

# List of publications of Laboratoire de Glaciologie (GLACIOL)

## Peer-reviewed journal articles

### 2024

Tollenaar, V., Zekollari, H., Kittel, C., Farinotti, D., Lhermitte, S., Debaille, V., Goderis, S., Claeys, P., Joy, K. H., & Pattyn, F. (2024). Antarctic meteorites threatened by climate warming. *Nature climate change*, 14(4), 340-343. doi:10.1038/s41558-024-01954-y

Coulon, V., Ann Kristin, K., Kittel, C., Edwards, T. L., Turner, F., Winkelmann, R., & Pattyn, F. (2024). Disentangling the drivers of future Antarctic ice loss with a historically calibrated ice-sheet model. *The Cryosphere*.

Tollenaar, V., Zekollari, H., Pattyn, F., Rußwurm, M., Kellenberger, B., Lhermitte, S., Izeboud, M., & Tuia, D. (2024). Where the White Continent Is Blue: Deep Learning Locates Bare Ice in Antarctica. *Geophysical research letters*, 51(3). doi:10.1029/2023GL106285

Hanna, E., Topál, D., Box, J. J., Buzzard, S., Christie, F., Hvidberg, C., Morlighem, M., De Santis, L., Silvano, A., Colleoni, F., Sasgen, I., Banwell, A. F., van den Broeke, M. R., DeConto, R., De Rydt, J., Goelzer, H., Gossart, A., Gudmundsson, G. H., Lindbäck, K., Miles, B. B., Mottram, R., Pattyn, F., Reese, R., Rignot, E., Srivastava, A., Sun, S., Toller, J., Tuckett, P., & Ultee, L. (2024). Short- and long-term variability of the Antarctic and Greenland ice sheets. *Nature Reviews Earth & Environment*. doi:10.1038/s43017-023-00509-7

Wauthy, S., Tison, J.-L., Inoue, M., El Amri, S., Sun, S., Fripiat, F., Claeys, P., & Pattyn, F. (2024). Spatial and temporal variability of environmental proxies from the top 120 m of two ice cores in Dronning Maud Land (East Antarctica). *Earth System Science Data*, 16(1), 35-58. doi:10.5194/essd-16-35-2024

### 2023

Koch, I., Drews, R., Franke, S., Jansen, D., Oraschewski, F. M., Muhle, L. S., Višnjević, V., Matsuoka, K., Pattyn, F., & Eisen, O. (2023). Radar internal reflection horizons from multisystem data reflect ice dynamic and surface accumulation history along the Princess Ragnhild Coast, Dronning Maud Land, East Antarctica. *Journal of Glaciology*, 1-19. doi:10.1017/jog.2023.93

Seroussi, H., Verjans, V., Nowicki, S., Payne, A. J., Goelzer, H., Lipscomb, W. H., Abe-Ouchi, A., Agosta, C., Albrecht, T., Asay-Davis, X., Barthel, A., Calov, R., Cullather, R., Dumas, C., Galton-Fenzi, B. K., Gladstone, R. R., Golledge, N. R., Gregory, J. M., Greve, R., Hattermann, T., Hoffman, M. J., Humbert, A., Huybrechts, P., Jourdain, N. C., Kleiner, T., Larour, E., Leguy, G. R., Lowry, D. P., Little, C. M., Morlighem, M., Pattyn, F., Pelle, T., Price, S. F., Quiquet, A., Reese, R., Schlegel, N.-J., Shepherd, A., Simon, E., Smith, R. R., Straneo, F., Sun, S., Trusel, L. D., Van Breedam, J., Van Katwyk, P., van de Wal, R. S. W., Winkelmann, R., Zhao, C., Zhang, T., & Zwinger, T. (2023). Insights

into the vulnerability of Antarctic glaciers from the ISMIP6 ice sheet model ensemble and associated uncertainty. *The Cryosphere*, 17(12), 5197-5217. doi:10.5194/tc-17-5197-2023

Gregov, T., Pattyn, F., & Arnst, M. (2023). Grounding-line flux conditions for marine ice-sheet systems under effective-pressure-dependent and hybrid friction laws. *Journal of fluid mechanics*, 975. doi:10.1017/jfm.2023.760

Tang, W., Ward, B. B., Beman, M., Bristow, L., Clark, D., Fawcett, S. E., Frey, C., Fripiat, F., Herndl, G., Mdutyana, M., Paulot, F., Peng, X., Santoro, A. E., Shiozaki, T., Sintes, E., Stock, C., Sun, X., Wan, X. S., Xu, M. N., & Zhang, Y. (2023). Database of nitrification and nitrifiers in the global ocean. *Earth System Science Data*, 15(11), 5039-5077. doi:10.5194/essd-15-5039-2023

Henley, S. F., Cozzi, S., Fripiat, F., Lannuzel, D., Nomura, D., Thomas, D. N., Meiners, K. M., Vancoppenolle, M., Arrigo, K., Stefels, J., van Leeuwe, M., Moreau, S., Jones, E. M., Fransson, A., Chierici, M., & Delille, B. (2023). Macronutrient biogeochemistry in Antarctic land-fast sea ice: Insights from a circumpolar data compilation. *Marine chemistry*, 257, 104324. doi:10.1016/j.marchem.2023.104324

Ann Kristin, K., Coulon, V., Pattyn, F., & Winkelmann, R. (2023). The long-term sea-level commitment from Antarctica. *The Cryosphere Discussions*.

Løkkegaard, A., Mankoff, K. D., Zdanowicz, C., Clow, G. G., Lüthi, M. M., Doyle, S. S., Thomsen, H. H., Fisher, D., Harper, J., Aschwanden, A., Vinther, B. M., Dahl-Jensen, D., Zekollari, H., Meierbacholt, T., McDowell, I., Humphrey, N., Solgaard, A., Karlsson, N. N., Khan, S. S., Hills, B., Law, R., Hubbard, B., Christoffersen, P., Jacquemart, M., Seguinot, J., Fausto, R. R., & Colgan, W. (2023). Greenland and Canadian Arctic ice temperature profiles database. *The Cryosphere*, 17(9), 3829-3845. doi:10.5194/tc-17-3829-2023

Coulon, V., Ann Kristin, K., Kittel, C., Edwards, T. L., Turner, F., Winkelmann, R., & Pattyn, F. (2023). Disentangling the drivers of future Antarctic ice loss with a historically-calibrated ice-sheet model. *The Cryosphere Discussions*.

Frémand, A., Fretwell, P., Bodart, J. A., Pritchard, H. D., Aitken, A., Bamber, J. L., Bell, R., Bianchi, C., Bingham, R. G., Blankenship, D., Casassa, G., Catania, G., Christianson, K., Conway, H., Corr, H. F. J., Cui, X., Damaske, D., Damm, V., Drews, R., Eagles, G., Eisen, O., Eisermann, H., Ferraccioli, F., Field, E., Forsberg, R., Franke, S., Fujita, S., Gim, Y., Goel, V., Gogineni, S. P., Greenbaum, J. S., Hills, B., Hindmarsh, R. C. A., Hoffman, A. O., Holmlund, P., Holschuh, N., Holt, J. W., Horlings, A., Humbert, A., Jacobel, R., Jansen, D., Jenkins, A., Jokat, W., Jordan, T., King, E., Kohler, J., Krabill, W., Kusk Gillespie, M., Langley, K., Lee, J., Leitchenkov, G., Leuschen, C., Luyendyk, B., MacGregor, J. A., MacKie, E., Matsuoka, K., Morlighem, M., Mouginot, J., Nitsche, F., Nogi, Y., Nost, O., Paden, J., Pattyn, F., Popov, S. V., Rignot, E., Rippin, D., Medina-Rivera, A., Roberts, J., Ross, N., Ruppel, A., Schroeder, D. M., Siegert, M. J., Smith, A. M., Steinhage, D., Studinger, M., Sun, B., Tabacco, I., Tinto, K., Urbini, S., Vaughan, D., Welch, B., Wilson, D. S., Young, D. A., & Zirizzotti, A. (2023). Antarctic Bedmap data: Findable, Accessible, Interoperable, and Reusable (FAIR) sharing of 60 years of ice bed, surface, and thickness data. *Earth System Science Data*, 15(7), 2695-2710. doi:10.5194/essd-15-2695-2023

Blard, P.-H., Protin, M., Tison, J.-L., Fripiat, F., Dahl-Jensen, D., Steffensen, J. P., Mahaney, W., Bierman, P. R., Christ, A. J., Corbett, L. B., Debaille, V., Rigaudier, T., & Claeys, P. (2023). Basal debris of the NEEM ice core, Greenland: a window into sub-ice-

sheet geology, basal ice processes and ice-sheet oscillations. *Journal of Glaciology*, 1-19. doi:10.1017/jog.2022.122

Van Achter, G., Fichefet, T., Goosse, H., Pelletier, C., Haubner, K., & Pattyn, F. (2023). Ocean–Ice Sheet Coupling in the Totten Glacier Area, East Antarctica: Analysis of the Feedbacks and Their Response to a Sudden Ocean Warming. *Geosciences (Switzerland)*, 13(4), 106. doi:10.3390/geosciences13040106

Vanderstraeten, A., Mattielli, N., Laruelle, G. G., Gili, S., Bory, A., Gabrielli, P., Boxho, S., Tison, J.-L., & Bonneville, S. (2023). Identifying the provenance and quantifying the contribution of dust sources in EPICA Dronning Maud Land ice core (Antarctica) over the last deglaciation (7–27 kyr BP): A high-resolution, quantitative record from a new Rare Earth Element mixing model. *Science of the total environment*, 881, 163450. doi:10.1016/j.scitotenv.2023.163450

Geilfus, N. X., Delille, B., Tison, J.-L., Lemes, M., & Rysgaard, S. (2023). Gas dynamics within landfast sea ice of an Arctic fjord (NE Greenland) during the spring- summer transition. *Elementa (Washington, D.C.)*, 11(1), 00056. doi:10.1525/elementa.2022.00056

Lannuzel, D., Fourquez, M., De Jong, J., Tison, J.-L., Delille, B., & Schoemann, V. (2023). First report on biological iron uptake in the Antarctic sea-ice environment. *Polar biology*, 46(4), 339–355. doi:10.1007/s00300-023-03127-7

Marshall, T., Sigman, D. M., Beal, L., Foreman, A., Martínez-García, A., Blain, S., Campbell, E., Fripiat, F., Granger, R., Harris, E., Haug, G. H., Marconi, D., Oleynik, S., Rafter, P. A., Roman, R., Sinyanya, K., Smart, S., & Fawcett, S. E. (2023). The Agulhas Current Transports Signals of Local and Remote Indian Ocean Nitrogen Cycling. *Journal of geophysical research. Oceans*, 128(3). doi:10.1029/2022JC019413

Fripiat, F., Sigman, D. M., Martínez-García, A., Marconi, D., Ai, X. E., Auderset, A., Fawcett, S. E., Moretti, S., Studer, A. S., & Haug, G. H. (2023). The Impact of Incomplete Nutrient Consumption in the Southern Ocean on Global Mean Ocean Nitrate #15N. *Global biogeochemical cycles*, 37(2). doi:10.1029/2022GB007442

Postnikova, T., Rybak, O., Gubanov, A., Zekollari, H., Huss, M., & Shahgedanova, M. (2023). Debris cover effect on the evolution of Northern Caucasus glaciers in the 21st century. *Frontiers in Earth Science*, 11, 1256696. doi:10.3389/feart.2023.1256696

Farmer, J. R., Pico, T., Underwood, O. M., Cleveland Stout, R., Granger, J., Cronin, T. M., Fripiat, F., Martínez-García, A., Haug, G. H., & Sigman, D. M. (2023). The Bering Strait was flooded 10,000 years before the Last Glacial Maximum. *Proceedings of the National Academy of Sciences of the United States of America*, 120(1). doi:10.1073/pnas.2206742119

## 2022

Bolíbar, J., Rabatel, A., Gouttevin, I., Zekollari, H., & Galiez, C. (2022). Nonlinear sensitivity of glacier mass balance to future climate change unveiled by deep learning. *Nature communications*, 13(1), 409. doi:10.1038/s41467-022-28033-0

Compagno, L., Huss, M., Zekollari, H., Miles, E. S., & Farinotti, D. (2022). Future growth and decline of high mountain Asia's ice-dammed lakes and associated risk. *Communications Earth and Environment*, 3(1), 191. doi:10.1038/s43247-022-00520-8

Wiersma, P., Aerts, J., Zekollari, H., Hrachowitz, M., Drost, N., Huss, M., Sutanudjaja, E. E., & Hut, R. (2022). Coupling a global glacier model to a global hydrological model prevents underestimation of glacier runoff. *Hydrology and earth system sciences*, 26(23), 5971-5986. doi:10.5194/hess-26-5971-2022

Kazmierczak, E., Sun, S., Coulon, V., & Pattyn, F. (2022). Subglacial hydrology modulates basal sliding response of the Antarctic ice sheet to climate forcing. *The Cryosphere*, 16(10), 4537-4552. doi:10.5194/tc-16-4537-2022

van de Wal, R. S. W., Nicholls, R. J., Behar, D., McInnes, K., Stammer, D., Lowe, J. A., Church, J. A., DeConto, R., Fettweis, X., Goelzer, H., Haasnoot, M., Haigh, I. D., Hinkel, J., Horton, B. P., James, T. S., Jenkins, A., Le Cozannet, G., Levermann, A., Lipscomb, W. H., Marzeion, B., Pattyn, F., Payne, T., Pfeffer, T., Price, S. F., Seroussi, H., Sun, S., Veatch, W., & White, K. (2022). A high#end estimate of sea#level rise for practitioners. *Earth's future*. doi:10.1029/2022EF002751

Martínez-García, A., Jung, J., Ai, X., Sigman, D. M., Auderset, A., Duprey, N., Foreman, A., Fripiat, F., Leichliter, J., Lüdecke, T., Moretti, S., & Wald, T. (2022). Laboratory Assessment of the Impact of Chemical Oxidation, Mineral Dissolution, and Heating on the Nitrogen Isotopic Composition of Fossil#Bound Organic Matter. *Geochemistry, geophysics, geosystems*, 23(8). doi:10.1029/2022GC010396

Cavitte, M. G., Goosse, H., Wauthy, S., Kausch, T., Tison, J.-L., Van Liefferinge, B., Pattyn, F., Lenaerts, J. T. M., & Claeys, P. (2022). From ice core to ground-penetrating radar: representativeness of SMB at three ice rises along the Princess Ragnhild Coast, East Antarctica. *Journal of Glaciology*, 1-13. doi:10.1017/jog.2022.39

Zekollari, H., Huss, M., Farinotti, D., & Lhermitte, S. (2022). Ice-Dynamical Glacier Evolution Modeling—A Review. *Reviews of geophysics*, 60(2), e2021RG000754. doi:10.1029/2021RG000754

Materi#, D., Kjær, H. A., Vallelonga, P., Tison, J.-L., Röckmann, T., & Holzinger, R. (2022). Nanoplastics measurements in Northern and Southern polar ice. *Environmental research*, 208, 112741. doi:10.1016/j.envres.2022.112741

Compagno, L., Huss, M., Miles, E. S., McCarthy, M. J., Zekollari, H., Dehecq, A., Pellicciotti, F., & Farinotti, D. (2022). Modelling supraglacial debris-cover evolution from the single-glacier to the regional scale: an application to High Mountain Asia. *The Cryosphere*, 16(5), 1697-1718. doi:10.5194/tc-16-1697-2022

Middleton, C., Gopalakrishnan, S. S., Berenstein, I., Knaepen, B., Tison, J.-L., & De Wit, A. (2022). Relative role of short interfacial fingers and long internally driven streamers in convective flows below growing sea ice. *Physical Review Fluids*, 7(4), 043503. doi:10.1103/PhysRevFluids.7.043503

Tollenaar, V., Zekollari, H., Lhermitte, S., Tax, D. M., Debaille, V., Goderis, S., Claeys, P., & Pattyn, F. (2022). Unexplored Antarctic meteorite collection sites revealed through machine learning. *Science advances*, 8(4). doi:10.1126/sciadv.abj8138

Pelletier, C., Fichefet, T., Goosse, H., Haubner, K., Helsen, S., Huot, P. V., Kittel, C., Klein, F., Le clec'h, S., van Lipzig, N. P. M., Marchi, S., Massonnet, F., Mathiot, P., Moravveji, E., Moreno-Chamarro, E., Ortega, P., Pattyn, F., Souverijns, N., Van Achter, G., Vanden Broucke, S., Vanhulle, A., Verfaillie, D., & Zipf, L. (2022). PARASO, a circum-Antarctic fully coupled ice-sheet–ocean–sea-ice–atmosphere–land model involving f.ETISh1.7, NEMO3.6, LIM3.6, COSMO5.0 and CLM4.5. *Geoscientific Model Development*, 15(2), 553–594. doi:10.5194/gmd-15-553-2022

Durand, G., van den Broeke, M. R., Le Cozannet, G., Edwards, T. L., Holland, P. R., Jourdain, N. C., Marzeion, B., Mottram, R., Nicholls, R. J., Pattyn, F., Paul, F., Slanger, A., Winkelmann, R., Burgard, C., van Calcar, C., Barré, J.-B., Bataille, A., & Chapuis, A. (2022). Sea-Level Rise: From Global Perspectives to Local Services. *Frontiers in marine science*, 8. doi:10.3389/fmars.2021.709595

## 2021

Van Liefferinge, B., Taylor, D., Tsutaki, S., Fujita, S., Gogineni, P., Kawamura, K., Matsuoka, K., Moholdt, G., Oyabu, I., Abe-Ouchi, A., Awasthi, A., Buizert, C., Gallet, J., Isaksson, E., Motoyama, H., Nakazawa, F., Ohno, H., O'Neill, C., Pattyn, F., & Sugiura, K. (2021). Surface Mass Balance Controlled by Local Surface Slope in Inland Antarctica: Implications for Ice#Sheet Mass Balance and Oldest Ice Delineation in Dome Fuji. *Geophysical research letters*, 48(24). doi:10.1029/2021GL094966

Geilfus, N. X., Munson, K., Lemes, M., Wang, F., Tison, J.-L., & Rysgaard, S. (2021). Meteoric water contribution to sea ice formation and its control of the surfacewater carbonate cycle on the Wandel Sea shelf, northeastern Greenland. *Elementa (Washington, D.C.)*, 9(1), 9. doi:10.1525/elementa.2021.00004

Campbell, K., Matero, I., Bellas, C., Turpin-Jelfs, T., Anhaus, P., Graeve, M., Fripiat, F., Tranter, M., Landy, J. C., Sanchez-Baracaldo, P., Leu, E., Katlein, C., Mundy, C. J., Rysgaard, S., Tedesco, L., Haas, C., & Nicolaus, M. (2021). Monitoring a changing Arctic: Recent advancements in the study of sea ice microbial communities. *Ambio*. doi:10.1007/s13280-021-01658-z

Fripiat, F., Martínez-García, A., Marconi, D., Fawcett, S. E., Kopf, S., Luu, V. H., Rafter, P. A., Zhang, R., Sigman, D. M., & Haug, G. H. (2021). Nitrogen isotopic constraints on nutrient transport to the upper ocean. *Nature Geoscience*. doi:10.1038/s41561-021-00836-8

Jacques, C., Sapart, C., Fripiat, F., Carnat, G., Zhou, J., Delille, B., Röckmann, T., Van der Veen, C., Niemann, H., Haskell, T., & Tison, J.-L. (2021). Sources and sinks of methane in sea ice: Insights from stable isotopes. *Elementa: Science of the Anthropocene*, 9(1). doi:10.1525/elementa.2020.00167

Nowé, S., Lecocq, T., Caudron, C., Jónsdóttir, K., & Pattyn, F. (2021). Permanent, seasonal, and episodic seismic sources around Vatnajökull, Iceland, from the analysis of correlograms. *Volcanica*, 135–147. doi:10.30909/vol.04.02.135147

Farmer, J. R., Sigman, D. M., Granger, J., Underwood, O. M., Fripiat, F., Cronin, T. M., Martínez-García, A., & Haug, G. H. (2021). Arctic Ocean stratification set by sea level and freshwater inputs since the last ice age. *Nature Geoscience*. doi:10.1038/s41561-021-00789-y

Coulon, V., Bulthuis, K., Whitehouse, P. L., Sun, S., Haubner, K., Zipf, L., & Pattyn, F. (2021). Contrasting Response of West and East Antarctic Ice Sheets to Glacial Isostatic Adjustment. *Journal of Geophysical Research: Earth Surface*, 126(7). doi:10.1029/2020JF006003

Glaude, Q., Derauw, D., Barbier, C., & Pattyn, F. (2021). The added-value of TOPSAR coherence tracking for sentinel-1 interferometry over ice shelves. *Proceedings of the European Conference on Synthetic Aperture Radar, EUSAR*, 2021-March, 732-736.

Glaude, Q., Derauw, D., Barbier, C., & Pattyn, F. (2021). Fast azimuthal displacement retrieval from TOPSAR burst overlapping interferometry: Application in dronning Maud Land (Antarctica). *Proceedings of the European Conference on Synthetic Aperture Radar, EUSAR*, 2021-March, 851-854.

Roukaerts, A., Deman, F., Van der Linden, F., Carnat, G., Bratkic, A., Moreau, S., Lannuzel, D., Dehairs, F., Delille, B., Tison, J.-L., & Fripiat, F. (2021). The biogeochemical role of a microbial biofilm in sea ice: Antarctic landfast sea ice as a case study. *Elementa: Science of the Anthropocene*, 9(1). doi:10.1525/elementa.2020.00134

Compagno, L., Eggs, S., Huss, M., Zekollari, H., & Farinotti, D. (2021). Brief communication: Do 1.0, 1.5, or 2.0° C matter for the future evolution of Alpine glaciers? *The Cryosphere*, 15(6), 2593-2599. doi:10.5194/tc-15-2593-2021

Hanus, S., Hrachowitz, M., Zekollari, H., Schoups, G., Vizcaino, M., & Kaitna, R. (2021). Future changes in annual, seasonal and monthly runoff signatures in contrasting Alpine catchments in Austria. *Hydrology and earth system sciences*, 25(6), 3429-3453. doi:10.5194/hess-25-3429-2021

Payne, A. J., Nowicki, S., Abe-Ouchi, A., Agosta, C., Alexander, P., Albrecht, T., Asay-Davis, X., Aschwanden, A., Barthel, A., Bracegirdle, T. J., Calov, R., Chambers, C., Choi, Y., Cullather, R., Cuzzone, J., Dumas, C., Edwards, T. L., Felikson, D., Fettweis, X., Galton-Fenzi, B. K., Goelzer, H., Gladstone, R. R., Golledge, N. R., Gregory, J. M., Greve, R., Hattermann, T., Hoffman, M. J., Humbert, A., Huybrechts, P., Jourdain, N. C., Kleiner, T., Munneke, P. K., Larour, E., Le clec'h, S., Lee, V., Leguy, G., Lipscomb, W. H., Little, C. M., Lowry, D. P., Morlighem, M., Nias, I., Pattyn, F., Pelle, T., Price, S. F., Quiquet, A., Reese, R., Rückamp, M., Schlegel, N.-J., Seroussi, H., Shepherd, A., Simon, E., Slater, D., Smith, R. R., Straneo, F., Sun, S., Tarasov, L., Trusel, L. D., Van Breedam, J., van de Wal, R. S. W., Van den Broeke, M., Winkelmann, R., Zhao, C., Zhang, T., & Zwinger, T. (2021). Future sea level change under CMIP5 and CMIP6 scenarios from the Greenland and Antarctic ice sheets. *Geophysical research letters*. doi:10.1029/2020GL091741

Edwards, T. L., Nowicki, S., Marzeion, B., Hock, R., Goelzer, H., Seroussi, H., Jourdain, N. C., Slater, D. A., Turner, F., Smith, C. J., McKenna, C., Simon, E., Abe-Ouchi, A., Gregory, J. M., Larour, E., Lipscomb, W. H., Payne, A. J., Shepherd, A., Agosta, C., Alexander, P., Albrecht, T., Anderson, B., Asay-Davis, X., Aschwanden, A., Barthel, A., Bliss, A., Calov, R., Chambers, C., Champollion, N., Choi, Y., Cullather, R., Cuzzone, J., Dumas, C., Felikson, D., Fettweis, X., Fujita, K., Galton-Fenzi, B. K., Gladstone, R. R., Golledge,

N. R., Greve, R., Hattermann, T., Hoffman, M. J., Humbert, A., Huss, M., Huybrechts, P., Immerzeel, W. W. (W.), Kleiner, T., Kraaijenbrink, P., Le clec'h, S., Lee, V., Leguy, G. R., Little, C. M., Lowry, D. P., Malles, J. H., Martin, D. F., Maussion, F., Morlighem, M., O'Neill, J. F., Nias, I., Pattyn, F., Pelle, T., Price, S. F., Quiquet, A., Radi#, V., Reese, R., Rounce, D. R., Rückamp, M., Sakai, A., Shafer, C., Schlegel, N.-J., Shannon, S., Smith, R. R., Straneo, F., Sun, S., Tarasov, L., Trusel, L. D., Van Breedam, J., van de Wal, R. S. W., Van den Broeke, M., Winkelmann, R., Zekollari, H., Zhao, C., Zhang, T., & Zwinger, T. (2021). Projected land ice contributions to twenty-first-century sea level rise. *Nature (London)*, 593(7857), 74-82. doi:10.1038/s41586-021-03302-y

Berends, C. C., Goelzer, H., & van de Wal, R. S. W. (2021). The Utrecht Finite Volume Ice-Sheet Model: UFEMISM (version 1.0). *Geoscientific Model Development*, 14(5), 2443-2470. doi:10.5194/gmd-14-2443-2021

Deman, F., Fonseca-Batista, D., Roukaerts, A., García#Ibáñez, M. I., Le Roy, E., Thilakarathne, E. P. D. N., Elskens, M., Dehairs, F., & Fripiat, F. (2021). Nitrate Supply Routes and Impact of Internal Cycling in the North Atlantic Ocean Inferred From Nitrate Isotopic Composition. *Global biogeochemical cycles*, 35(4). doi:10.1029/2020GB006887

Christ, A. J., Bierman, P. R., Schaefer, J. M., Dahl-Jensen, D., Steffensen, J. P., Corbett, L. B., Peteet, D. M., Thomas, E. K., Steig, E. J., Rittenour, T. M., Tison, J.-L., Blard, P.-H., Perdrial, N., Dethier, D. P., Lini, A., Hidy, A. J., Caffee, M. W., & Southon, J. (2021). A multimillion-year-old record of Greenland vegetation and glacial history preserved in sediment beneath 1.4 km of ice at Camp Century. *Proceedings of the National Academy of Sciences of the United States of America*, 118(13), e2021442118. doi:10.1073/pnas.2021442118

Lambert, E., Le Bars, D., Goelzer, H., & van de Wal, R. S. W. (2021). Correlations Between Sea-Level Components Are Driven by Regional Climate Change. *Earth's future*, 9(2), e2020EF001825. doi:10.1029/2020EF001825

Compagno, L., Zekollari, H., Huss, M., & Farinotti, D. (2021). Limited impact of climate forcing products on future glacier evolution in Scandinavia and Iceland. *Journal of Glaciology*, 67(264), 727-743. doi:10.1017/jog.2021.24

## 2020

Sigman, D. D., Fripiat, F., Studer, A. S., Kemeny, P. C., Martínez-García, A., Hain, M. M., Ai, X., Wang, X., Ren, H., & Haug, G. H. (2020). The Southern Ocean during the ice ages: A review of the Antarctic surface isolation hypothesis, with comparison to the North Pacific. *Quaternary science reviews*, 254, 106732. doi:10.1016/j.quascirev.2020.106732

Laurent, L., Buoncristiani, J. F., Pohl, B., Zekollari, H., Farinotti, D., Huss, M., Mugnier, J. L., & Pergaud, J. (2020). The impact of climate change and glacier mass loss on the hydrology in the Mont-Blanc massif. *Scientific Reports*, 10(1). doi:10.1038/s41598-020-67379-7

Ai, X., Studer, A. S., Sigman, D. M., Martínez-García, A., Fripiat, F., Thöle, L., Michel, E., Gottschalk, J., Arnold, L., Moretti, S., Schmitt, M., Oleynik, S., Jaccard, S. L., & Haug, G. H. (2020). Southern Ocean upwelling, Earth's obliquity, and glacial-interglacial atmospheric CO<sub>2</sub> change. *Science*, 370(6522), 1348-1352. doi:10.1126/science.abd2115

Hainbucher, D., Alvarez, M., Astray Uceda, B., Bachi, G., Cardin, V., Celentano, P., Chaikakis, S., Del Mar Chavez Montero, M., Civitarese, G., Fajar, N. N., Fripiat, F., Gerke, L., Gogou, A., Guallart, E. F., Gülk, B., El Rahaman Hassoun, A., Lange, N., Rochner, A., Santinelli, C., Steinhoff, T., Tanhua, T., Urbini, L., Velaoras, D., Wolf, F., & Welsch, A. (2020). Variability and Trends in Physical and Biogeochemical Parameters of the Mediterranean Sea during a Cruise with RV MARIA S. MERIAN in March 2018. *Earth System Science Data*, 12, <https://doi.org/10.5194/essd-12-2747-2020>.

Lannuzel, D., Tedesco, L., Van Leeuwe, M. M., Karley, C., Flores, H., Delille, B., Miller, L. L., Stefels, J., Assmy, P., Bowman, J. S., Brown, K. A., Castellani, G., Chierici, M. M., Crabeck, O., Ellen, D., Else, B., Fransson, A. A., Fripiat, F., Geilfus, N. X., Jacques, C., Elisabeth, J., Kaartokallio, H., Meiners, K., Moreau, S., Nomura, D., Peeken, I., Rintala, J. M., Steiner, N., Tison, J.-L., Vancoppenolle, M., Van Der Linden, F., Marcello, V., & Wongpan, P. (2020). The future of Arctic sea-ice biogeochemistry and ice-associated ecosystems. *Nature climate change*. doi:<https://doi.org/10.1038/s41558-020-00940-4>

Lhermitte, S., Sun, S., Shuman, C., Wouters, B., Pattyn, F., Wuite, J., Berthier, E., & Nagler, T. (2020). Damage accelerates ice shelf instability and mass loss in Amundsen Sea Embayment. *Proceedings of the National Academy of Sciences of the United States of America*, 117(40), 24735-24741. doi:[10.1073/pnas.1912890117](https://doi.org/10.1073/pnas.1912890117)

Glaude, Q., Amory, C., Berger, S., Derauw, D., Pattyn, F., Barbier, C., & Orban, A. (2020). Empirical Removal of Tides and Inverse Barometer Effect on DInSAR From Double DInSAR and a Regional Climate Model. *I E E Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 13, 4085-4094. doi:[10.1109/JSTARS.2020.3008497](https://doi.org/10.1109/JSTARS.2020.3008497)

Kausch, T., Lhermitte, S., Lenaerts, J. T. M., Wever, N., Inoue, M., Pattyn, F., Sun, S., Wauthy, S., Tison, J.-L., & van de Berg, W. J. (2020). Impact of coastal East Antarctic ice rises on surface mass balance: insights from observations and modeling. *The Cryosphere*, 14(10), 3367-3380. doi:[10.5194/tc-14-3367-2020](https://doi.org/10.5194/tc-14-3367-2020)

Rückamp, M., Goelzer, H., & Humbert, A. (2020). Sensitivity of Greenland ice sheet projections to spatial resolution in higher-order simulations: The Alfred Wegener Institute (AWI) contribution to ISMIP6 Greenland using the Ice-sheet and Sea-level System Model (ISSM). *The Cryosphere*, 14(10), 3309-3327. doi:[10.5194/tc-14-3309-2020](https://doi.org/10.5194/tc-14-3309-2020)

Seroussi, H., Nowicki, S., Payne, A. J., Goelzer, H., Lipscomb, W. H., Abe-Ouchi, A., Agosta, C., Albrecht, T., Asay-Davis, X., Barthel, A., Calov, R., Cullather, R., Dumas, C., Galton-Fenzi, B. K., Gladstone, R. R., Golledge, N. R., Gregory, J. M., Greve, R., Hattermann, T., Hoffman, M. J., Humbert, A., Huybrechts, P., Jourdain, N. C., Kleiner, T., Larour, E., Leguy, G. R., Lowry, D. P., Little, C. M., Morlighem, M., Pattyn, F., Pelle, T., Price, S. F., Quiquet, A., Reese, R., Schlegel, N.-J., Shepherd, A., Simon, E., Smith, R. R., Straneo, F., Sun, S., Trusel, L. D., Van Breedam, J., van de Wal, R. S. W., Winkelmann, R., Zhao, C., Zhang, T., & Zwinger, T. (2020). ISMIP6 Antarctica: a multi-model ensemble of the Antarctic ice sheet evolution over the 21st century. *The Cryosphere*, 14(9), 3033-3070. doi:[10.5194/tc-14-3033-2020](https://doi.org/10.5194/tc-14-3033-2020)

Sun, S., Pattyn, F., Simon, E. G., Albrecht, T., Cornford, S. L., Calov, R., Dumas, C., Gillet-Chaulet, F., Goelzer, H., Golledge, N. R., Greve, R., Hoffman, M. J., Humbert, A., Kazmierczak, E., Kleiner, T., Leguy, G. R., Lipscomb, W. H., Martin, D., Morlighem, M., Nowicki, S., Pollard, D., Price, S., Quiquet, A., Seroussi, H., Schlemm, T., Sutter, J., van

de Wal, R. S. W., Winkelmann, R., & Zhang, T. (2020). Antarctic ice sheet response to sudden and sustained ice-shelf collapse (ABUMIP). *Journal of Glaciology*, 1-14. doi:10.1017/jog.2020.67

Goelzer, H., Nowicki, S., Payne, A., Larour, E., Seroussi, H., Lipscomb, W. H., Gregory, J., Abe-Ouchi, A., Shepherd, A., Simon, E., Agosta, C., Alexander, P., Aschwanden, A., Barthel, A., Calov, R., Chambers, C., Choi, Y., Cuzzone, J., Dumas, C., Edwards, T. L., Felikson, D., Fettweis, X., Golledge, N. R., Greve, R., Humbert, A., Huybrechts, P., Le clec'h, S., Lee, V., Leguy, G., Little, C., Lowry, D. P., Morlighem, M., Nias, I., Quiquet, A., Rückamp, M., Schlegel, N.-J., Slater, D. A., Smith, R. R., Straneo, F., Tarasov, L., van de Wal, R. S. W., & Van den Broeke, M. (2020). The future sea-level contribution of the Greenland ice sheet: a multi-model ensemble study of ISMIP6. *The Cryosphere*, 14(9), 3071-3096. doi:10.5194/tc-14-3071-2020

Dunmire, D., Lenaerts, J. T. M., Banwell, A. F., Wever, N., Shragge, J. C. J., Lhermitte, S., Drews, R., Pattyn, F., Hansen, J. S. S., Willis, I. C., Miller, J., & Keenan, E. (2020). Observations of Buried Lake Drainage on the Antarctic Ice Sheet. *Geophysical research letters*, 47(15). doi:10.1029/2020GL087970

Bulthuis, K., Pattyn, F., & Arnst, M. (2020). A Multifidelity Quantile-Based Approach for Confidence Sets of Random Excursion Sets with Application to Ice-Sheet Dynamics. *SIAM/ASA Journal on Uncertainty Quantification*, 8(3), 860-890. doi:10.1137/19M1280466

Nowicki, S., Goelzer, H., Seroussi, H., Payne, A., Lipscomb, W. W., Abe-Ouchi, A., Agosta, C., Alexander, P., Asay-Davis, X., Barthel, A., Bracegirdle, T. T., Cullather, R., Felikson, D., Fettweis, X., Gregory, J., Hattermann, T., Jourdain, N. N., Kuipers Munneke, P., Larour, E., Little, C. C., Morlighem, M., Nias, I., Shepherd, A., Simon, E., Slater, D., Smith, R. R., Straneo, F., Trusel, L. D., Van Den Broeke, M., & van de Wal, R. S. W. (2020). Experimental protocol for sea level projections from ISMIP6 stand-alone ice sheet models. *The Cryosphere*, 14(7), 2331-2368. doi:10.5194/tc-14-2331-2020

Marzeion, B., Hock, R., Anderson, B., Bliss, A., Champollion, N., Fujita, K., Huss, M., Immerzeel, W. W. (W.), Kraaijenbrink, P., Malles, J. H., Maussion, F., Radi#, V., Rounce, D. R., Sakai, A., Shannon, S., van de Wal, R. S. W., & Zekollari, H. (2020). Partitioning the Uncertainty of Ensemble Projections of Global Glacier Mass Change. *Earth's future*, 8(7). doi:10.1029/2019EF001470

Jacques, C., Gkritzalis, T., Tison, J.-L., Hartley, T., Van der Veen, C., Röckmann, T., Middelburg, J., Cattrijse, A., Egger, M., Dehairs, F., & Sapart, C. (2020). Carbon and Hydrogen Isotope Signatures of Dissolved Methane in the Scheldt Estuary. *Estuaries and Coasts.*, <https://doi.org/10.1007/s12237-020-00768-3>.

Van Der Linden, F., Tison, J.-L., Champenois, W., Moreau, S., Carnat, G., Kotovitch, M., Fripiat, F., Deman, F., Roukaerts, A., Dehairs, F., Wauthy, S., Lourenço, A., Vivier, F., Haskell, T., & Delille, B. (2020). Sea Ice CO<sub>2</sub> Dynamics Across Seasons: Impact of Processes at the Interfaces. *Journal of geophysical research. Oceans*, 125(6). doi:10.1029/2019JC015807

Tison, J.-L., Maksym, T., Fraser, A. D., Corkill, M., Kimura, N., Nosaka, Y., Nomura, D., Vancoppenolle, M., Ackley, S., Stammerjohn, S., Wauthy, S., Van Der Linden, F., Carnat, G., Sapart, C., De Jong, J., Fripiat, F., & Delille, B. (2020). Physical and biological

properties of early winter Antarctic sea ice in the Ross Sea. *Annals of glaciology*, 1-19.  
doi:10.1017/aog.2020.43

Goelzer, H., Noël, B. B., Edwards, T., Fettweis, X., Gregory, J., Lipscomb, W. W., van de Wal, R. S. W., & Van den Broeke, M. (2020). Remapping of Greenland ice sheet surface mass balance anomalies for large ensemble sea-level change projections. *The Cryosphere*, 14(6), 1747-1762. doi:10.5194/tc-14-1747-2020

Robinson, A., Alvarez-Solas, J., Montoya, M., Goelzer, H., Greve, R., & Ritz, C. (2020). Description and validation of the ice-sheet model Yelmo (version 1.0). *Geoscientific Model Development*, 13(6), 2805-2823. doi:10.5194/gmd-13-2805-2020

Wittek, B., Carnat, G., Delille, B., Tison, J.-L., & Gypens, N. (2020). Dimethylsulfoniopropionate (DMSP) and dimethylsulfoxide (DMSO) cell quotas variations arising from sea ice shifts of salinity and temperature in the Prymnesiophyceae Phaeocystis antarctica. *Environmental chemistry*. doi:<https://doi.org/10.1071/EN19302>

Nomura, D., Wongpan, P., Toyota, T., Tanikawa, T., Kawaguchi, Y., Ono, T., Ishino, T., Tozawa, M., Tamura, T. P., Yabe, I. S., Son, E. Y., Vivier, F., Lourenço, A., Lebrun, M., Nosaka, Y., Hirawake, T., Ooki, A., Aoki, S., Else, B., Fripiat, F., Inoue, J., & Vancoppenolle, M. (2020). Saroma-ko Lagoon observations for sea ice physico-chemistry and ecosystems 2019 (SLOPE2019). *Bulletin of glaciological research*, 38, 1-12.

Hubbard, B., Philippe, M., Pattyn, F., Drews, R., Young, T. J., Bruyninx, C., Bergeot, N., Fjosne, K., & Tison, J.-L. (2020). High-resolution distributed vertical strain and velocity from repeat borehole logging by optical televiewer: Derwael Ice Rise, Antarctica. *Journal of Glaciology*, 1-7. doi:10.1017/jog.2020.18

Drews, R., Schannwell, C., Ehlers, T. A., Gladstone, R., Pattyn, F., & Matsuoka, K. (2020). Atmospheric and oceanographic signatures in the ice#shelf channel morphology of Roi Baudouin Ice Shelf, East Antarctica, inferred from radar data. *Journal of Geophysical Research: Earth Surface*. doi:10.1029/2020JF005587

Wittek, B., Carnat, G., Tison, J.-L., & Gypens, N. (2020). Response of dimethylsulfoniopropionate (DMSP) and dimethylsulfoxide (DMSO) cell quotas to salinity and temperature shifts in the sea-ice diatom *Fragilariaopsis cylindrus*. *Polar biology*. doi:10.1007/s00300-020-02651-0

Pattyn, F., & Morlighem, M. (2020). The uncertain future of the Antarctic Ice Sheet. *Science*, 367(6484), 1331-1335. doi:10.1126/science.aaz5487

Goelzer, H., Coulon, V., Pattyn, F., de Boer, B., & van de Wal, R. S. W. (2020). Brief communication: On calculating the sea-level contribution in marine ice-sheet models. *The Cryosphere*, 14(3), 833-840. doi:10.5194/tc-14-833-2020

Barthel, A., Agosta, C., Little, C. C., Hattermann, T., Jourdain, N. N., Goelzer, H., Nowicki, S., Seroussi, H., Straneo, F., & Bracegirdle, T. T. (2020). CMIP5 model selection for ISMIP6 ice sheet model forcing: Greenland and Antarctica. *The Cryosphere*, 14(3), 855-879. doi:10.5194/tc-14-855-2020

Slater, D. A., Felikson, D., Straneo, F., Goelzer, H., Little, C. M., Morlighem, M., Fettweis, X., & Nowicki, S. (2020). Twenty-first century ocean forcing of the Greenland ice sheet for modelling of sea level contribution. *The Cryosphere*, 14(3), 985-1008. doi:10.5194/tc-14-985-2020

Hanna, E., Pattyn, F., Navarro, F., Favier, V., Goelzer, H., van den Broeke, M. R., Vizcaino, M., Whitehouse, P. L., Ritz, C., Bulthuis, K., & Smith, B. (2020). Mass balance of the ice sheets and glaciers – Progress since AR5 and challenges. *Earth-science reviews*, 201, 102976. doi:10.1016/j.earscirev.2019.102976

Hanna, E., Pattyn, F., Navarro, F., Favier, V., Goelzer, H., van den Broeke, M. R., Vizcaino, M., Whitehouse, P. L., Ritz, C., Bulthuis, K., & Smith, B. (2020). Mass balance of the ice sheets and glaciers – Progress since AR5 and challenges. *Earth-science reviews*, 201, 102976. doi:10.1016/j.earscirev.2019.102976

Levermann, A., Winkelmann, R., Albrecht, T., Goelzer, H., Golledge, N. R., Greve, R., Huybrechts, P., Jordan, J., Leguy, G., Martin, D., Morlighem, M., Pattyn, F., Pollard, D., Quiquet, A., Rodehacke, C., Seroussi, H., Sutter, J., Zhang, T., Van Breedam, J., Calov, R., DeConto, R., Dumas, C., Garbe, J., Gudmundsson, G. H., Hoffman, M. J., Humbert, A., Kleiner, T., Lipscomb, W. H., Meinshausen, M., Ng, E., Nowicki, S. M. J., Perego, M., Price, S. F., Saito, F., Schlegel, N.-J., Sun, S., & van de Wal, R. S. W. (2020). Projecting Antarctica's contribution to future sea level rise from basal ice shelf melt using linear response functions of 16 ice sheet models (LARMIP-2). *Earth System Dynamics*, 11(1), 35-76. doi:10.5194/esd-11-35-2020

Levermann, A., Winkelmann, R., Albrecht, T., Goelzer, H., Golledge, N. R., Greve, R., Huybrechts, P., Jordan, J., Leguy, G., Martin, D. D., Morlighem, M., Pattyn, F., Pollard, D., Quiquet, A., Rodehacke, C., Seroussi, H., Sutter, J., Zhang, T., Van Breedam, J., Calov, R., Deconto, R., Dumas, C., Garbe, J., Hilmar Gudmundsson, G., Hoffman, M. M., Humbert, A., Kleiner, T., Lipscomb, W. W., Meinshausen, M., Ng, E., Nowicki, S., Perego, M., Price, S. S., Saito, F., Schlegel, N., Sun, S., & van de Wal, R. S. W. (2020). Projecting Antarctica's contribution to future sea level rise from basal ice shelf melt using linear response functions of 16 ice sheet models (LARMIP-2). *Earth System Dynamics*, 11(1), 35-76. doi:10.5194/esd-11-35-2020

Ackley, S. S., Stammerjohn, S. S., Maksym, T., Smith, M., Cassano, J. J. J., Guest, P., Tison, J.-L., Delille, B., Loose, B., Sedwick, P., Depace, L., Roach, L., & Parno, J. (2020). Sea-ice production and air/ice/ocean/biogeochemistry interactions in the Ross Sea during the PIPERS 2017 autumn field campaign. *Annals of glaciology*. doi:10.1017/aog.2020.31

Zekollari, H., Huss, M., & Farinotti, D. (2020). On the Imbalance and Response Time of Glaciers in the European Alps. *Geophysical research letters*, 47(2). doi:10.1029/2019GL085578

## 2019

Brunner, M. I., Farinotti, D., Zekollari, H., Huss, M., & Zappa, M. (2019). Future shifts in extreme flow regimes in Alpine regions. *Hydrology and earth system sciences*, 23(11), 4471-4489. doi:10.5194/hess-23-4471-2019

Slater, D., Straneo, F., Felikson, D., Little, C. C., Goelzer, H., Fettweis, X., & Holte, J. (2019). Estimating Greenland tidewater glacier retreat driven by submarine melting. *The Cryosphere*, 13(9), 2489-2509. doi:10.5194/tc-13-2489-2019

Sun, S., Hattermann, T., Pattyn, F., Nicholls, K., Drews, R., & Berger, S. (2019). Topographic shelf waves control seasonal melting near Antarctic ice shelf grounding lines. *Geophysical research letters*.

Sun, S., Hattermann, T., Pattyn, F., Nicholls, K., Drews, R., & Berger, S. (2019). Topographic Shelf Waves Control Seasonal Melting Near Antarctic Ice Shelf Grounding Lines. *Geophysical research letters*, 46(16), 9824-9832. doi:10.1029/2019GL083881

Closset, I., Cardinal, D., Trull, T. W., & Fripiat, F. (2019). New Insights Into Processes Controlling the d30Si of Sinking Diatoms: A Seasonally Resolved Box Model Approach. *Global biogeochemical cycles*, 33(8), 957-970. doi:10.1029/2018GB006115

Seroussi, H., Nowicki, S., Simon, E., Abe-Ouchi, A., Albrecht, T., Brondex, J., Cornford, S. L., Dumas, C., Gillet-Chaulet, F., Goelzer, H., Golledge, N. R., Gregory, J., Greve, R., Hoffman, M. M., Humbert, A., Huybrechts, P., Kleiner, T., Larour, E., Leguy, G., Lipscomb, W., Lowry, D., Mengel, M., Morlighem, M., Pattyn, F., Payne, A., Pollard, D., Price, S., Quiquet, A., Reerink, T. T., Reese, R., Rodehacke, C., Schlegel, N., Shepherd, A., Sun, S., Sutter, J., Van Breedam, J., van de Wal, R. S. W., Winkelmann, R., & Zhang, T. (2019). InitMIP-Antarctica: An ice sheet model initialization experiment of ISMIP6. *The Cryosphere*, 13(5), 1441-1471. doi:10.5194/tc-13-1441-2019

Bulthuis, K., Arnst, M., Sun, S., & Pattyn, F. (2019). Uncertainty quantification of the multi-centennial response of the Antarctic ice sheet to climate change. *The Cryosphere*, 13(4), 1349-1380. doi:10.5194/tc-13-1349-2019

Crabeck, O., Galley, R. J., Mercury, L., Delille, B., Tison, J.-L., & Rysgaard, S. (2019). Evidence of Freezing Pressure in Sea Ice Discrete Brine Inclusions and Its Impact on Aqueous-Gaseous Equilibrium. *Journal of geophysical research. Oceans*, 124(3), 1660-1678. doi:10.1029/2018JC014597

Zekollari, H., Goderis, S., Debaille, V., Van Ginneken, M., Gattacceca, J., Timothy Jull, A., Lenaerts, J. T. M., Yamaguchi, A., Huybrechts, P., & Claeys, P. (2019). Unravelling the high-altitude Nansen blue ice field meteorite trap (East Antarctica) and implications for regional palaeo-conditions. *Geochimica et cosmochimica acta*, 248, 289-310. doi:10.1016/j.gca.2018.12.035

Fonseca-Batista, D., Li, X., Riou, V., Michotey, V., Deman, F., Fripiat, F., Guasco, S., Brion, N., Lemaitre, N., Tonnard, M., Gallinari, M., Planquette, H., Planchon, F., Sarthou, G., Elskens, M., Laroche, J., Chou, L., & Dehairs, F. (2019). Evidence of high N<sub>2</sub> fixation rates in the temperate northeast Atlantic. *Biogeosciences*, 16(5), 999-1017. doi:10.5194/bg-16-999-2019

Morlighem, M., Rignot, E., Binder, T., Blankenship, D., Drews, R., Eagles, G., Eisen, O., Ferraccioli, F., Forsberg, R., Fretwell, P., Goel, V., Greenbaum, J. S., Gudmundsson, H., Guo, J., Helm, V., Hofstede, C., Howat, I., Humbert, A., Jokat, W., Karlsson, N. N., Lee, W. S., Matsuoka, K., Millan, R., Mouginot, J., Paden, J., Pattyn, F., Roberts, J. J., Rosier, S., Ruppel, A., Seroussi, H., Smith, E., Steinhage, D., Sun, B., Broeke, M. R. D. M., Ommen, T. D. T., Wessem, M. V., & Young, D. D. (2019). Deep glacial troughs

and stabilizing ridges unveiled beneath the margins of the Antarctic ice sheet. *Nature Geoscience*. doi:10.1038/s41561-019-0510-8

Roukaerts, A., Nomura, D., Deman, F., Hattori, H., Dehairs, F., & Fripiat, F. (2019). The effect of melting treatments on the assessment of biomass and nutrients in sea ice (Saroma-ko lagoon, Hokkaido, Japan). *Polar biology*, 42(2), 347-356. doi:10.1007/s00300-018-2426-y

Fripiat, F., Martínez-García, A., Fawcett, S. E., Kemeny, P., Studer, A. S., Smart, S., Rubach, F., Oleynik, S., Sigman, D. M., & Haug, G. H. (2019). The isotope effect of nitrate assimilation in the Antarctic Zone: Improved estimates and paleoceanographic implications. *Geochimica et cosmochimica acta*, 247, 261-279. doi:10.1016/j.gca.2018.12.003

## 2018

Kemeny, P. C., Kast, E. R., Hain, M. P., Fawcett, S. E., Fripiat, F., Studer, A. S., Martínez-García, A., Haug, G. H., & Sigman, D. M. (2018). A Seasonal Model of Nitrogen Isotopes in the Ice Age Antarctic Zone: Support for Weakening of the Southern Ocean Upper Overturning Cell. *Paleoceanography and Paleoclimatology*, 33(12), 1453-1471. doi:10.1029/2018PA003478

Meiners, K. M., Vancoppenolle, M., Carnat, G., Castellani, G., Delille, B., Delille, D., Dieckmann, G., Flores, H., Fripiat, F., Grotti, M., Lange, B. A., Lannuzel, D., Martin, A., McMinn, A., Nomura, D., Peekin, I., Rivaro, P., Ryan, K. K., Stefels, J., Swadling, K. K., Thomas, D. D., Tison, J.-L., Van der Merwe, P., Van Leeuwe, M. M., Weldrick, C., & Yang, E. E. (2018). Chlorophyll-a in Antarctic Landfast Sea Ice: A First Synthesis of Historical Ice Core Data. *Journal of geophysical research. Oceans*, 123(11), 8444-8459. doi:10.1029/2018JC014245

Pattyn, F., Ritz, C., Hanna, E., Asay-Davis, X., DeConto, R., Durand, G., Favier, L., Fettweis, X., Goelzer, H., Golledge, N., Kuipers Munneke, P., Lenaerts, J. T. M., Nowicki, S., Payne, A., Robinson, A., Seroussi, H., Trusel, L. D., & Van den Broeke, M. (2018). The Greenland and Antarctic ice sheets under 1.5 °C global warming. *Nature climate change*. doi:10.1038/s41558-018-0305-8

Moon, T., Ahlstrøm, A. A., Goelzer, H., Lipscomb, W., & Nowicki, S. (2018). Rising Oceans Guaranteed: Arctic Land Ice Loss and Sea Level Rise. *Current climate change reports*, 4(3), 211-222. doi:10.1007/s40641-018-0107-0

Fripiat, F., Declercq, M., Sapart, C., Anderson, L. L., Bruechert, V., Deman, F., Fonseca-Batista, D., Humborg, C., Roukaerts, A., Semiletov, I., & Dehairs, F. (2018). Influence of the bordering shelves on nutrient distribution in the Arctic halocline inferred from water column nitrate isotopes. *Limnology and Oceanography*, 63(5), 2154-2170. doi:10.1002/lio.10930

Mourad, F., Wittrant, E., & Pattyn, F. (2018). The Initialization of Basal Sliding Coefficients for Antarctica A Lyapunov Based Approach. *Proceedings of the American Control Conference*, 2018-June, 8431855, 3014-3019. doi:10.23919/ACC.2018.8431855

Van Liefferinge, B., Pattyn, F., Cavitte, M. M., Karlsson, N. N., Young, D. D., Sutter, J., & Eisen, O. (2018). Promising oldest ice sites in east antarctica based on thermodynamical modelling. *The Cryosphere*, 12(8), 2773-2787. doi:10.5194/tc-12-2773-2018

Pattyn, F. (2018). The paradigm shift in Antarctic ice sheet modelling. *Nature communications*, 9(1), 2728. doi:10.1038/s41467-018-05003-z

Karlsson, N. N., Binder, T., Eagles, G., Helm, V., Pattyn, F., Van Liefferinge, B., & Eisen, O. (2018). Glaciological characteristics in the Dome Fuji region and new assessment for "Oldest Ice". *The Cryosphere*, 12(7), 2413-2424. doi:10.5194/tc-12-2413-2018

Schlitzer, R., Anderson, R. F., Masferrer Dudas, E., Lohan, M., Geibert, W., Tagliabue, A., Bowie, A., Jeandel, C., Maldonado, M. T., Landing, W. M., Cockwell, D., Dehairs, F., Fripiat, F., et al. (2018). The GEOTRACES Intermediate Data Product 2017. *Chemical geology*, 493, 210-223.

Goelzer, H., Nowicki, S., Edwards, T., Beckley, M., Abe-Ouchi, A., Aschwanden, A., Calov, R., Gagliardini, O., Gillet-Chaulet, F., Golledge, N., Gregory, J., Greve, R., Humbert, A., Huybrechts, P., Kennedy, J., Larour, E., Lipscomb, W., Leclerc, S., Lee, V., Morlighem, M., Pattyn, F., Payne, A., Rodehacke, C., Rückamp, M., Saito, F., Schlegel, N., Seroussi, H., Shepherd, A., Sun, S., van de Wal, R. S. W., & Ziemen, F. (2018). Design and results of the ice sheet model initialisation initMIP-Greenland: An ISMIP6 intercomparison. *The Cryosphere*, 12(4), 1433-1460. doi:10.5194/tc-12-1433-2018

Luhtanen, A. M., Eronen-Rasimus, E., Oksanen, H. H., Tison, J.-L., Delille, B., Dieckmann, G., Rintala, J. M., & Bamford, D. D. (2018). The first known virus isolates from Antarctic sea ice have complex infection patterns. *FEMS microbiology, ecology*, 94(4), fiy028. doi:10.1093/femsec/fiy028

Kirchner, N., van Dongena, E., Gowan, E. E., Pattyn, F., Noormetsg, R., Jakobsson, M., & Ingólfsson, Ó. (2018). GRANTSISM: An Excel™ ice sheet model for use in introductory Earth science courses. *Journal of geoscience education*, 66(2), 109-120. doi:10.1080/10899995.2018.1412177

Carnat, G., Said-Ahmad, W., Fripiat, F., Wittek, B., Tison, J.-L., Uhlig, C., & Amrani, A. (2018). Variability in sulfur isotope composition suggests unique dimethylsulfoniopropionate cycling and microalgae metabolism in Antarctic sea ice. *Communications biology*, 1, 212. doi:10.1038/s42003-018-0228-y

## 2017

Tison, J.-L., Blomster, L., Hendrickx, S., Uhlig, C., Luhtanen, A. M., De Jong, J., Janssens, J., Carnat, G., Zhou, J., Delille, B., Schwegmann, S., Dieckmann, G., Rintala, J. M., Meyer, H., Moreau, S., Vancoppenolle, M., Nomura, D., & Engberg, S. (2017). Biogeochemical Impact of Snow Cover and Cyclonic Intrusions on the Winter Weddell Sea Ice Pack. *Journal of geophysical research. Oceans*, 122(12), 9548-9571. doi:10.1002/2017JC013288

Goelzer, H., Robinson, A., Seroussi, H., & van de Wal, R. S. W. (2017). Recent Progress in Greenland Ice Sheet Modelling. *Current climate change reports*, 3(4), 291-302. doi:10.1007/s40641-017-0073-y

Berger, S., Drews, R., Helm, V., Sun, S., & Pattyn, F. (2017). Detecting high spatial variability of ice shelf basal mass balance, Roi Baudouin Ice Shelf, Antarctica. *The Cryosphere*, 11(6), 2675-2690. doi:10.5194/tc-11-2675-2017

Otto-Bliesner, B. B., Dutton, A., Fischer, H., Goelzer, H., Govin, A., Haywood, A., Joos, F., Legrande, A. A., Lipscomb, W., Lohmann, G., Mahowald, N., Braconnot, P., Nehrbass-Ahles, C., Pausata, F. F., Peterschmitt, J. Y., Phipps, S. S., Renssen, H., Zhang, Q., Harrison, S. S., Lunt, D. D., Abe-Ouchi, A., Albani, S., Bartlein, P. P., Capron, E., & Carlson, A. A. (2017). The PMIP4 contribution to CMIP6 - Part 2: Two interglacials, scientific objective and experimental design for Holocene and Last Interglacial simulations. *Geoscientific Model Development*, 10(11), 3979-4003. doi:10.5194/gmd-10-3979-2017

Eronen-Rasimus, E., Luhtanen, A. M., Rintala, J. M., Delille, B., Dieckmann, G., Karkman, A., & Tison, J.-L. (2017). An active bacterial community linked to high chl-a concentrations in Antarctic winter-pack ice and evidence for the development of an anaerobic sea-ice bacterial community. *The ISME Journal*, 11(10), 2345-2355. doi:10.1038/ismej.2017.96

Laruelle, G. G., Landschutze, P., Gruber, N., Tison, J.-L., Delille, B., & Regnier, P. (2017). Global high-resolution monthly pCO<sub>2</sub> climatology for the coastal ocean derived from neural network interpolation. *Biogeosciences*, 14(19), 4545-4561. doi:10.5194/bg-14-4545-2017

Pattyn, F., Favier, L., Sun, S., & Durand, G. (2017). Progress in Numerical Modeling of Antarctic Ice-Sheet Dynamics. *Current climate change reports*, 3(3), 174-184. doi:10.1007/s40641-017-0069-7

Pattyn, F. (2017). Sea-level response to melting of Antarctic ice shelves on multi-centennial timescales with the fast Elementary Thermomechanical Ice Sheet model (f.ETISh v1.0). *The Cryosphere*, 11(4), 1851-1878. doi:10.5194/tc-11-1851-2017

Benetti, M., Sveinbjörnsdóttir, A., Ólafsdóttir, R., Leng, M. J., Arrowsmith, C. C., Debondt, K., Fripiat, F., & Aloisi, G. (2017). Inter-comparison of salt effect correction for d<sup>18</sup>O and d<sup>2</sup>H measurements in seawater by CRDS and IRMS using the gas-H<sub>2</sub>O equilibration method. *Marine chemistry*, 194, 114-123. doi:10.1016/j.marchem.2017.05.010

Oziel, L., Neukermans, G., Ardyna, M., Lancelot, C., Tison, J.-L., Wassmann, P., Sirven, J., Ruiz-Pino, D., & Gascard, J. C. (2017). Role for Atlantic inflows and sea ice loss on shifting phytoplankton blooms in the Barents Sea. *Journal of geophysical research. Oceans*, 122(6), 5121-5139. doi:10.1002/2016JC012582

Turner, K. K., Smith, I. I., Tison, J.-L., Verbeke, V., McGuinness, M., Ingham, M., Vennell, R., & Trodahl, J. (2017). Sea ice growth rates from tide-driven visible banding. *Journal of geophysical research. Oceans*, 122(6), 4675-4684. doi:10.1002/2016JC012524

Drews, R., Pattyn, F., Hewitt, I., Ng, F., Berger, S., Matsuoka, K., Helm, V., Nicolas, B. N., Favier, L., & Neckel, N. (2017). Hydrological coupling between subglacial water conduits, eskers, and ice-shelf channels across the grounding line of an Antarctic ice shelf. *Nature communications*, 8, doi:10.1038/ncomms15228.

Drews, R., Neckel, N., Pattyn, F., Hewitt, I. J., Ng, F., Berger, S., Matsuoka, K., Helm, V., Nicolas, B. N., & Favier, L. (2017). Actively evolving subglacial conduits and eskers initiate

ice shelf channels at an Antarctic grounding line. *Nature communications*, 8, 15228. doi:10.1038/ncomms15228

Sapart, C., Sergienko, V., Salyuk, A., Tumskoy, V., Tison, J.-L., Röckmann, T., Shakhova, N., Semiletov, I., Jansen, J., Szidat, S., Kosmach, D., Dudarev, O., Van der Veen, C., & Egger, M. (2017). The origin of methane in the East Siberian Arctic Shelf unraveled with triple isotope analysis. *Biogeosciences*, 14(9), 2283-2292. doi:10.5194/bg-14-2283-2017

Kawamura, K., & Pattyn, F. (2017). State dependence of climatic instability over the past 720,000 years from Antarctic ice cores and climate modeling. *Science advances*, 3(2), e1600446. doi:10.1126/sciadv.1600446

Kawamura, K., Abe-Ouchi, A., Aoki, S., Fujii, Y., Fujita, S., Greve, R., Parrenin, F., Pattyn, F., et al. (2017). State dependence of climatic instability over the past 720,000 years from Antarctic ice cores and climate modelling. *Science advances*, 3(2).

Pattyn, F. (2017). Sea-level response to melting of Antarctic ice shelves on multi-centennial scales with the fast Elementary Thermomechanical Ice Sheet (f.ETISH v1.0) model. *The Cryosphere*, 11(4), 1851-1878. doi:10.5194/tc-11-1851-2017

Pattyn, F., Favier, L., & Sun, S. (2017). Progress in Numerical Modeling of Antarctic Ice-sheet Dynamics. *Current climate change reports*, 3(3), 174-184. doi:10.1007/s40641-017-0069

Fripiat, F., Delille, B., Dieckmann, G., Dunbar, R. R., Fransson, A. A., Kattner, G., Kennedy, H., Lannuzel, D., Munro, D. D., Nomura, D., Rintala, J. M., Meiners, K. M., Schoemann, V., Stefels, J., Steiner, N., Tison, J.-L., Vancoppenolle, M., Papadimitriou, S., Thomas, D. D., Ackley, S. S., Arrigo, K. K., Carnat, G., & Cozzi, S. (2017). Macro-nutrient concentrations in Antarctic pack ice: Overall patterns and overlooked processes. *Elementa (Washington, D.C.)*, 5, 13. doi:10.1525/elementa.217

Fonseca-Batista, D., Dehairs, F., Riou, V., Fripiat, F., Elskens, M., Deman, F., Brion, N., Quérouté, F., Bode, M., & Auel, H. (2017). Nitrogen fixation in the eastern Atlantic reaches similar levels in the Southern and Northern Hemisphere. *Journal of Geophysical Research: Oceans*, 122(1), 587-601. doi:10.1002/2016JC012335

## 2016

Lenaerts, J. T. M., Lhermitte, S., Drews, R., Ligtenberg, S., Berger, S., Helm, V., Smeets, C., Van den Broeke, M., Van De Berg, W. J., Van Meijgaard, E., Eijkelboom, M., Eisen, O., & Pattyn, F. (2016). Meltwater produced by wind-albedo interaction stored in an East Antarctic ice shelf. *Nature climate change*, doi:10.1038/nclimate3180. doi:10.1038/nclimate3180

Nowicki, S., Payne, A., Larour, E., Seroussi, H., Goelzer, H., Lipscomb, W., Gregory, J., Abe-Ouchi, A., & Shepherd, A. (2016). Ice Sheet Model Intercomparison Project (ISMIP6) contribution to CMIP6. *Geoscientific Model Development*, 9(12), 4521-4545. doi:10.5194/gmd-9-4521-2016

Goelzer, H., Huybrechts, P., Loutre, M.-F., & Fichefet, T. (2016). Last Interglacial climate and sea-level evolution from a coupled ice sheet–climate model. *Climate of the past*, 12(12), 2195-2213. doi:10.5194/cp-12-2195-2016

Favier, L., Pattyn, F., Berger, S., & Drews, R. (2016). Dynamic influence of pinning points on marine ice-sheet stability: a numerical study in Dronning Maud Land, East Antarctica. *The Cryosphere*, 10(6), 2623-2635. doi:10.5194/tc-10-2623-2016

Jutras, M., Vancoppenolle, M., Lourenço, A., Vivier, F., Carnat, G., Madec, G., Rousset, C., & Tison, J.-L. (2016). Thermodynamics of slush and snow–ice formation in the Antarctic sea-ice zone. *Deep-sea research. Part 2. Topical studies in oceanography*, 131, 75-83. doi:10.1016/j.dsr2.2016.03.008

Roukaerts, A., Cavagna, A.-J., Fripiat, F., Lannuzel, D., Meiners, K. M., & Dehairs, F. (2016). Sea-ice algal primary production and nitrogen uptake rates off East Antarctica. *Deep-sea research. Part 2. Topical studies in oceanography*, 131, 140-149. doi:10.1016/j.dsr2.2015.08.007

Goelzer, H., Huybrechts, P., Loutre, M.-F., & Fichefet, T. (2016). Impact of ice sheet meltwater fluxes on the climate evolution at the onset of the Last Interglacial. *Climate of the past*, 12(8), 1721-1737. doi:10.5194/cp-12-1721-2016

Asay-Davis, X., Holland, P. P., Martin, D. D., Mathiot, P., Pattyn, F., Seroussi, H., Cornford, S. L., Durand, G., Galton-Fenzi, B. B., Gladstone, R. R., Hilmar Gudmundsson, G., Hattermann, T., Holland, D. D., & Holland, D. (2016). Experimental design for three interrelated marine ice sheet and ocean model intercomparison projects: MISMIP v. 3 (MISMIP +), ISOMIP v. 2 (ISOMIP +) and MISOMIP v. 1 (MISOMIP1). *Geoscientific Model Development*, 9(7), 2471-2497. doi:10.5194/gmd-9-2471-2016

Hubbard, B., Philippe, M., Tison, J.-L., et al. (2016). Massive subsurface ice formed by refreezing of ice-shelf melt ponds. *Nature communications*, 7, 11897. doi:10.1038/ncomms11897

Callens, D., Drews, R., Witrant, E., Philippe, M., & Pattyn, F. (2016). Temporally stable surface mass balance asymmetry across an ice rise derived from radar internal reflection horizons through inverse modeling. *Journal of Glaciology*. doi:10.1017/jog.2016.41

Drews, R., Brown, J., Matsuoka, K., Witrant, E., Philippe, M., Hubbard, B., & Pattyn, F. (2016). Constraining variable density of ice shelves using wide-angle radar measurements. *The Cryosphere*, 10, 811–823. doi:10.5194/tc-10-811-2016

Jutras, M., Vancoppenolle, M., Lourenço, A., Viviers, F., Carnat, G., Madec, G., Rousset, C., & Tison, J.-L. (2016). Thermodynamics of slush and snow–ice formation in the Antarctic sea-ice zone. *Deep-sea research. Part 2. Topical studies in oceanography*. doi:10.1016/j.dsr2.2016.03.008

Goossens, T., Sapart, C., Dahl-Jensen, D., Popp, T., El Amri, S., & Tison, J.-L. (2016). A comprehensive interpretation of the NEEM basal ice build-up using a multi parametric approach. *The Cryosphere*, 10, 553-567. doi:10.5194/tc-10-553-2016

Zhou, J., Kotovitch, M., Kaartokallio, H., Moreau, S., Tison, J.-L., Kattner, G., Dieckmann, G., Thomas, D. D., & Delille, B. (2016). The impact of dissolved organic carbon and bacterial respiration on pCO<sub>2</sub> in experimental sea ice. *Progress in oceanography*, 141, 153-167. doi:10.1016/j.pocean.2015.12.005

Berger, S., Favier, L., Drews, R., Derwael, J.-J., & Pattyn, F. (2016). The control of an uncharted pinning point on the flow of an Antarctic ice shelf. *Journal of Glaciology*. doi:10.1017/jog.2016.7

Philippe, M., Tison, J.-L., Fjosne, K., Hubbard, B., Kjær, H. A., Lenaerts, J. T. M., Sheldon, G., De Bondt, K., Claeys, P., & Pattyn, F. (2016). Ice core evidence for a 20th century increase in surface mass balance in coastal Dronning Maud Land, East Antarctica. *The Cryosphere*, 10, 2501-2516. doi:10.5194/tc-10-2501-2016

Middleton, C., Thomas, C., De Wit, A., & Tison, J.-L. (2016). Visualizing brine channel development and convective processes during artificial sea-ice growth using Schlieren optical methods. *Journal of Glaciology*, 62, 1-17. doi:10.1017/jog.2015.1

Carnat, G., Brabant, F., Dumont, I., Vancoppenolle, M., Ackley, S. S., Fritsen, C., Delille, B., & Tison, J.-L. (2016). Influence of short-term synoptic events and snow depth on DMS, DMSP, and DMSO dynamics in Antarctic spring sea ice. *Elementa (Washington, D.C.)*, 4, 000135. doi:10.12952/journal.elementa.000135

Janssens, J., Meiners, K. M., Tison, J.-L., Dieckmann, G., Delille, B., & Lannuzel, D. (2016). Incorporation of iron and organic matter into young Antarctic sea ice during its initial growth stages. *Elementa (Washington, D.C.)*, 2016, 000123. doi:10.12952/journal.elementa.000123

Moreau, S., Vancoppenolle, M., Bopp, L., Aumont, O., Madec, G., Delille, B., Tison, J.-L., Barriat, P. Y., & Goosse, H. (2016). Assessment of the sea-ice carbon pump: Insights from a three-dimensional ocean-sea-ice biogeochemical model (NEMO-LIM-PISCES). *Elementa (Washington, D.C.)*, 2016, e000122. doi:10.12952/journal.elementa.000122

Kotovitch, M., Delille, B., Moreau, S., Zhou, J., Vancoppenolle, M., Dieckmann, G., Evers, K.-U., Van Der Linden, F., Thomas, D. D., & Tison, J.-L. (2016). Air-ice carbon pathways inferred from a sea ice tank experiment. *Elementa (Washington, D.C.)*, 2016, 000112. doi:10.12952/journal.elementa.000112

## 2015

Moreau, S., Kaartokallio, H., Vancoppenolle, M., Zhou, J., Kotovitch, M., Dieckmann, G., S., Thomas, D. R., Tison, J.-L., & Delille, B. (2015). Assessing the O<sub>2</sub> budget under sea ice: An experimental and modelling approach. *Elementa (Washington, D.C.)*, 3, 3:000080. doi:10.12952/journal.elementa.000080

De Jong, J., Stammerjohn, S., Ackley, S. S., Tison, J.-L., Mattielli, N., & Schoemann, V. (2015). Sources and fluxes of dissolved iron in the Bellingshausen Sea (West Antarctica): The importance of sea ice, icebergs and the continental margin. *Marine chemistry*, 177, 518-535.

Fripiat, F., Elskens, M., Trull, T. W., Blain, S., Cavagna, A. J., Fernandez, C., Fonseca-Batista, D., Planchon, F., Raimbault, P., Roukaerts, A., & Dehairs, F. (2015). Significant

mixed layer nitrification in a natural iron-fertilized bloom of the Southern Ocean. *Global biogeochemical cycles*, 29(11), 1929-1943. doi:10.1002/2014GB005051

Cavagna, A. J., Fripiat, F., Elskens, M., Mangion, P., Chirurgien, L., Closset, I., Lasbleiz, M., Florez-Leiva, L., Cardinal, D., Leblanc, K., Fernandez, C., Lefèvre, D., Oriol, L., Blain, S., Quéguiner, B., & Dehairs, F. (2015). Production regime and associated N cycling in the vicinity of Kerguelen Island, Southern Ocean. *Biogeosciences*, 12(21), 6515-6528. doi:10.5194/bg-12-6515-2015

Tison, J.-L., Jouzel, J., Stenni, B., Johnsen, S. J. S., Masson-Delmotte, V., Landais, A., Lipenkov, V. Y., Loulergue, L., Barnola, J.-M., Petit, J.-R., Delmonte, B., De Angelis, M., Dreyfus, G., Dahl-Jensen, D., Durand, G., Bereiter, B., Schilt, A., Spahni, R., Pol, K., Lorain, R., Souchez, R., Samyn, D., Littot, G., Wolff, E., Fischer, H., Hansson, M., Bigler, M., Udisti, R., & Wegner, A. (2015). Retrieving the paleoclimatic signal from the deeper part of the EPICA Dome C ice core. *The Cryosphere*, 9(4), 1633-1648. doi:10.5194/tc-9-1633-2015

Favier, L., & Pattyn, F. (2015). Antarctic ice rise formation, evolution, and stability. *Geophysical research letters*, 42(11), 4456-4463. doi:10.1002/2015GL064195

Fürst, J. J., Goelzer, H., & Huybrechts, P. (2015). Ice-dynamic projections of the Greenland ice sheet in response to atmospheric and oceanic warming. *The Cryosphere*, 9(3), 1039-1062. doi:10.5194/tc-9-1039-2015

de Boer, B., Dolan, A. M., Bernales, J., Gasson, E., Goelzer, H., Golledge, N. R., Sutter, J., Huybrechts, P., Lohmann, G., Rogozhina, I., Abe-Ouchi, A., Saito, F., & Van de Wal, R. (2015). Simulating the Antarctic ice sheet in the late-Pliocene warm period: PLISMIP-ANT, an ice-sheet model intercomparison project. *The Cryosphere*, 9(3), 881-903. doi:10.5194/tc-9-881-2015

Mawji, E., Schlitzer, R., Masferrer Dudas, E., Abadie, C., Fripiat, F., Dehairs, F., et al. (2015). The GEOTRACES Intermediate Data Product 2014. *Marine chemistry*, 177, 1-8.

Fripiat, F., Sigman, D. M., Massé, G., & Tison, J.-L. (2015). High turnover rates indicated by changes in the fixed N forms and their stable isotopes in Antarctic landfast sea ice. *Journal of geophysical research. Oceans*, 120(4), 3079-3097. doi:10.1002/2014JC010583

Drews, R., Matsuoka, K., Carlos, M. C., Denis, C. D., Nicolas, B. N., & Pattyn, F. (2015). Evolution of Derwael Ice Rise in Dronning Maud Land, Antarctica, over the last millennia. *Journal of Geophysical Research F: Earth Surface*, 120(3), F003246, 564-579. doi:10.1002/2014JF003246

Dehairs, F., Fripiat, F., Cavagna, A. J., Trull, T. W., Fernandez, C., Davies, D., Roukaerts, A., Fonseca Batista, D., Planchon, F., & Elskens, M. (2015). Nitrogen cycling in the Southern Ocean Kerguelen Plateau area: evidence for significant surface nitrification from nitrate isotopic compositions. *Biogeosciences*, 12(5), 1459-1482. doi:10.5194/bg-12-1459-2015

Moreau, S., Vancoppenolle, M., Delille, B., Tison, J.-L., Zhou, J., Kotovitch, M., Thomas, D. R., Geilfus, N. X., & Goosse, H. (2015). Drivers of inorganic carbon dynamics in

first year sea ice: A model study. *Journal of Geophysical Research: Oceans*, 120. doi:10.1002/2014JC010388

Miller, L. L., Fripiat, F., Brent, E. G., Bowman, J. S., Brown, K. A., Collins, E. R., Ewert, M., Fransson, A. A., Goselin, M., Lannuzel, D., Meiners, K., Michel, C., Nishioka, J., Nomura, D., Papadimitriou, S., Russell, L. M., Sorensen, L. L., Thomas, D. R., Tison, J.-L., van Leeuwe, M., Vancoppenolle, M., Wolff, E. W., & Zhou, J. (2015). Methods for biogeochemical studies of sea ice: The state of the art, caveats, and recommendations. *Elementa*, 3, 000038. doi:10.12952/journal.elementa.000038

Matsuoka, K., Hindmarsh, R., Moholdt, G., Bentley, M., Pritchard, H., Brown, J., Conway, H., Drews, R., Durand, G., Goldberg, D., Hattermann, T., Kingslake, J., Lenaerts, J. T. M., MartÃn, C., Mulvaney, R., Nicholls, K., Pattyn, F., Ross, N., Scambos, T., & Whitehouse, P. L. (2015). Antarctic ice rises and ripples: their properties and significance for ice-sheet dynamics and evolution. *Earth-science reviews*. doi:10.1016/j.earscirev.2015.09.004

Callens, D., Thonnard, N., Lenaerts, J. T. M., Van Wessem, J. J., Van De Berg, W. J., Matsuoka, K., & Pattyn, F. (2015). Mass balance of the Sør Rondane glacial system, East Antarctica. *Annals of glaciology*, 56(70), 63-69. doi:10.3189/2015AoG70A010

Pattyn, F., Carter, S., & Thoma, M. (2015). Advances in modelling subglacial lakes and their interaction with the Antarctic ice sheet. *Philosophical transactions - Royal Society. Mathematical, Physical and engineering sciences*, 374(2059). doi:10.1098/rsta.2014.0296

Durand, G., & Pattyn, F. (2015). Reducing uncertainties in projections of Antarctic ice mass loss. *The Cryosphere*, 9, 2043-2055.

Holland, D. D., Galton-Fenzi, B. B., Parizek, B., Holland, D., Menemenlis, D., Larour, E., Pattyn, F., Durand, G., Kim, H., Jougin, I. R., Ridley, J., Kasuhara, K., Bentsen, M., Dinniman, M., Jourdain, P., Mathiot, P., Hallberg, R., Gladstone, R. R., Walker, R., Mernild, S., Goeller, S., Nowicki, S., Price, S., Hattermann, T., Lee, W., & Asay-Davis, X. (2015). Projecting Sea-Level Rise from West Antarctica. *Eos*.

Geilfus, N. X., Galley, R. J., Crabeck, O., Papakyriakou, T., Landy, J., Tison, J.-L., & Rysgaard, S. (2015). Inorganic carbon dynamics of melt pond-covered first year sea ice in the Canadian Arctic. *Biogeosciences*, 12(6), 2047-2061. doi:10.5194/bg-12-2047-2015

Koch, I., Fitzsimons, S., Samyn, D., & Tison, J.-L. (2015). Marine ice recycling at the southern McMurdo Ice Shelf, Antarctica. *Journal of Glaciology*, 61(228), 689-701. doi:10.3189/2015JoG14J095

Crabeck, O., Galley, R. J., Delille, B., Else, B., Geilfus, N. X., Lemes, M., Des Roches, M., Francus, P., Tison, J.-L., & Rysgaard, S. (2015). Imaging air volume fraction in sea ice using non-destructive X-ray tomography. *The Cryosphere Discussions*, 9, 5203-5251. doi:10.5194/tcd-9-5203-2015

Moreau, S., Kaartokallio, H., Vancoppenolle, M., Zhou, J., Kotovitch, M., Dieckmann, G., Thomas, D. D., Tison, J.-L., & Delille, B. (2015). Assessing the O<sub>2</sub> budget under sea ice: An experimental and modelling approachAssessing the O budget under sea ice. *Elementa (Washington, D.C.)*, 3, 000080. doi:10.12952/journal.elementa.000080

De Jong, J., Stammerjohn, S., Ackley, S. S., Tison, J.-L., Mattielli, N., & Schoemann, V. (2015). Sources and fluxes of dissolved iron in the Bellingshausen Sea (West Antarctica): The importance of sea ice, icebergs and the continental margin. *Marine chemistry.*, <http://dx.doi.org/10.1016/j.marchem.2015.08-004>. doi:10.1016/j.marchem.2015.08.004

Middleton, C., Thomas, C., Escala, D. M., Tison, J.-L., & De Wit, A. (2015). Imaging the evolution of brine transport in experimentally grown quasi-two dimensional sea ice. *Procedia engineering*, 15, 95-100. doi:10.1016/j.piutam.2015.04.014

Imae, N., Debaille, V., Akada, Y., Debouge, W., Goderis, S., Hublet, G., Mikouchi, T., Van Roosbroek, N., Yamaguchi, A., Zekollari, H., et al. (2015). Report of the JARE-54 and BELARE 2012-2013 joint expedition to collect meteorites on the Nansen Ice Field, Antarctica. *Nankyou Shiryo*, 59(1), 38-72.

## 2014

Lenaerts, J. T. M., Reijmer, C. C., Pattyn, F., Van Lipzig, N. P. M., Brown, J., Van den Broeke, M., Matsuoka, K., Drews, R., Callens, D., Philippe, M., Gorodetskaya, I. I., & Van Meijgaard, E. (2014). High variability of climate and surface mass balance induced by Antarctic ice rises. *Journal of Glaciology*, 60(224), 1126-1134. doi:10.3189/2014JoG14J040

Geilfus, N. X., Rysgaard, S., Tison, J.-L., Delille, B., Ackley, S. S., Galley, R. J., & Miller, L. L. (2014). Sea ice pCO<sub>2</sub> dynamics and air-ice CO<sub>2</sub> fluxes during the sea ice mass balance in the Antarctic (SIMBA) experiment-Bellingshausen sea, Antarctica. *The Cryosphere*, 8(6), 2395-2407. doi:10.5194/tc-8-2395-2014

Crabeck, O., Delille, B., Thomas, D. R., Geilfus, N. X., Rysgaard, S., & Tison, J.-L. (2014). CO<sub>2</sub> and CH<sub>4</sub> in sea ice from a subarctic fjord under influence of riverine input. *Biogeosciences*, 11, 6525-6538. doi:10.5194/bg-11-6525-2014

Zhou, J., Delille, B., Kaartokallio, H., Kattner, G., Kuosa, H., Tison, J.-L., Autio, R., Dieckmann, G., Evers, K.-U., Jorgensen, L., Kennedy, H., Kotovitch, M., Luhtanen, A., Stedmon, C., & Thomas, D. R. (2014). Physical and bacterial controls on inorganic nutrients and dissolved organic carbon during a sea ice growth and decay experiment. *Marine chemistry*, 166, 59-69. doi:10.1016/j.marchem.2014.09.013

Zhou, J., Delille, B., Brabant, F., & Tison, J.-L. (2014). Insights into oxygen transport and net community production in sea ice from oxygen, nitrogen and argon concentrations. *Biogeosciences*, 11, 5007-5020. doi:10.5194/bg-11-5007-2014

Crabeck, O., Delille, B., Rysgaard, S., Thomas, D. R., Geilfus, N. X., Else, B., & Tison, J.-L. (2014). First "in-situ" determination of gas transport coefficients (DO<sub>2</sub>, DAr, and DN<sub>2</sub>) from bulk gas concentrations measurements (O<sub>2</sub>, N<sub>2</sub>, Ar) in natural sea ice. *Journal of geophysical research. Oceans*. doi:10.1002/2014JC009849

Loutre, M.-F., Goossens, H., Huybrechts, P., Goelzer, H., & Capron, E. (2014). Factors controlling the last interglacial climate as simulated by LOVECLIM1.3. *Climate of the past*, 10(4), 1541-1565. doi:10.5194/cp-10-1541-2014

Robinson, A., & Goelzer, H. (2014). The importance of insolation changes for paleo ice sheet modeling. *The Cryosphere*, 8(4), 1419-1428. doi:10.5194/tc-8-1419-2014

Callens, D., Matsuoka, K., Steinhage, D., Smith, B., Witrant, E., & Pattyn, F. (2014). Transition of flow regime along a marine-terminating outlet glacier in East Antarctica. *The Cryosphere*, 8(3), 867-875. doi:10.5194/tc-8-867-2014

Docquier, D., Pollard, D., & Pattyn, F. (2014). Thwaites Glacier grounding-line retreat: influence of width and buttressing parameterizations. *Journal of Glaciology*, 60(220), 305-313. doi:10.3189/2014JoG13J117

Feldmann, J., Albrecht, T., Khroulev, C., Pattyn, F., & Levermann, A. (2014). Resolution-dependent performance of grounding line motion in a shallow model compared to a full-Stokes model according to the MISMIP3d intercomparison. *Journal of Glaciology*, 60(220), 353-360. doi:10.3189/2014JoG13J093

Edwards, T. L., Fettweis, X., Gagliardini, O., Gillet-Chaulet, F., Goelzer, H., Gregory, J., Hoffman, M., Huybrechts, P., Payne, A., Perego, M., Price, S. F., Quiquet, A., & Ritz, C. (2014). Probabilistic parameterisation of the surface mass balance–elevation feedback in regional climate model simulations of the Greenland ice sheet. *The Cryosphere*, 8, 181–194. doi:10.5194/tc-8-181-2014

Edwards, T. L., Fettweis, X., Gagliardini, O., Gillet-Chaulet, F., Goelzer, H., Gregory, J., Hoffman, M., Huybrechts, P., Payne, A., Perego, M., Price, S. F., Quiquet, A., & Ritz, C. (2014). Effect of uncertainty in surface mass balance–elevation feedback on projections of the future sea level contribution of the Greenland ice sheet. *The Cryosphere*, 8, 195–208. doi:10.5194/tc-8-195-2014

Thoma, M., Grosfeld, K., Barbi, D., Determann, J., Goeller, S., Mayer, C., & Pattyn, F. (2014). RIMBAY - A multi-approximation 3D ice-dynamics model for comprehensive applications: Model description and examples. *Geoscientific Model Development*, 7(1), 1-21. doi:10.5194/gmd-7-1-2014

Di Nitto, D., Neukermans, G., Koedam, N., Defever, H., Pattyn, F., Kairo, J. G., & Dahdouh-Guebas, F. (2014). Mangroves facing climate change: landward migration potential in response to projected scenarios of sea level rise. *Biogeosciences*, 11, 857-871. doi:10.5194/bg-11-857-2014

Sørensen, L. L., Jensen, B., Glud, R. N., McGinnis, D., Sejr, M. C., Sievers, J., Søgaard, D., Tison, J.-L., & Rysgaard, S. (2014). Parametrization of Atmosphere-Surface exchange of CO<sub>2</sub> over sea ice. *The Cryosphere*, 8(3), 853-866.

Dierckx, M., Peternell, M., Schroeder, C., & Tison, J.-L. (2014). Influence of pre-existing microstructure on mechanical properties of marine ice during compression experiments. *Journal of Glaciology*, 60(221). doi:10.3189/2014JoG13J154

Zhou, J., Tison, J.-L., Carnat, G., Geilfus, N. X., & Delille, B. (2014). Physical controls on the storage of methane in landfast sea ice. *The Cryosphere*, 8, 1019-1029. doi:10.5194/tc-8-1019-2014

Delille, B., Vancoppenolle, M., Geilfus, N. X., Tilbrook, B., Lannuzel, D., Schoemann, V., Becquevert, S., Carnat, G., Delille, B., Lancelot, C., Chou, L., Dieckmann, G., & Tison, J.-L. (2014). Southern Ocean CO<sub>2</sub> sink: The contribution of the sea ice. *Journal of geophysical research. Oceans*, 119(9), 6340-6355. doi:10.1002/2014JC009941

Fripiat, F., Tison, J.-L., André, L., Notz, D., & Delille, B. (2014). Biogenic silica recycling in sea ice inferred from Si-isotopes: Constraints from Arctic winter first-year sea ice. *Biogeochemistry*, 119(1-3), 25-33. doi:10.1007/s10533-013-9911-8

Carnat, G., Zhou, J., Papakyriakou, T., Delille, B., Goossens, T., Haskell, T., Schoemann, V., Fripiat, F., Rintala, J. M., & Tison, J.-L. (2014). Physical and biological controls on DMS,P dynamics in ice shelf-influenced fast ice during a winter-spring and a spring-summer transitions. *Journal of geophysical research. Oceans*, 119(5), 2882-2905. doi:10.1002/2013JC009381

Fripiat, F., Sigman, D. M., Fawcett, S., Rafter, P., Weigand, M., & Tison, J.-L. (2014). New insights into sea ice nitrogen biogeochemical dynamics from the nitrogen isotopes. *Global biogeochemical cycles.*, 10.1002/2013GB004729. doi:10.1002/2013GB004729

Moreau, S., Vancoppenolle, M., Zhou, J., Tison, J.-L., Delille, B., & Goosse, H. (2014). Modelling argon dynamics in first-year sea ice. *Ocean modelling*, 73, 1-18. doi:10.1016/j.ocemod.2013.10.004

## 2013

Hubbard, B., Tison, J.-L., Philippe, M., Heene, B., Pattyn, F., Malone, T., & Freitag, J. (2013). Ice shelf density reconstructed from optical televiewer borehole logging. *Geophysical research letters*, 40(22), 5882-5887. doi:10.1002/2013GL058023

Fischer, H., Schwander, J., Severinghaus, J., Brook, E., Wolff, E., Arthern, R., Dinn, M., Hindmarsh, R., Mulvaney, R., Albert, M., Alemany, O., Chappellaz, J., Gallee, H., Parrenin, F., Ritz, C., Bentley, C., Blankenship, D., Creyts, T., Dahl-Jensen, D., Frezzotti, M., Fujita, S., Kawamura, K., Hudspeth, D., Van Ommen, T., Jugie, G., Lipenkov, V. Y., Miller, H., Steinhage, D., Wilhelms, F., & Pattyn, F. (2013). Where to find 1.5 million yr old ice for the IPICS "Oldest-Ice" ice core. *Climate of the past*, 9(6), 2489-2505. doi:10.5194/cp-9-2489-2013

Van Liefferinge, B., & Pattyn, F. (2013). Using ice-flow models to evaluate potential sites of million year-old ice in Antarctica. *Climate of the past*, 9(5), 2335-2345. doi:10.5194/cp-9-2335-2013

Pattyn, F., & Durand, G. (2013). Why marine ice sheet model predictions may diverge in estimating future sea level rise. *Geophysical research letters*, 40(16), 4316-4320. doi:10.1002/grl.50824

Goelzer, H., Huybrechts, P., Fürst, J. J., Nick, F., Andersen, M. L., Edwards, T. L., Fettweis, X., Payne, A., & Shannon, S. (2013). Sensitivity of Greenland ice sheet projections to model formulations. *Journal of Glaciology*, 59(216), 733-749. doi:10.3189/2013JoG12J182

Delcourt, C., Van Liefferinge, B., Pattyn, F., & Nolan, M. (2013). The climate memory of an Arctic polythermal glacier. *Journal of Glaciology*, 59(218), 1084-1092. doi:10.3189/2013JoG12J109

Nick, F., Vieli, A., Andersen, M. L., Joughin, I. R., Payne, A., Edwards, T. L., Pattyn, F., & van de Wal, R. S. W. (2013). Future sea-level rise from Greenland's main outlet glaciers in a warming climate. *Nature (London)*, 497(7448), 235-238. doi:10.1038/nature12068

Drouet, A.-S., Docquier, D., Hindmarsh, R., Durand, G., Pattyn, F., Gagliardini, O., & Zwinger, T. (2013). Grounding line transient response in marine ice sheet models. *The Cryosphere*, 7, 395-406. doi:10.5194/tc-7-395-2013

Fürst, J. J., Goelzer, H., & Huybrechts, P. (2013). Effect of higher-order stress gradients on the centennial mass evolution of the Greenland ice sheet. *The Cryosphere*, 7(1), 183-199. doi:10.5194/tc-7-183-2013

Dahl-Jensen, D., Pattyn, F., Tison, J.-L., Sapart, C., et al. (2013). Eemian interglacial reconstructed from Greenland folded ice core. *Nature (London)*, 493(7433), 489-494. doi:10.1038/nature11789

Hanna, E., Navarro, G., Pattyn, F., Domingues, C. M., Fettweis, X., Ivins, E. R., Nicholls, R. J., Ritz, C., Smith, B., Tulaczyk, S., Whitehouse, P. L., & Jay Zwally, H. (2013). Ice-sheet mass balance and climate change. *Nature (London)*, 498(7452), 51-59. doi:10.1038/nature12238

Fischer, H., Severinghaus, J., Brook, E., Wolff, E. W., Albert, M., Alemany, O., Arthern, R., Bentley, C., Blankenship, D., Chappellaz, J. A., Creyts, T., Dahl-Jensen, D., Dinn, M., Frezzotti, M., Fujita, S., Galley, H., Hindmarsh, R., Hudspeth, D., Jugie, G., Kawamura, K., Lipenkov, V., Miller, H., Mulvaney, R., Pattyn, F., Ritz, C., Schwander, J., Steinhage, D., Van Ommen, T., & Wilhelms, F. (2013). Where to find 1.5 million year old ice for the IPICS "Oldest Ice" ice core. *Climate of the past discussions*, 9, 2489–2505. doi:10.5194/cpd-9-2771-2013

Pattyn, F., Perichon, L., Durand, G., Favier, L., Gagliardini, O., Hindmarsh, R., Zwinger, T., Albrecht, T., Cornford, S. L., Docquier, D., Fuerst, J. J., Goldberg, D., Gudmundsson, G., Humbert, A., Huetten, M., Huybrechts, P., Jouvet, G., Kleiner, T., Larour, E., Martin, D., Morlighem, M., Payne, T., Pollard, D., Rueckamp, M., Rybak, O., Seroussi, H., Thoma, M., & Wilkens, N. (2013). Grounding-line migration in plan-view marine ice-sheet models: results of the ice2sea MISMIP3d intercomparison. *Journal of Glaciology*, 59(215), 410-422. doi:10.3189/2013JoG12J129

Vancoppenolle, M., Notz, D., Viviers, F., Tison, J.-L., Delille, B., Carnat, G., Zhou, J., Jardon, F., Griewank, P., & Lourenço, A. (2013). Technical Note: On the use of the mushy-layer Rayleigh number for the interpretation of sea-ice-core data. *The Cryosphere Discussions*, 7(4), 3209-3230.

Sorensen, L. L., Jensen, B., Glud, R. N., McGinnis, D., Sejr, M. C., Sievers, J., Sogaard, D., Tison, J.-L., & Rysgaard, S. (2013). Parameterization of atmosphere–surface exchange of CO<sub>2</sub> over sea ice. *The Cryosphere Discussions*, 7(4), 3899-3929. doi:10.5194/tc-8-853-2014

Montross, S. N., Skidmore, M. L., Christner, B. C., Samyn, D., Tison, J.-L., Lorrain, R., Doyle, S. M., & Fitzsimons, S. (2013). Debris-rich basal ice as a microbial habitat, Taylor Glacier, Antarctica. *Geomicrobiology journal.*, doi:10.1080/01490451.2013.811316. doi:10.1080/01490451.2013.811316

Boereboom, T., Samyn, D., Meyer, H., & Tison, J.-L. (2013). Stable isotope and gas properties of two climatically contrasting (Pleistocene and Holocene) ice wedges from Cape Mamontov Klyk, Laptev Sea, northern Siberia. *The Cryosphere*, 7, doi: 10.5194/tc-7-31-2013, 31-46.

de Angelis, M., Tison, J.-L., Morel-Fourcade, M. C., & Susini, J. (2013). Micro-investigation of EPICA Dome C bottom ice: evidence of long term in situ processes involving acid-salt interactions, mineral dust, and organic matter. *Quaternary science reviews*, 78, <http://dx.doi.org/10.1016/j.quascirev.2013.08.012>, 48-265. doi:10.1016/j.quascirev.2013.08.012

Kaartokallio, H., Sogaard, D., Norman, R., Rysgaard, S., Tison, J.-L., Delille, B., & Thomas, D. R. (2013). Short-term variability in bacterial abundance, cell properties, and incorporation of leucine and thymidine in subarctic sea ice. *Aquatic microbial ecology*, 71, doi:10.3354/ame0166, 57-73. doi:10.3354/ame01667

Vancoppenolle, M., Meiners, K. M., Michel, C., Bopp, L., Brabant, F., Carnat, G., Delille, B., Lannuzel, D., Madec, G., Moreau, S., Tison, J.-L., & Van der Merwe, P. (2013). Role of sea ice in global biogeochemical cycles: Emerging views and challenges. *Quaternary science reviews*, 79, 207-230. doi:10.1016/j.quascirev.2013.04.011

Zhou, J. M., Delille, B., Eicken, H., Vancoppenolle, M., Brabant, F., Carnat, G., Geilfus, N. X., Papakyriakou, T., Heinesch, B., & Tison, J.-L. (2013). Physical and biogeochemical properties in landfast sea ice (Barrow, Alaska): Insights on brine and gas dynamics across seasons. *Journal of Geophysical Research*, 118(6), 3172-3189.

Carnat, G., Papakyriakou, T., Geilfus, N. X., Brabant, F., Delille, B., Vancoppenolle, M., Gilson, G., Zhou, J. M., & Tison, J.-L. (2013). Investigations on physical and textural properties of arctic first-year sea ice in the Amundsen gulf, Canada, November 2007-june 2008 (IPY-CFL system study). *Journal of Glaciology*, 59(217), 819-837.

Geilfus, N. X., Carnat, G., Dieckmann, G. S., Eicken, H., Halden, N., Nehrke, G., Papakyriakou, T., Tison, J.-L., & Delille, B. (2013). First estimates of the contribution of CaCO<sub>3</sub> precipitation to the release of CO<sub>2</sub> to the atmosphere during young sea ice growth. *Journal of geophysical research*. doi:10.1029/2012JC007980

Lannuzel, D., Schoemann, V., Dumont, I., De Jong, J., Tison, J.-L., Delille, B., & Becquevert, S. (2013). Effect of melting Antarctic sea ice on the fate of microbial communities studied in microcosms. *Polar biology*, 36(10), 1483-1497. doi:10.1007/s00300-013-1368-7

de Jong, J., Schoemann, V., Maricq, N., Mattielli, N., Langhorne, P., Haskell, T., & Tison, J.-L. (2013). Iron in land-fast sea ice of McMurdo Sound derived from sediment resuspension and wind-blown dust attributes to primary productivity in the Ross Sea, Antarctica. *Marine chemistry*, 157, <http://dx.doi.org/10.1016/j.marchem.2013.07.001>, 24-40. doi:10.1016/j.marchem.2013.07.001

Shannon, S., Payne, A., Bartholomew, I., van den Broeke, M. R., Edwards, T. L., Fettweis, X., Gagliardini, O., Gillet-Chaulet, F., Goelzer, H., Hoffman, M., Huybrechts, P., Mair, D., Nienow, P. P., Perego, M., Price, S. F., Smeets, C., Sole, A., van de Wal, R. S. W., & Zwinger, T. (2013). Enhanced basal lubrication and the contribution of the Greenland ice sheet to future sea-level rise. *Proceedings of the National Academy of Sciences of the United States of America.*, 201212647. doi:10.1073/pnas.1212647110

## 2012

Matsuoka, K., MacGregor, J. A., & Pattyn, F. (2012). Predicting radar attenuation within the Antarctic ice sheet. *Earth and planetary science letters*, 359-360, 173-183. doi:10.1016/j.epsl.2012.10.018

Goelzer, H., Huybrechts, P., Raper, S. C. B., Loutre, M.-F., Goosse, H., & Fichefet, T. (2012). Millennial total sea-level commitments projected with the Earth system model of intermediate complexity LOVECLIM. *Environmental Research Letters*, 7(4), 045401. doi:10.1088/1748-9326/7/4/045401

Matsuoka, K., Pattyn, F., Callens, D., & Conway, H. (2012). Radar characterization of the basal interface across the grounding zone of an ice-rise promontory in East Antarctica. *Annals of glaciology*, 53(60), 29-34. doi:10.3189/2012AoG60A106

Hubbard, B., Tison, J.-L., Pattyn, F., Dierckx, M., Boereboom, T., & Samyn, D. (2012). Optical-televIEWer-based identification and characterization of material facies associated with an antarctic ice-shelf rift. *Annals of glaciology*, 53(60), 137-146. doi:10.3189/2012AoG60A045

Thoma, M., Grosfeld, K., Mayer, C., & Pattyn, F. (2012). Ice-flow sensitivity to boundary processes: A coupled model study in the vostok subglacial lake area, antarctica. *Annals of glaciology*, 53(60), 173-180. doi:10.3189/2012AoG60A009

Goelzer, H., Janssens, I., Nemec, J., & Huybrechts, P. (2012). A dynamic continental runoff routing model applied to the last Northern Hemisphere deglaciation. *Geoscientific Model Development*, 5(3), 599-609. doi:10.5194/gmd-5-599-2012

Nick, F., van de Wal, R. S. W., Pattyn, F., Luckman, A., Vieli, A., Van der Veen, C. J., Van As, D., Hubbard, A., & Floricioiu, D. (2012). The response of Petermann Glacier, Greenland, to large calving events, and its future stability in the context of atmospheric and oceanic warming. *Journal of Glaciology*, 58(208), 229-239. doi:10.3189/2012JoG11J242

Nick, F., Luckman, A., Vieli, A., Van der Veen, C. J., Van As, D., Van de Wal, R., Hubbard, A., Floricioiu, D., & Pattyn, F. (2012). The response of Petermann Glacier to large calving events and its future stability in the context of atmospheric and oceanic warming. *Journal of Glaciology*, 58(208), 229-239.

Thoma, M., Grosfeld, K., Mayer, C., & Pattyn, F. (2012). Ice flow sensitivity to boundary processes: a coupled model study in the Subglacial Lake Vostok area. *Annals of glaciology*, 53(60), 173-180.

MacGregor, J. A., Matsuoka, K., Waddington, E. D., Winebrenner, D., & Pattyn, F. (2012). Modeling the spatial variation of englacial radar attenuation and application to the Vostok flowline. *Journal of geophysical research*, 117(F03022). doi:10.1029/2011JF002327

MacGregor, J. A., Matsuoka, K., Waddington, E. D., Winebrenner, D., & Pattyn, F. (2012). Spatial variation of englacial radar attenuation: Modeling approach and application to the Vostok flowline. *Journal of geophysical research*, 117(3), F03022. doi:10.1029/2011JF002327

Pattyn, F., Matsuoka, K., Callens, D., Conway, H., Depoorter, M., Docquier, D., Hubbard, B., Samyn, D., & Tison, J.-L. (2012). Melting and refreezing beneath Roi Baudouin Ice Shelf (East Antarctica) inferred from radar, GPS, and ice core data. *Journal of geophysical research*, 117(4), F04008. doi:10.1029/2011JF002154

Pattyn, F., Schoof, C., Perichon, L., Hindmarsh, R., Bueler, E., De Fleurian, B., Durand, G., Gagliardini, O., Gladstone, R., Goldberg, D., Gudmundsson, G., Huybrechts, P., Lee, V., Nick, F., Payne, A., Pollard, D., Rybak, O., Saito, F., & Vieli, A. (2012). Results of the Marine Ice Sheet Model Intercomparison Project, MISMIP. *The Cryosphere*, 6, 573-588. doi:10.5194/tc-6-573-2012

Di Nitto, D., Neukermans, G., Koedam, N., Defever, H., Pattyn, F., Kairo, J. G., & Dahdouh-Guebas, F. (2012). Mangroves facing climate change: landward migration potential in response to projected scenarios of sea level rise. *VLIZ Special Publication*, 57, 55.

Stefels, J., Carnat, G., Dacey, J., Goossens, T., Elzenga, J. T. M., & Tison, J.-L. (2012). The analysis of dimethylsulfide and dimethylsulfoniopropionate in sea ice: Dry-crushing and melting using stable isotope additions. *Marine chemistry*, 128-129, 34-43. doi:10.1016/j.marchem.2011.09.007

Dierckx, M., & Tison, J.-L. (2012). Marine ice deformation experiments: an empirical validation of creep parameters. *Geophysical research letters*, 40(1), doi:10.1029/2012GL054197, 134-138. doi:10.1029/2012GL054197

Meiners, K., Vancoppenolle, M., Thanassekos, S., Dieckmann, G., Thomas, D. R., Tison, J.-L., Arrigo, K. K., Garrison, D. D., McMinn, A., Lannuzel, D., Van der Merwe, P., Swadling, K. K., Smith Jr., W. J. W., Melnikov, I., & Raymond, B. (2012). Chlorophyll-a in Antarctic sea ice from historical ice core data. *Geophysical research letters*, 39(11), doi:10.1029/2012GL053478, L21602. doi:10.1029/2012GL053478

De Jong, J., Schoemann, V., Lannuzel, D., Croot, P., De Baar, H. J. W., & Tison, J.-L. (2012). Natural iron fertilization of the Atlantic sector of the Southern Ocean by continental shelf sources of the Antarctic Peninsula. *Journal of geophysical research*, 117(1), 01029. doi:10.1029/2011JG001679

Geilfus, N. X., Carnat, G., Papakyriakou, T., Tison, J.-L., Else, B., Thomas, H., Shadwick, E. H., & Delille, B. (2012). Dynamics of pCO<sub>2</sub> and related air-ice CO<sub>2</sub> fluxes in the Arctic coastal zone (Amundsen Gulf, Beaufort Sea). *Journal of geophysical research*, 117, C00G10. doi:10.1029/2011JC007118

Boereboom, T., Depoorter, M., Coppens, S., & Tison, J.-L. (2012). Gas properties of winter lake ice in Northern Sweden: implication for carbon gas release. *Biogeosciences*, 9, 827-838.

Geilfus, N. X., Delille, B., Verbeke, V., & Tison, J.-L. (2012). Instruments and methods towards a method for high vertical resolution measurements of the partial pressure of CO<sub>2</sub> within bulk sea ice. *Journal of Glaciology*, 58(208), 287. doi:10.3189/2012JoG11J071

Fripiat, F., Cavagna, A.-J., Dehairs, F., de Brauwere, A., André, L., & Cardinal, D. (2012). Processes controlling the Si-isotopic composition in the Southern Ocean and application for paleoceanography. *Biogeosciences*, 9, doi:10.5194/bg-9-2443-2012, 2443–2457.

de Brauwere, A., Fripiat, F., Cardinal, D., Cavagna, A.-J., De Ridder, F., André, L., & Elskens, M. (2012). Isotopic model of oceanic silicon cycling: the Kerguelen Plateau case study. *Deep-sea research. Part 1. Oceanographic research papers*, 70, 42-59.

## 2011

Fürst, J. J., Rybak, O., Goelzer, H., De Smedt, B., de Groen, P., & Huybrechts, P. (2011). Improved convergence and stability properties in a three-dimensional higher-order ice sheet model. *Geoscientific Model Development*, 4(4), 1133-1149. doi:10.5194/gmd-4-1133-2011

Rysgaard, S., Bendtsen, J., Delille, B., Dieckmann, G. S., Glud, R. N., Kennedy, H., Mortensen, J., Papadimitriou, S., Thomas, D. R., & Tison, J.-L. (2011). Sea ice contribution to the air-sea CO<sub>2</sub> exchange in the Arctic and Southern oceans. *Tellus. Series B, Chemical and physical meteorology*, 63(5), 823-830. doi:10.1111/j.1600-0889.2011.00571.x

Cavagna, A.-J., Elskens, M., Jacquet, S. H. M., Dehairs, F., Fripiat, F., Griffiths, B. F., & Westwood, K. J. (2011). Contrasting regimes of production and potential for carbon export in the Sub-Antarctic and Polar Frontal Zones south of Tasmania. *Deep-sea research. Part 2. Topical studies in oceanography*, 58(21-22), 2235-2247. doi:10.1016/j.dsr2.2011.05.026

Huybrechts, P., Goelzer, H., Janssens, I., Driesschaert, E., Fichefet, T., Goosse, H., & Loutre, M.-F. (2011). Response of the Greenland and Antarctic Ice Sheets to Multi-Millennial Greenhouse Warming in the Earth System Model of Intermediate Complexity LOVECLIM. *Surveys in geophysics*, 32(4-5), 397-416. doi:10.1007/s10712-011-9131-5

Goelzer, H., Huybrechts, P., Loutre, M.-F., Goosse, H., Fichefet, T., & Mouchet, A. (2011). Impact of Greenland and Antarctic ice sheet interactions on climate sensitivity. *Climate dynamics*, 37(5-6), 1005-1018. doi:10.1007/s00382-010-0885-0

Fripiat, F., Leblanc, K., Elskens, M., Cavagna, A.-J., Armand, L., André, L., Dehairs, F., & Cardinal, D. (2011). Efficient silicon recycling in summer in both the Polar Frontal and Subantarctic Zones of the Southern Ocean. *Marine ecology. Progress series*, 435, 47-61. doi:10.3354/meps09237

Loutre, M.-F., Mouchet, A., Fichefet, T., Goosse, H., Goelzer, H., & Huybrechts, P. (2011). Evaluating climate model performance with various parameter sets using observations over the recent past. *Climate of the past*, 7(2), 511-526. doi:10.5194/cp-7-511-2011

Docquier, D., Perichon, L., & Pattyn, F. (2011). Representing grounding line dynamics in numerical ice sheet models: Recent advances and outlook. *Surveys in geophysics*, 32, 417-435. doi:10.1007/s10712-011-9133-3

Samyn, D., Dierckx, M., Remy, J.-P., Goossens, T., & Tison, J.-L. (2011). Instruments and Methods A simple and updated pneumatic method for uniaxial ice compression in the laboratory: experimental settings and creep test results on glacier ice. *Journal of Glaciology*, 57(202), 337-344.

Boereboom, T., Depoorter, M., Coppens, S., & Tison, J.-L. (2011). Gas properties of winter lake ice in Northern Sweden: biogeochemical processes and implication for carbon gas release. *Biogeosciences discussions*, 8, 9639-9669.

Tison, J.-L. (2011). Sea ice. *Journal of Glaciology*, 57, 191-192.

Boereboom, T., Samyn, D., Meyer, H., & Tison, J.-L. (2011). Stable isotope and gas properties of two ice wedges from Cape MamontovKlyk, Laptev Sea, Northern Siberia. *The Cryosphere Discussions*, 5, 3267-3660.

Lewis, M.-J., Tison, J.-L., Weissling, B., Delille, B., Ackley, S., Brabant, F., & Xie, H. (2011). Sea ice and snow cover characteristics during the winter-spring transition in the Bellingshausen Sea: an overview of SIMBA 2007. *Deep-sea research. Part 2. Topical studies in oceanography*, 58, 1019-1038. doi:10.1016/j.dsr2.2010.10.027

Loose, B., Schlosser, P., Ringelberg, D., Ho, D. T., Takahashi, T., Richter-Menge, J., Reynolds, C. M., McGillis, W., & Tison, J.-L. (2011). Gas diffusion through columnar laboratory sea ice: implications for mixed-layer ventilation of CO<sub>2</sub> in the seasonal ice zone. *Tellus. Series B, Chemical and physical meteorology*, 63(1), 23-39. doi:10.1111/j.1600-0889.2010.00506.x

Brabant, F., El Amri, S., & Tison, J.-L. (2011). A robust approach for the determination of dimethylsulfoxide in sea ice. *Limnology and oceanography, methods*, 9, 261-274. doi:10.4319/lom.2011.9.261

Vancoppenolle, M., Timmerman, R., Ackley, S., Fichefet, T., Goosse, H., Heil, P., Lieser, J., Leonard, K. C., Nicolaus, M., Papakyriakou, T., & Tison, J.-L. (2011). Assessment of model forcing data sets for large-scale sea ice models in the Southern Ocean. *Deep-sea research. Part 2. Topical studies in oceanography*, 58, 1237-1249. doi:10.1016/j.dsr2.2010.10.039

Fripiat, F., André, L., Cardinal, D., Cavagna, A.-J., Savoye, N., & Dehairs, F. (2011). Isotopic constraints on the Si-biogeochemical cycle of the Antarctic Zone in the Kerguelen area (KEOPS). *Marine chemistry*, 123(1-4), 11-22. doi:10.1016/j.marchem.2010.08.005

Cavagna, A.-J., Fripiat, F., Dehairs, F., Wolf-Gadrow, D., Cisewski, B., Savoye, N., André, L., & Cardinal, D. (2011). Silicon uptake and supply during a Southern Ocean iron fertilization experiment (EIFEX) tracked by Si-isotopes. *Limnology and oceanography*, 56(1), 147-160. doi:10.4319/lo.2011.56.1.0147

Cavagna, A.-J., Elskens, M., Griffiths, B. F., Fripiat, F., Jacquet, S., Westwood, K. J., & Dehairs, F. (2011). Contrasting regimes of production and potential for carbon export

in the SAZ and PFZ south of Tasmania. *Deep-sea research. Part 2. Topical studies in oceanography*, 58, 2235-2247.

Fripiat, F., André, L., Cardinal, D., Cavagna, A.-J., Dehairs, F., & Speich, S. (2011). Silicon pool dynamics and biogenic silica export in the Southern Ocean inferred from Si-isotopes. *Ocean science*, 7(5), 533-547. doi:10.5194/os-7-533-2011

## 2010

Goosse, H., Brovkin, V. V., Fichefet, T., Haarsma, R., Huybrechts, P., Jongma, J., Mouchet, A., Selten, F., Barriat, P. Y., Campin, J.-M., Deleersnijder, E., Driesschaert, E., Goelzer, H., Janssens, I., Loutre, M.-F., Morales Maqueda, M. A., Opsteegh, T., Mathieu, P.-P., Munhoven, G., Pettersson, E., Renssen, H., Roche, D. M., Schaeffer, M., Tartinville, B., Timmermann, A., & Weber, S. L. (2010). Description of the Earth system model of intermediate complexity LOVECLIM version 1.2. *Geoscientific Model Development*, 3(2), 603-633. doi:10.5194/gmd-3-603-2010

Calov, R., Greve, R., Abe-Ouchi, A., Bueler, E., Huybrechts, P., Johnson, J., Pattyn, F., Pollard, D., Ritz, C., Saito, F., & Tarasov, L. (2010). Results from the Ice-Sheet Model Intercomparison Project-Heinrich Event INtercOmparison (ISMIP HEINO). *Journal of Glaciology*, 56(197), 371-383. doi:10.3189/002214310792447789

De Smedt, B., Pattyn, F., & de Groen, P. (2010). Using the unstable manifold correction in a Picard iteration to solve the velocity field in higher-order ice-flow models. *Journal of Glaciology*, 56(196), 257-261. doi:10.3189/002214310791968395

De Smedt, B., Pattyn, F., & de Groen, P. (2010). On the use of the unstable manifold correction in a Picard iteration for the solution of the velocity field in higher-order ice-flow models. *Journal of Glaciology*, 56(196), 257-261.

Calov, R., Greve, R., Abe-Ouchi, A., Bueler, E., Huybrechts, P., Johnson, J., Pattyn, F., Pollard, D., Ritz, C., Saito, F., & Tarasov, L. (2010). Results from the ice sheet model intercomparison project Heinrich event intercomparison (ISMIP HEINO). *Journal of Glaciology*, 56(197), 371-383.

Pattyn, F. (2010). Antarctic subglacial conditions inferred from a hybrid ice sheet/ice stream model. *Earth and planetary science letters*, 295, 451-461.

Pattyn, F., Matsuoka, K., & Berte, J. (2010). Glacio-meteorological conditions in the vicinity of the Belgian Princess Elisabeth Station, Antarctica. *Antarctic science*, 22(1), 79-85. doi:10.1017/S0954102009990344

Thoma, M., Grosfeld, K., Mayer, C., & Pattyn, F. (2010). Interaction between ice sheet dynamics and subglacial lake circulation: a coupled modelling approach. *The Cryosphere*, 4(1), 1-12. doi:10.5194/tc-4-1-2010

Pattyn, F. (2010). Antarctic subglacial lake discharges. *Geophysical monograph*. doi:10.1029/2010GM000935

Lannuzel, D., Schoemann, V., De Jong, J., Pasquer, B., Van der Merwe, P., Masson, F., Tison, J.-L., & Bowie, A. (2010). Distribution of dissolved iron in Antarctic sea ice: Spatial,

seasonal and interannual variability? *Journal of geophysical research*, 115, G03022. doi:10.1029/2009JG001031

Montross, S. N., Doyle, S. M., Samyn, D., Tison, J.-L., Christner, B. C., & Skidmore, M. L. (2010). Sediment-rich Antarctic basal ice as a habitat for microorganisms. *Geochimica et cosmochimica acta. Supplement*, 73(13), 897.

Tison, J.-L., Brabant, F., Dumont, I., & Stefels, J. (2010). High resolution DMS and DMSP time series profiles in decaying summer first-year sea ice at ISPOL (Western Weddell Sea, Antarctica). *Journal of geophysical research*, 115, G04044. doi:10.1029/2010JG001427

Vancoppenolle, M., Goosse, H., De Montety, A., Fichefet, T., Tremblay, B., & Tison, J.-L. (2010). Modelling brine and nutrient dynamics in Antarctic sea ice: the case of dissolved silica. *Journal of geophysical research*, 115, C02005. doi:10.1029/2009JC005369

Lannuzel, D., Schoemann, V., de Jong, J., Pasquer, B., Van der Merwe, P., Masson, F., Tison, J.-L., & Bowie, A. (2010). Distribution of dissolved iron in Antarctic sea ice: Spatial, seasonal, and inter-annual variability. *Journal of Geophysical Research. Biogeosciences*, 115(G3).

## 2009

Fripiat, F., Corvaisier, R., Navez, J., Elskens, M., Schoemann, V., Leblanc, K., André, L., & Cardinal, D. (2009). Measuring production-dissolution rates of marine biogenic silica by  $^{30}\text{Si}$ -isotope dilution using a high-resolution sector field inductively coupled plasma mass spectrometer. *Limnology and oceanography, methods*, 7(7), 470-478. doi:10.4319/lom.2009.7.470

Huybrechts, P., Rybak, O., Steinhage, D., & Pattyn, F. (2009). Past and present accumulation rate reconstruction along the Dome Fuji-Kohnen radio echo sounding profile, Dronning Maud Land, East Antarctica. *Annals of glaciology*, 50(51), 112-120.

Pattyn, F., Delcourt, C., Samyn, D., De Smedt, B., & Nolan, M. (2009). Bed properties and hydrological conditions underneath McCall Glacier. *Annals of glaciology*, 50(51), 80-84.

Pattyn, F. (2009). Modelling subglacial lakes and their influence on Antarctic ice sheet dynamics. *Eos*, 90(52).

Gagliardini, O., Durand, G., Pattyn, F., & Zwinger, T. (2009). On the effect of ice-shelves melting on the grounding line dynamics in presence of buttressing backforces. *Eos*, 90(52).

Pattyn, F., Delcourt, C., Samyn, D., De Smedt, B., & Nolan, M. (2009). Bed properties and hydrological conditions underneath McCall Glacier, Alaska, USA. *Annals of glaciology*, 50(51), 80-84. doi:10.3189/172756409789097559

Becquevort, S., Dumont, I., Tison, J.-L., Lannuzel, D., Sauvée, M.-L., Chou, L., & Schoemann, V. (2009). Biogeochemistry and microbial community composition in sea ice and underlying seawater off East Antarctica during early spring. *Polar biology*, 32(6), 879-895. doi:10.1007/s00300-009-0589-2

Dumont, I., Schoemann, V., Lannuzel, D., Chou, L., Tison, J.-L., & Becquevort, S. (2009). Distribution and characterization of dissolved and particulate organic matter in Antarctic pack ice. *Polar biology*, 32(5), 733-750. doi:10.1007/s00300-008-0577-y

Goelzer, H., Levermann, A., & Rahmstorf, S. (2009). Two-way coupling of an ENSO model to the global climate model CLIMBER-3. *Ocean modelling*, 29(1), 94-101. doi:10.1016/j.ocemod.2009.03.004

## 2008

De Jong, J., Schoemann, V., Lannuzel, D., Tison, J.-L., & Mattielli, N. (2008). High-accuracy determination of iron in seawater by isotope dilution multiple collector inductively coupled plasma mass spectrometry (ID-MC-ICP-MS) using nitrilotriacetic acid chelating resin for pre-concentration and matrix separation. *Analytica chimica acta*, 623(2), 126-139. doi:10.1016/j.aca.2008.06.013

Abraham, K., Opfergelt, S., Fripiat, F., Cavagna, A.-J., de Jong, J., Stephen, F., André, L., & Cardinal, D. (2008). d29Si and d30Si determination on USGS BHVO-1 and BHVO-2 reference materials with a new configuration on a Nu Plasma Multi-Collector ICP-MS. *Geostandards and geoanalytical research*, 32(2), 193-202. doi:10.1111/j.1751-908X.2008.00879.x

Tison, J.-L., Worby, A., Delille, B., Brabant, F., Papadimitriou, S., Thomas, D. R., De Jong, J., Lannuzel, D., & Haas, C. (2008). Temporal evolution of decaying summer first-year sea ice in the Western Weddell Sea, Antarctica. *Deep-sea research. Part 2. Topical studies in oceanography*, 55(8-9), 975-987. doi:10.1016/j.dsr2.2007.12.021

Pattyn, F. (2008). Investigating the stability of subglacial lakes with a full Stokes model. *Journal of Glaciology*, 54(185), 353-361.

Delcourt, C., Pattyn, F., & Nolan, M. (2008). Modelling historical and recent mass loss of McCall Glacier, Alaska, USA. *The Cryosphere*, 2, 23-31. doi:10.5194/tc-2-23-2008

Pattyn, F. (2008). Investigating the stability of subglacial lakes with a full Stokes ice-sheet model. *Journal of Glaciology*, 54(185), 353-361. doi:10.3189/002214308784886171

Pattyn, F., Perichon, L., Aschwanden, A., Breuer, B., De Smedt, B., Gagliardini, O., Gudmundsson, G., Hindmarsh, R., Hubbard, A., Johnson, J., Kleiner, T., Konovalov, Y., Payne, A., Pollard, D., Price, S., Rueckamp, M., Saito, F., Soucek, O., Sugiyama, S., & Zwinger, T. (2008). Benchmark experiments for higher-order and full-Stokes ice sheet models (ISMIP-HOM). *The Cryosphere*, 2(3), 95-108.

Lannuzel, D., Schoemann, V., De Jong, J., Chou, L., Delille, B., Becquevort, S., & Tison, J.-L. (2008). Iron study during a time series in the western Weddell pack ice. *Marine chemistry*, 108(1-2), 85-95. doi:10.1016/j.marchem.2007.10.006

Remy, J.-P., Becquevort, S., Haskell, T., & Tison, J.-L. (2008). Impact of the B-15 iceberg "stranding event" on the physical and biological properties of sea ice in McMurdo Sound, Ross Sea, Antarctica. *Antarctic science*, 1, 1-12. doi:10.1017/50954102008001284

Lannuzel, D., Schoemann, V., De Jong, J., Tison, J.-L., & Chou, L. (2008). Iron distribution and biogeochemical behaviour in the east Antarctic sea ice. *Marine chemistry*, 106, 18-32.

Schoemann, V., De Jong, J., Lannuzel, D., Tison, J.-L., Dellile, B., Chou, L., Lancelot, C., & Becquevort, S. (2008). Microbiological control on the cycling Fe and its isotopes in Antarctic sea ice. *Geochimica et cosmochimica acta*, 72(12), 837.

Schoemann, V., de Jong, J., Lannuzel, D., Tison, J.-L., Dellile, B., Chou, L., Lancelot, C., & Becquevort, S. (2008). Microbiological control on the cycling of Fe and its isotopes in Antarctic sea ice. *Geochimica et Cosmochimica Acta. Supplement*, 72(12), A837.

## 2007

De Smedt, B., de Groen, P., & Pattyn, F. (2007). A robust 2D higher-order ice-flow model for inverse applications. *Geophysical research abstracts*, 9.

De Smedt, B., Pattyn, F., de Groen, P., & Nolan, M. (2007). Inverse modelling of basal velocity using a 2D higher-order ice-flow model. *Geophysical research abstracts*, 9.

Delcourt, C., & Pattyn, F. (2007). Modelling historical and recent mass loss of a polythermal Arctic glacier (MacCall glacier, Alaska). *Geophysical research abstracts*, 9.

Schäfer, M., Gagliardini, O., Le Meur, E., Pattyn, F., & Ritz, C. (2007). Mountain glacier flow modelling: a comparison of different models from the shallow ice approximation to the full-stokes solution. *Geophysical research abstracts*, 9.

Rybäk, O., Huybrechts, P., Pattyn, F., & Steinhage, D. (2007). Model-derived ice core chronology and non-climatic biases in the lower part of the EDML ice core. *Geophysical research abstracts*, 9.

Pattyn, F., & Siegert, M. (2007). Mechanisms for subglacial lake drainage and outbursts. *Geophysical research abstracts*, 9.

Calov, R., Greve, R., Huybrechts, P., Bueler, E., Pollard, D., Pattyn, F., & Tarasov, L. (2007). First results of the ISMIP-HEINO model intercomparison project. *Geophysical research abstracts*, 9.

Schoof, C., Hindmarsh, R., & Pattyn, F. (2007). Benchmarks and intercomparison program for marine ice sheet models. *Geophysical research abstracts*, 9.

Pattyn, F. (2007). ISMIP-HOM: Results of the higher-order ice sheet model intercomparison exercise. *Geophysical research abstracts*, 9.

Van Lipzig, N. P. M., Van De Putte, T., Demuzere, M., & Pattyn, F. (2007). The climate of the Belgian research station in Antarctica from a regional atmospheric model. *Geophysical research abstracts*, 9.

Rybäk, O., Huybrechts, P., Pattyn, F., & Steinhage, D. (2007). Regionalnaya model' dinamiki l'da: Chast'1. Opisaniye modeli, postanovka chislennykh eksperimentov i sovremennaya dinamika potoka v oksrestnostiakh stantsii Konen. *Materialy Glyatsiologicheskikh Issledovanii*, 102, 3-11.

- Rybak, O., Huybrechts, P., Pattyn, F., & Steinhage, D. (2007). Regionalnaya model' dinamiki l'da: Chast' 2. Post-eksperimentalnaya obrabotka dannykh. *Materialy Glyatsiologicheskikh Issledovanii*, 103, 3-10.
- Johnson, J., Näslund, J.-O., Pattyn, F., & Jansson, P. (2007). High Resolution Geothermal Heat Flux Data-Implications for Ice Sheet Dynamics and Model Uncertainty. *Eos*, 88(52), C51A-0089.
- Huybrechts, P., Rybak, O., Pattyn, F., Ruth, U., & Steinhage, D. (2007). Ice thinning, upstream advection, and non-climatic biases for the upper 89% of the EDML ice core from a nested model of the Antarctic ice sheet. *Climate of the past*, 3(4), 577-589.
- Huybrechts, P., Rybak, O., Pattyn, F., Ruth, U., & Steinhage, D. (2007). Ice thinning, upstream advection, and non-climatic biases for the upper 89% of the EDML ice core from a nested model of the Antarctic ice sheet. *Climate of the past discussions*, 3(3), 693-727.
- Pattyn, F., Perichon, L., Aschwanden, A., Breuer, B., De Smedt, B., Gagliardini, O., Gudmundsson, G., Hindmarsh, R., Hubbard, A., Johnson, J., Kleiner, T., Konovalov, Y., Payne, A., Pollard, D., Price, S., Rueckamp, M., Saito, F., Soucek, O., Sugiyama, S., & Zwinger, T. (2007). Benchmark experiments for higher-order and full-Stokes ice sheet models (ISMIP-HOM). *Eos*, 88(52), C43A-08.
- Lannuzel, D., Schoemann, V., De Jong, J., Tison, J.-L., & Chou, L. (2007). Distribution and biogeochemical behaviour of iron in the East Antarctic sea ice. *Marine chemistry*, 106(1-2), 18-32. doi:10.1016/j.marchem.2006
- Fripiat, F., Cardinal, D., Tison, J.-L., Worby, A., & André, L. (2007). Diatom-induced Si-isotopic Fractionation in Antarctic Sea Ice. *Journal of geophysical research*, 112, G02001. doi:10.1029/2006JG000244
- Cardinal, D., Savoye, N., Trull, T. W., Dehairs, F., Kopczynska, E. E., Fripiat, F., Tison, J.-L., & André, L. (2007). Silicon Isotopes in Spring Southern Ocean Diatoms: Large Zonal Changes Despite Homogeneity Among Size fractions. *Marine chemistry*, 106(1-2), 46-62.
- Jouzel, J., Masson-Delmotte, V., Cattani, O., Dreyfus, G., Falourd, S., Hoffmann, G., Minster, B., Nouet, J., Barnola, J.-M., Chappellaz, J. A., Fischer, H., Gallet, J. C., Johnsen, S. J., Leuenberger, M., Louergue, L., Lüthi, D., Oerter, H., Parrenin, F., Raisbeck, G. M., Raynaud, D., Schilt, A., Schwander, J., Selmo, E., Souchez, R., Spahni, R., Stauffer, B., Steffensen, J. P., Stenni, B., Stocker, T. F., Tison, J.-L., Werner, M., & Wolff, E. W. (2007). Orbital and Millennial Antarctic Climate Variability over the Past 800.000 years. *Science*, 317(5839), 793-797. doi:10.1126/science.1141038
- De Jong, J., Schoemann, V., Tison, J.-L., Becquevort, S., Masson, F., Lannuzel, D., Petit, J., Chou, L., Weis, D., & Mattielli, N. (2007). Precise measurement of Fe isotopes in marine samples by multi-collector inductively coupled plasma mass spectrometry (MC-ICP-MS). *Analytica chimica acta*, 589(1), 105-119. doi:10.1016/j.aca.2007.02.055

2006

Souchez, R., Jouzel, J., Landais, A., Chappellaz, J., Lorrain, R., & Tison, J.-L. (2006). Gas isotopes in ice reveal a vegetated central Greenland during ice sheet invasion. *Geophysical research letters*, 33(24), L24503. doi:10.1029/2006GL028424

Barbante, C., Tison, J.-L., et al. (2006). One-to-one coupling of glacial climate variability in Greenland and Antarctica. *Nature (London)*, 444(7116), 195-198. doi:10.1038/nature05301

Goelzer, H., Mignot, J., Levermann, A., & Rahmstorf, S. (2006). Tropical versus high latitude freshwater influence on the Atlantic circulation. *Climate dynamics*, 27(7-8), 715-725. doi:10.1007/s00382-006-0161-5

Pattyn, F., Huyghe, A., De Brabander, S., & De Smedt, B. (2006). Role of transition zones in marine ice sheet dynamics. *Journal of geophysical research*, 111(2), F02004. doi:10.1029/2005JF000394

Pattyn, F. (2006). GRANTISM: an excel model for Greenland and Antarctic ice sheet response to climate changes. *Computers and Geosciences*, 32(3), 316-325. doi:10.1016/j.cageo.2005.06.020

Pattyn, F. (2006). Marine ice sheet stability and grounding line dynamics. *Geophysical research abstracts*, 8.

De Smedt, B., de Groen, P., & Pattyn, F. (2006). Inverse modelling of basal friction using a 2D higher-order ice-flow model. *Geophysical research abstracts*, 8.

Huyghe, A., Pattyn, F., & Huybrechts, P. (2006). Testing numerical techniques to solve the mass continuity equation in a coupled ice-sheet/ice-shelf model. *Geophysical research abstracts*, 8.

Huybrechts, P., Rybak, O., Pattyn, F., & Steinhage, D. (2006). Non-climatic biases and chronology of the EDML ice core derived from a nested Antarctic ice sheet model. *Geophysical research abstracts*, 8.

Pattyn, F., & Payne, T. (2006). Ice sheet model intercomparison project: Benchmark experiments for higher-order ice sheet models (ISMIP-HOM). *Geophysical research abstracts*, 8.

Lannuzel, D., Schoemann, V., de Jong, J., Tison, J.-L., Delille, B., & Chou, L. (2006). Iron distribution in sea ice. *Eos Transactions AGU*, 87(36).

Schoemann, V., Lannuzel, D., Becquevort, S., Tison, J.-L., Trevena, A., de Jong, J., Delille, B., Sauvée, M.-L., Lancelot, C., & Chou, L. (2006). Impact of microbiological processes on the cycling of Fe in Antarctic sea ice during Spring. *Eos Transactions AGU*, 87(36).

EPICA Community, M., & Tison, J.-L. (2006). One-to-one coupling of glacial climate variability in Greenland during Ice Sheet Invasion. *Nature (London)*, 444, 195-198. doi:10.1038/nature05301

Zemmelink, H., Delille, B., Tison, J.-L., Hintsa, E., Houghton, L., & Dacey, J. (2006). CO<sub>2</sub> deposition over the multi-year ice of the western Weddell Sea. *Geophysical Research Letters*, 33(13), L13606. doi:10.1029/2006GL026320

Lannuzel, D., De Jong, J., Schoemann, V., Trevena, A., Tison, J.-L., & Chou, L. (2006). Development of a sampling and flow injection analysis technique for iron determination in the sea ice environment. *Analytica Chimica Acta*, 556, 476-483. doi:10.1016/j.aca.2005.09.059