

**An Initial Reading List**  
(preliminary, subjective, and incomplete)

• **Southern Ocean Circulation and Climate**

- Jacobs, S., 2006: Observations of change in the Southern Ocean. *Phil. Trans. R. Soc. A*, **364(1884)**, 1657–1681, [doi:10.1098/rsta.2006.1794](https://doi.org/10.1098/rsta.2006.1794).
- Mayewski, P.A. and 17 others, 2009: State of the Antarctic and Southern Ocean climate system. *Rev. Geophys.*, **47**, RG1003, [doi:10.1029/2007RG000231](https://doi.org/10.1029/2007RG000231).

• **Atlantic Climate Variability**

- Marshall, J., Kushnir, Y., Battisti, D., Chang, P., Czaja, A., Dickson, R., McCartney, M., Saravanan, R., and Visbeck, M., 2001: North Atlantic Climate Variability: phenomena, impacts and mechanisms. *Inter. Jour. Climatology*, **21(15)**, 1863-1898, [doi:10.1002/joc.693](https://doi.org/10.1002/joc.693) [[PDF](#)]
- Hurrell, J.W. and 18 others, 2006: Atlantic climate variability and predictability: A CLIVAR perspective. *J. Clim.*, **19(20)**, 5100-5121, [doi:10.1175/JCLI3902.1](https://doi.org/10.1175/JCLI3902.1) [[PDF](#)]
- Straneo, F., G.S. Hamilton, D.A. Sutherland, L.A. Stearns, F. Davidson, M.O. Hammill, G.B. Stenson, and A. Rosing-Asvid, 2010: Rapid circulation of warm subtropical waters in a major glacial fjord in East Greenland. *Nature Geosci.*, **3**, 182–186, [doi:10.1038/NCEO764](https://doi.org/10.1038/NCEO764), [[PDF](#)]

• **Ice sheets and sea level**

- Munk, W., 2002: Twentieth century sea level: An enigma. *Proc. Natl. Acad. Sci. USA*, **99(10)**, 6550–6555, [doi:10.1073/pnas.092704599](https://doi.org/10.1073/pnas.092704599), [[PDF](#)]
- Alley, R.B., P.U. Clark, P. Huybrechts, and I. Joughin, 2005: Ice-sheet and sea-level changes. *Science*, **310**, 456–460, [doi:10.1126/science.1114613](https://doi.org/10.1126/science.1114613), [[PDF](#)]
- Milne, G., W.R. Gehrels, C.W. Hughes, and M.E. Tamisiea, 2009: Identifying the causes of sea-level change. *Nature Geosci.*, **2**, 471-478, [doi:10.1038/ngeo544](https://doi.org/10.1038/ngeo544), [[PDF](#)]

• **Ice ocean interactions**

- Lewis, E.L. and R.G. Perkin, 1986: Ice pumps and their rates. *J. Geophys. Res.*, **91(C10)**, 11,756–11,762, [doi:10.1029/JC091iC10p11756](https://doi.org/10.1029/JC091iC10p11756), [[PDF](#)]
- Holland P.R., A. Jenkins and D.M. Holland, 2008: The response of ice shelf basal melting to variations in ocean temperature. *J. Clim.*, **21**, 2558–2572, [doi:10.1175/2007JCLI1909.1](https://doi.org/10.1175/2007JCLI1909.1) [[PDF](#)]
- Jenkins, A. and S. Jacobs, 2008: Circulation and melting beneath George VI ice shelf, Antarctica. *J. Geophys. Res.*, **113**, C04013, [doi:10.1029/2007JC004449](https://doi.org/10.1029/2007JC004449) [[PDF](#)]

- Nicholls, K. W., S. Østerhus, K. Makinson, T. Gammelsrød, and E. Fahrbach, 2009: Ice-ocean processes over the continental shelf of the southern Weddell Sea, Antarctica: A review. *Rev. Geophys.*, **47**, RG3003, doi:10.1029/2007RG000250 [PDF]
- **Ice sheet modeling**
    - MacAyeal, D. R., 1989: Large-scale ice flow over a viscous basal sediment: Theory and application to ice stream B, Antarctica. *J. Geophys. Res.*, **94(B4)**, 40714087, doi:10.1029/JB094iB04p04071, [PDF]
    - Hindmarsh, R.C.A., 2004: A numerical comparison of approximations to the Stokes equations used in ice sheet and glacier modeling. *Geophys. Res.*, **109**, F01012, doi:10.1029/2003JF000065, [PDF]
    - van der Veen, K. and A.J. Payne, 2004: Modelling land ice dynamics. **in:** J.L. Bamber and A.J. Payne: Mass Balance of the Cryosphere. Chapter 6. *Cambridge University Press*, 644p., 2004.
    - Pollard, D. and R.M. DeConto, 2009: Modelling West Antarctic ice sheet growth and collapse through the past five million years. *Nature*, **458**, 329–333, doi:10.1038/nature07809, [PDF]
  - **Marine ice sheet instability**
    - Hughes, T. 1973: Is the West Antarctic ice sheet disintegrating? *J. Geophys. Res.*, **78(33)**, 7884–7910 [PDF]
    - Weertman, J., 1974: Stability of the junction of an ice sheet and an ice shelf. *J. Glaciol.*, **13(67)**, 3–11 [PDF]
    - Mercer, J.H., 1978: West Antarctic ice sheet and CO<sub>2</sub> greenhouse effect: a threat of disaster. *Nature*, **271**, 321–325 [PDF]
    - Schoof, C., 2007: Ice sheet grounding line dynamics: Steady states, stability, and hysteresis. *J. Geophys. Res.*, **112**, F03S28, doi:10.1029/2006JF000664 [PDF]
  - **Greenland ice sheet**
    - Nick, F.M., A. Vieli, I.M. Howat, and I. Joughin, 2009: Large-scale changes in Greenland outlet glacier dynamics triggered at the terminus. *Nature Geosci.*, **2**, 110–114, doi:10.1038/NGE0394, [PDF]
    - Joughin, I., I. M. Howat, M. Fahnestock, B. Smith, W. Krabill, R. B. Alley, H. Stern, and M. Truffer, 2008: Continued evolution of Jakobshavn Isbrae following its rapid speedup. *J. Geophys. Res.*, **113**, F04006, doi:10.1029/2008JF001023, [PDF]
  - **Antarctic ice sheet**
    - Hughes, T. 1977: West Antarctic ice streams. *Rev. Geophys. Space Phys.*, **15(1)**, 1–46, [PDF]
    - Bennett, M.R., 2005: Ice streams as the arteries of an ice sheet: their mechanics, stability and significance. *Earth-Sci. Rev.*, **61(3-4)**, 309–339, doi:10.1016/S0012-8252(02)00130-7, [PDF]

- Bamber, J.L. and R.E.M. Riva and B.L.A. Vermeersen and A. LeBrocq, 2009: Reassessment of the Potential Sea-Level Rise from a Collapse of the West Antarctic Ice Sheet. *Science*, **324**, 901, [doi:10.1126/science.1169335](https://doi.org/10.1126/science.1169335), [PDF]
- **Calving processes**
  - Benn D. I., C. R. Warren, and R. H. Mottram, 2007: Calving processes and the dynamics of calving glaciers. *Earth-Sci. Rev.*, **82**, 143-179. [doi:10.1016/j.earscirev.2007.02.002](https://doi.org/10.1016/j.earscirev.2007.02.002) [PDF]
  - Alley, R.B. and 7 others: A simple law for ice-shelf calving. *Science*, **322(5906)**, 1344, [doi:10.1126/science.1162543](https://doi.org/10.1126/science.1162543), [PDF]
- **Ocean wave–ice sheet interactions**
  - MacAyeal and 13 others, 2006: Transoceanic wave propagation links iceberg calving margins of Antarctica with storms in tropics and Northern Hemisphere. *Geophys. Res. Lett.*, **33**, L17502, [doi:10.1029/2006GL027235](https://doi.org/10.1029/2006GL027235).
  - Bromirski, P. D., O. V. Sergienko and D. R. MacAyeal, 2010: Transoceanic infragravity waves impacting Antarctic ice shelves. *Geophys. Res. Lett.*, **37**, L02502, [doi:10.1029/2009GL041488](https://doi.org/10.1029/2009GL041488).
- **Paleo-climate**
  - Alley, R.B. and P.U. Clark, 1999: The deglaciation of the Northern hemisphere: A global perspective. *Annu. Rev. Earth Planet. Sci.*, **27**, 149–182, [PDF]
  - Clark, P.U. and 8 others, 2009: The Last Glacial Maximum. *Science*, **325**, 710–714, [doi:10.1126/science.1172873](https://doi.org/10.1126/science.1172873), [PDF]
  - Huybers, P. and C. Wunsch, 2010: Paleophysical oceanography with an emphasis on transport rates. *Annu. Rev. Mar. Sci.*, **2**, 1–34, [doi:10.1146/annurev-marine-120308-081056](https://doi.org/10.1146/annurev-marine-120308-081056), [PDF]
  - Yde, J.C. and Ø. Paasche, 2010: Reconstructing climate change: Not all glaciers suitable. *EOS Transactions AGU*, **91(21)**, 25 May 2010, 189– 196, [PDF]