

# Collapsing ice sheets

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Most of the West Antarctic Ice Sheet (WAIS) sits on bedrock that is one to two kilometres below sea level. Its weight causes the ice sheet to flow outwards towards the ocean, thinning as it goes until it is thin enough to float on the ocean as an ice shelf before it ultimately breaks up into ice bergs. Some areas of the WAIS have been accelerating in recent years, as the point at which the sheet begins to float recedes, and this contributes to the rise in global sea level. I shall describe some recent analogue laboratory experiments and associated theoretical models that describe and quantify the fundamental dynamical controls on ice sheets that terminate in the ocean, focusing particularly on the role that floating ice shelves play in buttressing the ice sheet against collapse.