

1. Record Nr.	UNINA9910811545403321
Titolo	The mass balance of the cryosphere : observations and modelling of contemporary and future changes // edited by Jonathan L. Bamber and Antony J. Payne [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2004
ISBN	1-107-14405-1 1-108-45721-5 1-280-44952-7 9786610449521 0-511-18579-0 0-511-18496-4 0-511-18763-7 0-511-31369-1 0-511-53565-1 0-511-18670-3
Descrizione fisica	1 online resource (xvii, 644 pages) : digital, PDF file(s)
Disciplina	551.31
Soggetti	Ice sheets - Observations Ice sheets - Mathematical models Mass budget (Geophysics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction and background / Jonathan Bamber and Antony J. Payne -- In situ measurement techniques: land ice / Jon Ove Hagen and Niels Reeh -- In situ measurement techniques: sea ice / Peter Wadhams -- Remote sensing measurement techniques / Jonathan L. Bamber and Ron Kwok -- Modelling land ice surface mass balance / Wouter Greuell and Christophe Genthon -- Modelling land ice dynamics / Cornelis J. van der Veen and Anthony J. Payne -- Modelling sea ice dynamics / William D. Hibler, III -- Sea ice observations / Seymour Laxon . [and others] -- Sea-ice modelling Gregory M. Flato -- Greenland: recent mass-balance observations / Robert H. Thomas -- Greenland:

modelling / Roderik S.W. van de Wal -- Mass balance of the Antarctic ice sheet: observational aspects / Charles R. Bentley -- Antarctica: modelling / Philippe Huybrechts -- Arctic ice caps and glaciers / Julian A. Dowdeswell and Jon Ove Hagen -- Glaciers and ice caps: historical background and strategies of worldwide monitoring / Wilfried Haeberli -- Glaciers and the study of climate and sea-level change / Mark B. Dyurgerov and Mark F. Meier -- Conclusions, summary and outlook / Antony J. Payne and Jonathan L. Bamber.

Sommario/riassunto

The cryosphere comprises all the frozen water and soil on the surface of the Earth. Mass Balance of the Cryosphere focuses on two key components of this environment: land ice (in the form of ice sheets, caps and glaciers) and sea ice. These components have been identified as important indicators of both short and long term climate change. Early chapters cover the theory behind field-based and satellite observations, and modelling of mass balance, providing a thorough grounding in all the concepts and issues presented later in the book. Later chapters review our current understanding of the present and predicted future mass balance of the cryosphere. This is an important reference for all scientists working in the fields of climate change, environmental sciences and glaciology. It is written by leading authors in the field, and is fully integrated to provide a coherent, cross-referenced and consistent exposition on the subject.
