Calibration and Validation of the SRTM C-Band Mapping System

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The Shuttle Radar Topography Mission (SRTM) is a joint NASA/NIMA and DLR mission that collected C-band and X-band radar interferometric data for over 99% of the world's landmass between –57 deg to 60 deg latitude in February of 2000. These data are being used to generate the most accurate and highest resolution global topographic map of the earth. The C-band radar operated in the ScanSAR mode comprised of four subswaths in order to achieve the 225 km swath required to obtain global coverage during the 11 day mission. Calibrating the system both interferometrically and radiometrically involved challenges both expected and unexpected. Hooks for incorporating calibration data were interspersed throughout the entire processing chain, from the strip map processor to the mosaicking software. In this talk we will present the overall calibration scheme, discuss some of the unique aspects of system calibration, and provide an assessment of the accuracy of the system based on test data consisting of over one third of all the collected.

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