

Influence of snow depth and surface flooding on light transmission through Antarctic pack ice

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FIGURES S1 to S3

Introduction

The auxiliary material contains 3 additional figures supporting the manuscript. In particular, weather information obtained from the weather station at the ship for the entire period of the ice station are given (S1), as well as the primary (not gridded) sea-ice thickness and snow depth measurements in the 100m-by-100m study area (S2), and the incoming and transmitted solar radiation for each grid point (S3).

References:

König-Langlo, G. (2016), Continuous meteorological surface measurement during POLARSTERN cruise ANT-XXIX/7, edited, PANGAEA, doi:10.1594/PANGAEA.858532.

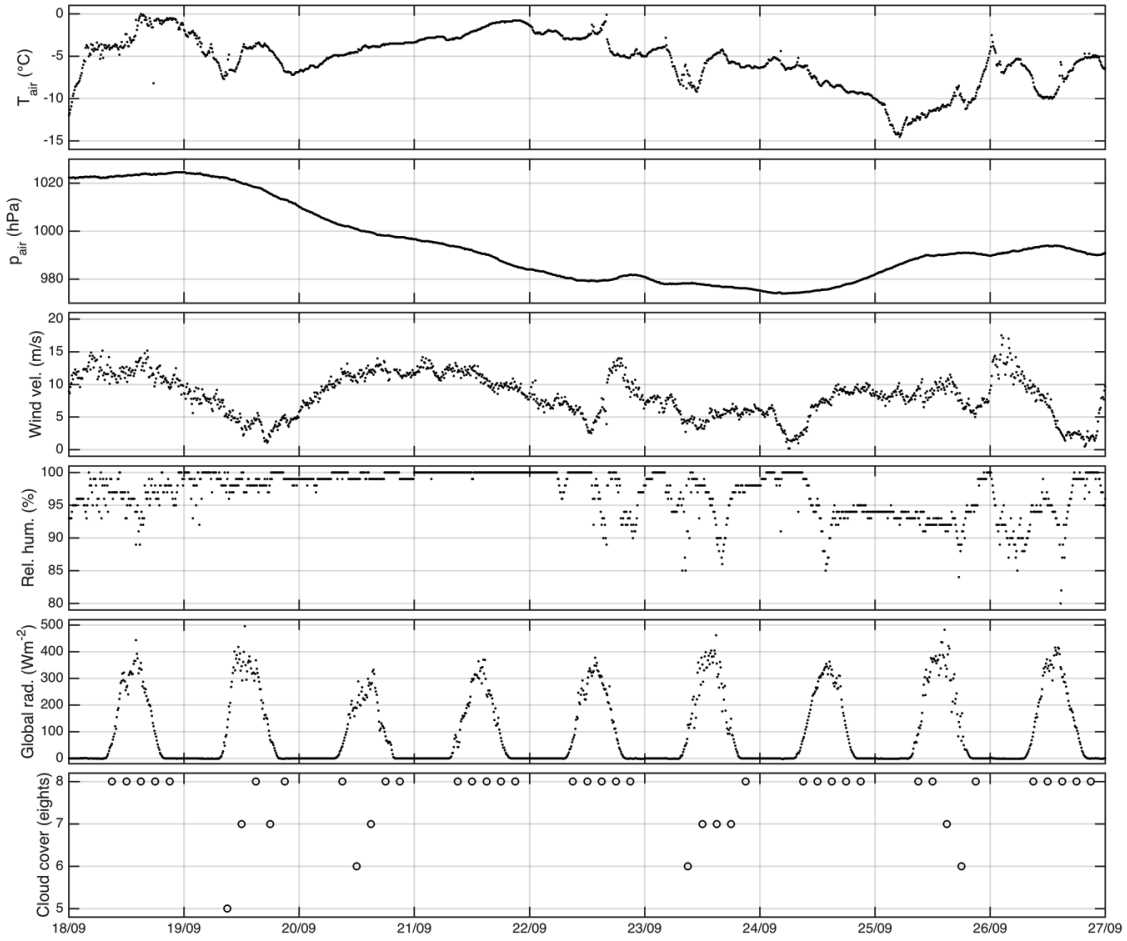


FIGURE S1. WEATHER CONDITIONS DURING THE ICE CAMP ON THE VOYAGE ANT-29/7 (PS81, WISKEY) WITH R/Y POLARSTERN IN THE WEDDELL SEA FROM 18 TO 26 SEPTEMBER 2013 [KÖNIG-LANGL, 2016].

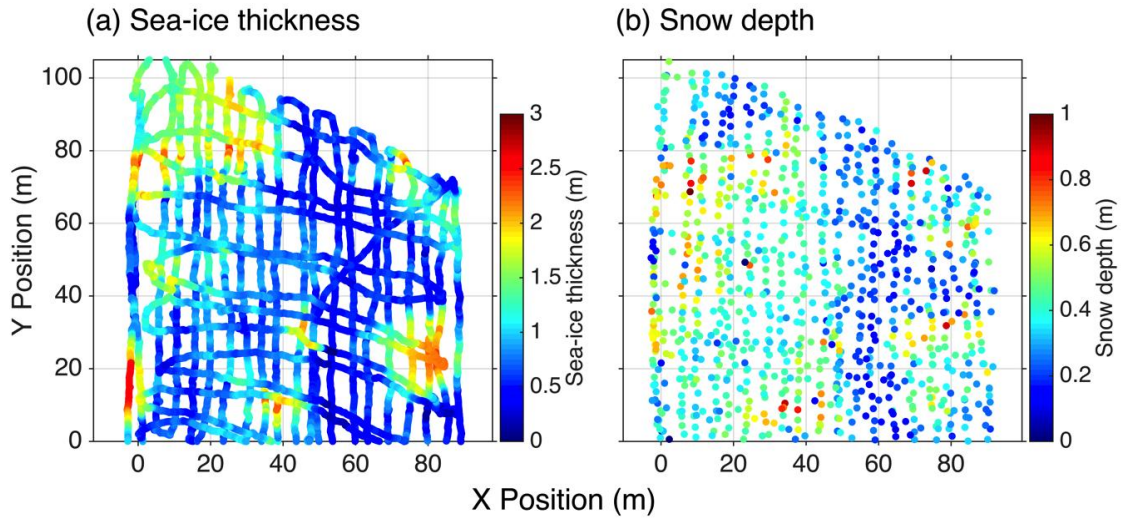


Figure S2. PHYSICAL PROPERTIES OF THE ICE FLOE WITHIN THE REMOTELY OPERATED VEHICLE (ROV) SURVEY AREA. (a) SEA-ICE THICKNESS DERIVED FROM THE GROUND-BASED MULTI-FREQUENCY ELECTROMAGNETIC INDUCTION INSTRUMENT (GEM-2). (b) SNOW DEPTH MEASURED WITH THE MAGNA PROBE. WHILE SEA-ICE THICKNESS MEASUREMENTS ARE CONTINUOUSLY RECORDED, SNOW DEPTH MEASUREMENTS WERE TAKEN EVERY 1.5 TO 2.5 m ALONG THE TRACK.

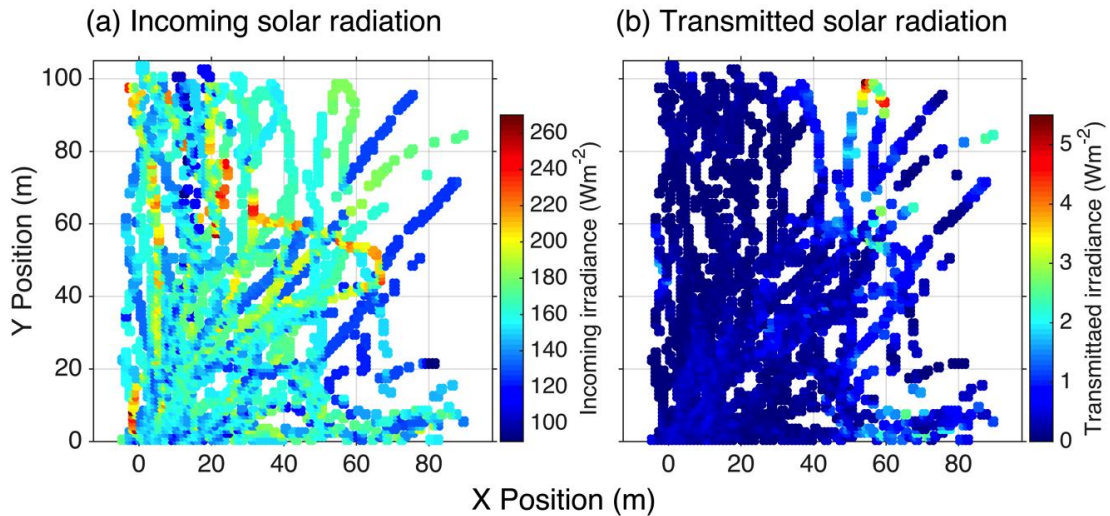


Figure S3. (a) INCOMING SOLAR RADIATION IN ACCORDANCE WITH THE UNDER-ICE LIGHT MEASUREMENTS. (b) TRANSMITTED SOLAR RADIATION. ALL DATA ARE GRIDDED TO A 2m-BY-2m GRID.