TPSC-Daily 1.0:
An Animation of Tibetan Plateau Snow Cover-Daily Version 1.0:
February 4, 1997 - March 15, 2012

Product Release Date: June 3, 2014

Animation download: http://shen.sdsu.edu/snowcover/TP_Daily_1997-2012.wmv

Citation of the Work: Shen, S.S.P., R. Yao, J. Ngo, A.M. Basist, N. Thomas, and T. Yao, 2014: Characteristics of Tibetan Plateau snow cover variations based on daily data during 1997-2011, *Theoretical and Applied Climatology*, doi: 10.1007/s00704-014-1185-0.

Product Summary

This is an animation product of the daily snow cover on the Tibetan Plateau (TP) region defined as (25°-45°N, 65°-105°E). The animation can be downloaded from

(a) Maximum snow cover (66.73%) on Feb 6, 2008.

(b) Minimum snow cover (0.52%) on Sept 1, 2009.

(c) Mean snow cover (16.42%) on Nov 25, 1998.

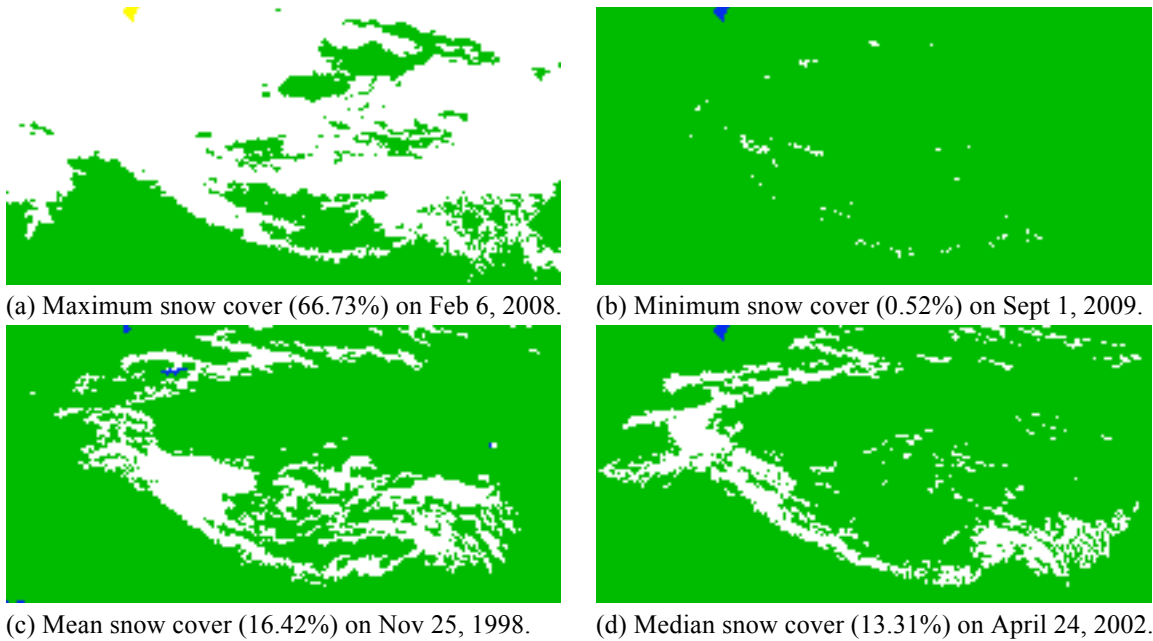(d) Median snow cover (13.31%) on April 24, 2002.

Figure 1: Tibetan Plateau area's snow cover on four different days: (a) maximum snow cover during February 4, 1997 - March 15, 2012, (b) minimum snow cover during January 1, 1997 - December 31, 2011, (c) mean snow cover during January 1, 1997 - December 31, 2011, and (d) median snow cover during January 1, 1997 - December 31, 2011. White is for snow, green for bear land, yellow for ice, and blue for lake water.
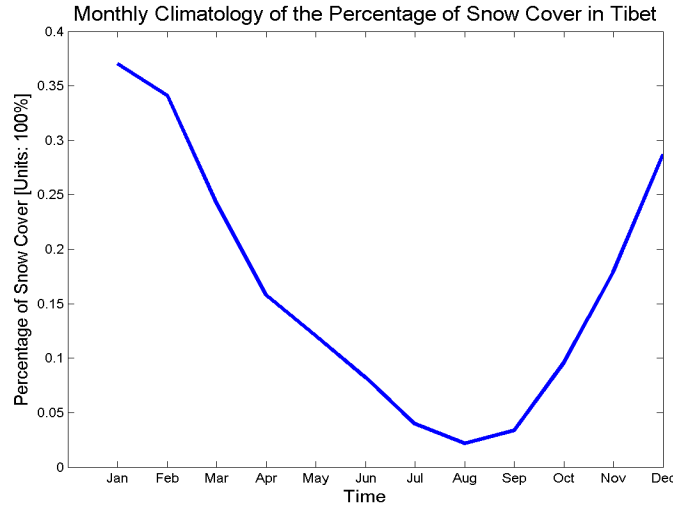
Figure 2: Monthly climatology of the Tibetan Plateau snow cover [Units: 100%]. The annual climatology is 16.42%.
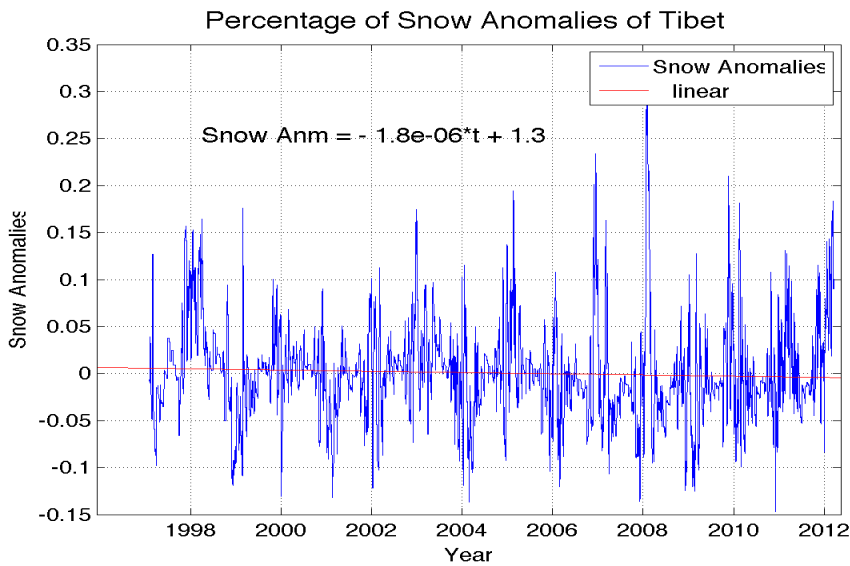

Figure 3: Daily anomalies [Units: 100%] of the TP region's snow cover and their decreasing trends: 4.0% per decade.

The TP region's daily snow cover data are a subset of the Interactive Multisensor Snow and Ice Mapping System (IMS) 24 km-by-24 km snow cover data for the entire Northern Hemisphere. A database of the daily snow cover for the TP region was developed from February 4, 1997 - March 15, 2012. Thus, an animation of the TP snow cover was made as a data product of this research. The maximum percentage snow cover (67%) occurred on February 6, 2008 and the minimum (0.5%) on September 1, 2009. The average snow cover is 16%. The seasonal cycle of the monthly TP snow cover reaches maximum in January (about 37%) and minimum in August (2%). The trend of the snow cover

reduction is 4.0%/10a, with a total reduction of 5.7% from February 4, 1997 - March 15, 2012.

Digital data of Figures 2 and 3 and other relevant products are available upon request.

Contact

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