

Multi-frequency Polarimetric Aircraft Repeat Pass Interferometry Results

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The JPL/NASA AIRSAR is a fully polarimetric, multi-frequency radar operating at C, L and P bands on board the NASA DC-8 aircraft. Repeat pass data interferometry data was collected over a number of sites in the US and Australia to ascertain the effects of vegetation on the interferometric phase for various frequencies. The site in Luarel Quad California was extensively ground truthed with corner reflectors and a series of 50 by 50 m vegetation transects distributed cross range in the swath for which the vegetation height, true ground surface elevation, and vegetation type and density were measured. This paper discusses the processing and calibration of these repeat pass measurements and comparison with the in-situ measurements and the TOPSAR derived interferometric measurements.