

## Larsen-B and -C Ice Shelf Velocities Revisited

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The Antarctic Peninsula has undergone significant changes over the last two decades. This includes the 1995 collapse of the Larsen-A ice shelf, the 2002 collapse of the Larsen-B ice shelf, and a large iceberg breaking off of Larsen-B remnant ice shelf in 2006. We present a series of ice velocity maps of the Larsen-B (remnant) and -C ice shelves and their tributaries spanning from 1997 to 2013. Velocity Measurements are based on spaceborne SAR data from RADARSAT-1 and -2, ALOS PALSAR, ENVISAT ASAR, TerraSAR-X and TanDEM-X. Our analysis shows that the adjustment period following the Larsen-B collapse continues to this date. The surface velocity of the Larsen B remnant ice shelf continues to increase following the 2002 collapse. The speed at the ice front has more than doubled compared to 2000. Its major tributaries, Flask and Leppard Glacier, also show an increase in velocity over that period. Crane glacier, with no more buttressing from a shelf, saw its speed triple between 2000 and 2006. Since then the speed receded to about twice of what it was before the collapse of the shelf. The Larsen-C ice shelf is well bounded by a number of ice rises and islands and appears relatively stable in terms of surface velocity over the last 13 years.

Our velocity maps will be made available to the science community as Earth Science Data Records (ESDR) as part of a NASA funded MEaSUREs project.

Spaceborne SAR data were made available for this project courtesy of the Polar Space Task Group.

Theme: Changes in WAIS from observations (*The Times They are a-Changin'*)