A General SAR Processing algorithm for multi beams and multi modes SAR system

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Abstract

A unified SAR processing algorithm for different SAR operations can lower the costs of development and maintenance of SAR system.

So, a general SAR processing algorithm is proposed. It utilizes the inverse chirp-z transformation for setting the pixel spacings, easily adapted to multi beams. It adopts the azimuth deramping for azimuth signal compression, dealing with the azimuth beam steering, readily applicable to multi modes.

A proper way of setting the azimuth deramping rate and the algorithm flow is explained, and result of tests by KOMPSAT-5 is described.

Keywords - Processing algorithms