Examples of the generated interferograms



Orbit: Descending Temporal baseline: 20030401-20050405 Perpendicular baseline: 70 m



Orbit: Ascending Temporal baseline: 20031218-20070107 Perpendicular baseline: 55 m

Two examples of the generated interferograms with relatively high quality in Descending and Ascending orbits are demonstrated. Interferograms are geocoded and the location of the Damavand volcano summit is shown by a black star in each panel. Although a very short temporal baseline is considered, the decorrelation error is evident in the descending interferogram and partly in the ascending one, showing the difficulties of the application of InSAR to this target. The other difficulty that we dealt with is the presence of significant atmospheric and topographic error induced by variable atmospheric conditions, steep topography and the inaccuracy of the DEM. We overcame these difficulties by using a combination of the approaches proposed in earlier works (Berardino et al., 2002; Ferretti et al., 2001), and by following such advanced InSAR analysis we are able to detect reliably spatiotemporal deformation field at those pixels presenting higher quality.

Appendix A