TerraSAR-X is Germany's new radar remote sensing flagship. It carries an advanced high-resolution X-band SAR instrument. The key element of the system is the active phased array antenna nominally operated with a bandwidth of 100 MHz or 150 MHz and an experimental 300 MHz capability. The instrument's flexibility with respect to electronic beam steering and pulse-to-pulse polarization switching allows the acquisition of SAR data in Stripmap, Spotlight and ScanSAR imaging configurations in different polarization modes for a wide range of incidence angles. The mission is implemented in the framework of a public-private partnership between the German Aerospace Center (DLR) and EADS Astrium GmbH Germany and will provide high resolution SAR data products for commercial use and scientific exploitation. Processing of the payload data will be performed at DLR's Payload Ground Segment (PGS) for TerraSAR-X. The central part of PGS is the TerraSAR Multi-Mode SAR Processor (TMSP) focusing the SAR data in a unified way for the different imaging configurations. A wide range of
processing options spanning from phase preserving complex products in slant range geometry
to orthorectified terrain corrected intensity images lead to a comprehensive collection of SAR
product types and variants. During the 5 months lasting commissioning phase the complete
processing chain will be properly tuned and adjusted. The TMSP algorithms have to be
configured, e.g. thresholds for calibration pulse analysis, estimation window sizes for SAR data
analysis, parameterization of estimation algorithms. Also the configuration of product variants
with respect to resolution and radiometric quality will be checked and refined. This paper shortly
reviews the different imaging configurations and product variants and gives a report on the SAR
processor checkout activities and presents the first results.

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