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TanDEM-X Mission: Overview and Evaluation of intermediate Results

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Abstract. The German Aerospace Center (DLR, Deutsches Zentrum für Luft- und Raumfahrt) currently conducts the bistatic interferometric synthetic aperture radar (SAR) Mission TanDEM-X, which shall result in a DEM of global coverage in an unprecedented resolution and accuracy according to DTED level 3 standard. The mission is based on the two SAR satellites TerraSAR-X and TanDEM-X that have been launched in June 2007 and 2010, respectively. After the commissioning phase of TanDEM satellite and the orbital adjustment the bistatic image acquisition in close formation began end of 2010. The data collection for the mission is scheduled to last about three years, i.e., the bigger part of the required data have been already gathered. Based on this data DLR will conduct several processing steps in order to come up finally with a global and seamless DEM of the Earth's landmass which shall meet the envisaged specifications. Since the entire mission is an endeavor in the framework of a private-public-partnership, the private partner, Astrium, will eventually commercialize the DEM product. In this paper, we will provide an overview of the data collection and the deliverables that will come along with TanDEM-X mission. Furthermore, we will analyze a DEM derived from early stage immediate products of the mission.

[Conference Paper](#) (PDF, 1665 KB)

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