, M. and Schädler, G. Modeling of stable water isotopes in Central Europe with COSMO_{iso}, *EGU 2016*, Vienna (Austria), April 2016.
- Raisbeck, G. M., Jouzel, J., Yiou, F., **Cauquoin, A.**, Landais, A., Petit, J.-R., Lipenkov, V. Y., Beer, J., Synal, H.-A., Oerter, H., Johnsen, S. J., Steffensen, J. P. and Svensson, A. An improved North-South synchronization of ice core records around the 41 K beryllium-10 peak, *IPICS 2016*, Hobart (Australia), March 2016.
- Casado, M., **Cauquoin, A.**, Landais, A., Landsberg, J., Kerstel, E. and Doussin, J.-F. Experimental determination for kinetic fractionation during solid condensation at low temperature and theoretical framework, *EGU 2014*, Vienna (Austria), May 2014.
- Capron, E., Landais, A., Buiron, D., **Cauquoin, A.**, Chappellaz, J., Debret, M., Jouzel, J., Leuenberger, M., Martinerie, P., Masson-Delmotte, V., Mulvaney, R., Parrenin, F. and Prié, F. Glacial–interglacial dynamics of Antarctic firn columns: comparison between simulations and ice core air- $\delta^{15}\text{N}$ measurements, *AGU 2013*, San Francisco (USA), December 2013.
- Casado, M., Landais, A., Prié, F., **Cauquoin, A.**, Guilbaud, S., Pangui, E., Morales, S., Doussin, J.-F., Landsberg, J., Chelli, B., Uemura, R., Risi, C. Le Fractionnement isotopique à très basse température lors de la condensation solide, *SFIS JJC6*, Dunkerque, October 2013.
- Raisbeck, G.M., **Cauquoin, A.**, Jouzel, J., Bard, E. and ASTER Team. Synchronization of the EPICA Dome C ice core with marine sediments from 355-800 ka using proxies of the paleomagnetic field intensity, *IPICS 2012*, Giens, October 2012.