Phase Unwrapping in InSAR Processing

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Phase unwrapping is a difficult issue and essential to extract amounts of crustal deformation in synthetic aperture radar (SAR) interferometry. We will report current status of two-dimensional phase unwrapping showing examples of interferograms from ALOS PALSAR data. Residues, polarities, charges, flags or singular points are important keys to solve phase unwrapping problems especially using branch cut algorithm. Main sources of the residues are noise, layover and crustal deformation. We found strange character of a residue type that increased when multilook averaging was performed. We will discuss characteristics of residues.

Keywords: interferogram, InSAR, Phase Unwrapping, ALOS, Crustal Deformation