

CP-SAR onboard Microsatellite for Global Land Deformation Observation

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Chiba University and Indonesian National Institute of Aeronautics and Space (Lapan) are collaborating to develop Circularly Polarized Synthetic Aperture Radar (CP-SAR) onboard microsatellite (150 kg class) for global land deformation monitoring. This paper explains the progress report of development of CP-SAR sensors (L, C and X bands) for flight tests using unmanned aerial vehicle (UAV) and Boeing 737-200 as microsatellite prelaunch experiments, including anechoic chamber experiment for full polarization of CP-SAR scattering. This paper also introduces application developments of SAR images using InSAR, DInSAR and PS-InSAR techniques for high precision land deformation observation to monitor and predict natural disasters.

Keywords: CP-SAR, microsatellite, land deformation, InSAR, disaster

