Abstract:
During ERS-1 and ERS-2 missions, the application of synthetic aperture radar interferometry (InSAR) become known as a very important method for topographic mapping and high accuracy surface displacement measurments. Further investigations, however, showed that expected accuracy couldn't be achieved. It appeared that radiowave propagation through the atmosphere causes significant distortion to the observed signal and obscures effects of topography and/or deformations. Therefore, it became clear that in order to achieve very accurate measurements of surface displacements additional knowledge of state of atmosphere during InSAR measurements is necessary. In this paper the possibility of using Medium Resolution Imaging Spectrometer (MERIS) in combination with Advanced SAR (ASAR), both are on board of ENVISAT, for obtaining atmosphere free interferograms is discussed.
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