Alexandre CAUQUOIN

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Profile

- Currently at the IIS (University of Tokyo)
- Climate modeling with water isotopes
- Paleoclimate
- Tritium and ^{10}Be
- Water cycle
- Polar ice cores
- Water isotopes

Work experience

April 2022 - : Project Assistant Professor at the Institute of Industrial Science (IIS, Yoshimura Lab), The University of Tokyo; Kashiwa, Japan.
Subject: Development of water isotope incorporated Earth System Model MIROC.

Tasks: implementation of the water isotopes in coupled MIROC ESM, reconstruction of past millenium climate variations, modeling of tritium in the water cycle, 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, Abe Lab), The University of Tokyo; Kashiwa, Japan.
Subject: Investigation of the climate variability during the LGM and the last deglaciation using isotope-enabled GCMs.

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, Yoshimura Lab), The University of Tokyo; Kashiwa, Japan.
Subject: Development of water isotope incorporated Earth System Model MIROC and first Euro-Japan intercomparison.
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, paleoclimate simulations, post-treatment and model-data comparisons, centralisation and updates of the model versions.

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, 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 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 and 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 (CO_2-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.

Tasks: 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, Science Faculty, doctoral school MIPEGE (ED 534), France.

2008 - 2010: Physics and Environment Master program - University Paris Sud XI, Science Faculty, France.

2005 - 2008: Fundamental Physics Bachelor program - University Paris-Sud XI, Science Faculty, France.

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.

Funded Projects (as PI or co-PI only)

April 2025 - March 2026: Grant for Dispatch to International Research Meetings by the Association of the Foundation for Promotion of Industrial Science.

April 2025 - March 2026: Environment Radioactivity Network Center (ERAN) FY2025 Collaborative Researcher Grant: P-25-22.

September 2022 - March 2025: Grant-in-Aid for Research Activity Start-up (KAKENHI): 22K20379.

August 2019 - August 2021: Grant-in-Aid for JSPS (Japan Society for the Promotion of Science) International Research Fellows: JP 19F19024.

Awards

August 2019 - August 2021: JSPS Postdoctoral Fellowship for Foreign Researchers (ID P19024).

March 2017: Conference grant from AFEQ-CNF-INQUA (Association Française pour l'Étude du Quaternaire) for the DPG Spring Meeting 2017 in Bremen, Germany.

Financial Supports

May 2024: Invited to the SNOWISO (European Research Council Grant agreement 759526) workshop in Ærøskøbing, Denmark.

July 2023: Financial support for the *International Symposium on Isotope Hydrology* at IAEA, Vienna.

Communications

Publications - under review:

- Ollivier, I., Steen-Larsen, H. C., Dietrich, L. J., **Cauquoin, A.**, Stenni, B., Werner, M., and Landais, A.: Post-depositional Processes Alter the Seasonal and Multi-decadal Water Isotopic Records in Antarctic Snow and Firn, *J. Geophys. Res. Atmos.*, doi:10.22541/au.175994561.12898624/v1, in review.
- Casado, M., Bailey, A., Leroy-Dos Santos, C., Fourré, É., Favier, V., Agosta, C., Kittel, C., Arnaud, L., Prié, F., Akers, P. D., **Cauquoin, A.**, Werner, M., Janssen, L., Stenni, B., Dreossi, G., Spolaor, A., Petteni, A., Savarino, J., and Landais, A.: Revisiting the Isotopic Paleothermometer: Spatial and Temporal Variability in Isotope–Temperature Relationships Explained, *Nat. Geosci.*, in review.
- Tcheng, T., Fourré, É., Leroy-Dos-Santos, C., Parrenin, F., Le Meur, E., Prié, F., Jossoud, O., Jacob, R., Minster, B., Magand, O., Agosta, C., Dutrievoz, N., Favier, V., Baubant, L., Lassalle-Bernard, C., Casado, M., Werner, M., **Cauquoin, A.**, Arnaud, L., Jourdain, B., Picard, G., Bouchet, M., and Landais, A.: Multiproxy analyses of multiple firn cores from coastal Adélie Land covering the last 40 years, *EGUsphere*, doi:10.5194/egusphere-2025-2863, in review for *The Cryosphere*.
- Li, Y., **Cauquoin, A.**, Okazaki, A., and Yoshimura, K.: Improved response of $\delta^{18}O_{sw}$ in the Pacific Ocean to atmosphere-ocean interaction and ENSO using the isotope-enabled Fully Coupled Model MIROC6-iso, *J. Adv. Model. Earth Syst.*, in review.

Publications - accepted or published:

43. Bong, H., LeGrande, A. N., Dee, S. G., Zhu, J., **Cauquoin, A.**, Fiorella, R. P., Ding, Q., Dutrievoz, N., Tanoue, M., Frazer, M., Sarkar, M., Agosta, C., Yoshimura, K., Werner, M., Okazaki, A., Risi, C., Steen-Larsen, H. C., Casado, M., Wahl, S., Nusbaumer, J., Worden, J. R., Good, S. P., Bailey, A., Schneider, M., Noel, S., Mandal, S., Bowman, K. W., Li, Y., Schmidt, G. A.: Water Isotope Model Intercomparison Project (WisoMIP): Present-day Climate, *J. Geophys. Res. Atmos.*, doi:10.1029/2025JD044985, 2026.

42. Jouzel, J., **Cauquoin, A.**, Bard, E., Zhang, L., Hou, S., Wu, Z., Zhou, W., Lipenkov, V., Petit, J.-R., Raisbeck, G., and Yiou, F.: Beryllium 10 in Antarctica over the last seven millennia, *Sci. Data*, **13**, 129, doi:10.1038/s41597-025-06444-0, 2026.

41. Falster, G., Abramowitz, G., Hobeichi, S., Hughes, C., Treble, P., Abram, N. J., Bird, M. I., **Cauquoin, A.**, Dixon, B., Drysdale, R., Jin, C., Munksgaard, N., Proemse, B., Tyler, J. J., Werner, M., and Tadros, C. V.: High resolution monthly precipitation isotope estimates across Australia from machine learning, *Hydrol. Earth Syst. Sci.*, **30**, 289–315, doi:10.5194/hess-30-289-2026, 2026.

40. Werner, M., Dastgerdi, S. B., and **Cauquoin, A.**: Comparison of ECHAM6-wiso near-surface water vapour isotopic composition with *in situ* measurements at Neumayer Station III, *Front. Earth Sci.*, **13**, 1467247, doi:10.3389/feart.2025.1467247, 2025.

39. Sime, L. C., Sivankutty, R., Malmierca-Vallet, I., Goursaud Oger, S., LeGrande, A. N., McClymont, E. L., de Boer, A., **Cauquoin, A.**, and Werner, M.: H11 meltwater and standard 127 ka Last Interglacial simulations suggest more modest peak temperatures for both Greenland and Antarctica: a multi-model study of water isotopes, *Clim. Past*, **21**, 1725–1753, doi:10.5194/cp-21-1725-2025, 2025.

38. Cheng, J., **Cauquoin, A.**, Yang, Y., Okazaki, A., and Yoshimura, K.: Contrasting impacts of ENSO evolution on the interannual variation of precipitation isotopes over the Tibetan Plateau, *J. Geophys. Res. Atmos.*, **130**, e2025JD043584, doi:10.1029/2025JD043584, 2025.

37. **Cauquoin, A.**, Gusyev, M., Komuro, Y., Ono, J., and Yoshimura, K.: Ocean general circulation model simulations of anthropogenic tritium releases from the Fukushima Daiichi Nuclear Power Plant site, *Mar. Pollut. Bull.*, **220**, 118294, doi:10.1016/j.marpolbul.2025.118294, 2025.

36. Hao, S., Zhang, X., Duan, Y., Gowan, E. J., Zhu, J., **Cauquoin, A.**, Chen, J., Werner, M., and Chen, F.: Model seasonal and proxy spatial biases revealed by assimilated mid-Holocene seasonal temperatures, *Sci. Bull.*, **70**(12), 2014–2022, doi:10.1016/j.scib.2025.03.039, 2025.

35. Palcsu, L., László, E., Surányi, G., Túri, M., Vargas, D., Veres, M., **Cauquoin, A.**, Zákány, L., Janovics, R., Csige, I., and Temovski, M.: Solar cycle detected in natural tritium of Ice layers before the nuclear era. *J. Geophys. Res. Atmos.*, **130**, e2024JD042678, doi:10.1029/2024JD042678, 2025.

34. Zhang, J., Yu, W., Thompson, L. G., Lewis, S., **Cauquoin, A.**, Werner, M., Jing, Z., Ma, Y., Xu, B., Wu, G., Guo, R., Ren, P., Zhang, Z., Wang, Q, and Qu, D.: Shifting influences of Indian Ocean Dipole and western Pacific subtropical high on annual precipitation $\delta^{18}O$ in southern East Asia, *npj Clim. Atmos. Sci.*, **8**, 107, doi:10.1038/s41612-025-01000-4, 2025.

33. **Cauquoin, A.**, Gusyev, M., Bong, H., Okazaki, A., and Yoshimura, K.: Modeling tritium release to the atmosphere during the Fukushima Daiichi Nuclear Power Plant accident and application to estimating post-accident water system transit times, *Environ. Sci. Pollut. Res.*, **32**, 3649–3663, doi:10.1007/s11356-025-35919-1, 2025.

32. Ollivier, I., Steen-Larsen, H. C., Stenni, B., Arnaud, L., Casado, M., **Cauquoin, A.**, Dreossi, G., Genthon, C., Minster, B., Picard, G., Werner, M., and Landais, A.: Surface processes and drivers of the snow water stable isotopic composition at Dome C, East Antarctica – a multi-datasets and modelling analysis, *The Cryosphere*, **19**, 173–200, doi:10.5194/tc-19-173-2025, 2025.

31. Wang, J., Xu, B., Li, Z., Nasir, J., Farhan, S., Wang, M., Xie, Y., Yang, S., **Cauquoin, A.**, and Hussain, A.: The interpretation of Karakoram anomaly by High Karakoram ice core record, *J. Geophys. Res. Atmos.*, **130**, e2023JD040235, doi:10.1029/2023JD040235, 2025.

30. Dreossi, G., Masiol, M., Stenni, B., Zannoni, D., Scarchilli, C., Ciardini, V., Casado, M., Landais, A., Werner, M., **Cauquoin, A.**, Casasanta, G., Del Guasta, M., Posocco, V., and Barbante, C.: A decade (2008–2017) of water stable isotope composition of precipitation at Concordia Station, East Antarctica, *The Cryosphere*, **18**, 3911–3931, doi:10.5194/tc-18-3911-2024, 2024.

29. Kino, K., **Cauquoin, A.**, Okazaki, A., Oki, T. and Yoshimura, K.: Synoptic moisture intrusion provided heavy isotope precipitations in inland Antarctica during the Last Glacial Maximum, *Geophys. Res. Lett.*, **51**, e2024GL108191, doi:10.1029/2024GL108191, 2024.

28. Landais, A., Agosta, C., Vimeux, F., Magand, O., Solis, C., **Cauquoin, A.**, Dutrievoz, N., Risi, C., Leroy-Dos Santos, C., Fourré, E., Cattani, O., Jossoud, O., Minster, B., Prié, F., Casado, M., Dommergue, A., Bertrand, Y., and Werner, M.: Abrupt excursions in water vapor isotopic variability at the Pointe Benedicte observatory on Amsterdam Island, *Atmos. Chem. Phys.*, **24**, 4611–4634, doi:10.5194/acp-24-4611-2024, 2024.

27. **Cauquoin, A.**, Fourré, É., Landais, A., Okazaki, A., and Yoshimura, K.: Modeling natural tritium in precipitation and its dependence on decadal variations of solar activity using the atmospheric general circulation model MIROC5-iso, *J. Geophys. Res. Atmos.*, **129**, e2023JD039745, doi:10.1029/2023JD039745, 2024.

26. Vimeux, F., Risi, C., Barthe, C., François, S., **Cauquoin, A.**, Jossoud, O., Metzger, J.-M., Cattani, O., Minster, B., and Werner, M.: Is the isotopic composition of precipitation a robust indicator for reconstructions of past tropical cyclones frequency? A case study on Réunion Island from rain and water vapor isotopic observations, *J. Geophys. Res. Atmos.*, **129**, e2023JD039794, doi:10.1029/2023JD039794, 2024.

25. Bong, H., **Cauquoin, A.**, Okazaki, A., Chang, E.-C., Werner, M., Wei, Z., Yeo, N. and Yoshimura, K.: Process-Based Intercomparison of Water Isotope-Enabled Models and Reanalysis Nudging Effects, *J. Geophys. Res. Atmos.*, **129**, e2023JD038719, doi:10.1029/2023JD038719, 2024.

24. Leroy-Dos Santos, C., Fourré, E., Agosta, C., Casado, M., **Cauquoin, A.**, Werner, M., Minster, B., Prié, F., Jossoud, O., Petit, L. and Landais, A.: From atmospheric water isotopes measurement to firn core interpretation in Adelie Land: A case study for isotope-enabled atmospheric models in Antarctica, *The Cryosphere*, 17, 5241–5254, doi:10.5194/tc-17-5241-2023, 2023.

23. Li, Y., Kino, K., **Cauquoin, A.** and Oki, T.: Contribution of lakes in sustaining the Sahara greening during the Mid-Holocene, *Clim. Past*, **19**, 1891–1904, doi:10.5194/cp-19-1891-2023, 2023.

22. Shi, X., **Cauquoin, A.**, Lohmann, G., Jonkers, L., Wang, Q., Yang, H., Sun, Y., and Werner, M.: Simulated stable water isotopes during the mid-Holocene and pre-industrial using AWI-ESM-2.1-wiso, *Geosci. Model Dev.*, **16**, 5153–5178, doi:10.5194/gmd-16-5153-2023, 2023.

21. Li, Y., Liu, X., Xie, X., **Cauquoin, A.** and Werner, M.: Interannual modulation of the East and South Asian summer precipitation $\delta^{18}O$ by the Indian and western North Pacific summer monsoon strength, *Glob. Planet. Change*, **227**, 104187, doi:10.1016/j.gloplacha.2023.104187, 2023.

20. **Cauquoin, A.**, Abe-Ouchi, A., Obase, T., Chan, W.-L., Paul, A. and Werner, M.: Effects of Last Glacial Maximum (LGM) sea surface temperature and sea ice extent on the isotope-temperature slope at polar ice core sites, *Clim. Past*, **19**, 1275-1294, doi:10.5194/cp-19-1275-2023, 2023.

19. Zhang, J., Yu, W., Lewis, S., Thompson, L., Bowen, G. J., Yoshimura, K., **Cauquoin, A.**, Werner, M., Chakraborty, S., Jing, Z., Ma, Y., Guo, X., Xu, B., Wu, G., Guo, R. and Qu, D.: Controls on stable oxygen isotopes in monsoonal precipitation across the Bay of Bengal: atmosphere and surface analysis, *Geophys. Res. Lett.*, **50**, e2022GL102229, doi:10.1029/2022GL102229, 2023.

18. Krätschmer, S., **Cauquoin, A.**, Lohmann, G. and Werner, M.: A Modeling Perspective on the Lingering Glacial Sea Surface Temperature Conundrum, *Geophys. Res. Lett.*, **49**, e2022GL100378, doi:10.1029/2022GL100378, 2022.

17. 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.: Interglacial Antarctic–Southern Ocean climate decoupling due to moisture source area shifts, *Nat. Geosci.,* **14**, 918-923, doi:10.1038/s41561-021-00856-4, 2021.

16. 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.

15. **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.

14. 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.

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

12. **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.

11. **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.

10. 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.

9. 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.

8. 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.

7. **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 cycle. *J. Geophys. Res. Atmos.*, **121**, 12,612-12,629, doi:10.1002/2016JD025484, 2016.

6. 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.

5. **Cauquoin, A.**, Jean-Baptiste, P., Risi, C., Fourré, 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.

4. **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.

3. **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.

2. **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.

1. 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-δ^{15}N measurements, *Clim. Past*, **9**, 983-999, doi:10.5194/cp-9-983-2013, 2013.

Press releases:

2025.07.02: 全球海洋モデルにより福島第一原発から放出される トリチウムの濃度分布を予測 ―― 放出計画をもとにした最新シミュレーション結果――, https://www.iis.u-tokyo.ac.jp/ja/news/4809/

(What about tritiated water release from Fukushima? Ocean model simulations provide an objective

scientific knowledge on the long-term tritium distribution, https://www.iis.u-tokyo.ac.jp/en/news/4809/).

Seminars - invited talks:

Cauquoin, A., Gusyev, M., Komuro, Y., Ono, J., and Yoshimura, K., Simulation of tritium releases into the ocean from the Fukushima Daiichi Nuclear Power Plant, *JpGU 2024*, Chiba (Japan), May 2024.

Cauquoin, A. Contributions of stable water isotopes to the understanding of the water cycle in the Tibetan Plateau region within a model-data approach, *International Symposium on Third Pole Environment 2023*, Chongqing (China), November 14th-17th 2023.

Cauquoin, A., Fourré, É., Landais, A., Bong, H., Okazaki, A. and Yoshimura, K. Implementation of tritium in the atmospheric General Circulation Model MIROC5-iso to investigate the dynamics of the hydrological cycle, *keynote at the International Symposium on Isotope Hydrology at IAEA*, Vienna (Austria), July 3rd 2023.

Cauquoin, A. Study of past Earth's climate variations using fully coupled General Circulation Models enabled with water isotopes, *IsoNet Seminar*, online, September 08th 2022.

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.

Seminars - 1st author:

Cauquoin, A., Werner, M., and Jungclaus, J.: Transient simulation of past 2000 years with the isotope-enabled Earth System Model MPI-ESM-wiso, oral, *PAGES 7th Open Science Meeting*, Shanghai (China), May 2025.

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