Development of Circularly Polarized Synthetic Aperture Radar onboard UAV, Aircraft and Microsatellite

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Chiba University develops Circularly Polarized Synthetic Aperture Radar (SAR) onboard microsatellite (150 kg class) for global land deformation monitoring. This presentation explains the progress of development of Circularly Polarized SAR sensors for flight tests using unmanned aerial vehicle (UAV) and Boeing 737-200 as microsatellite prelaunch experiments, including anechoic chamber experiment for full polarization of Circularly Polarized SAR scattering. The progress of microsatellite development is also introduced including parabolic mesh antenna, deployment system, and RF system.

Keywords: Synthetic Aperture Radar, Circular Polarization, Microsatellite, Aircraft, UAV

