ABSTRACT

MOSAICKING FOR INTERFEROMETRIC SYNTHETIC APERTURE RADAR ELEVATION MODELS AND IMAGERY USING 3-D TECHNIQUES

Advances in modern technology are revolutionizing the mapping world. Interferometric Synthetic Aperture Radar is a relatively new sensor, which has unique characteristics that traditional mapping methodology does not address. Various systematic errors resulting from the inherent nature of the sensor and the sensor platform require specific models. The process of providing data that is continuous and seamless requires the use of 3-D mosaicking methods. The process must include systematic error detection and address heterogeneous data quality and include the elevation model and radar imagery. Demonstration of a mosaicking process is used to provide a comparison of modeled versus unmodelled errors.

Derrick Shea Peckham
August 2003