

## **[I4] Multi-Beam SAR**

The goal of this project is to develop a general detection theory to guide the processing of images from synthetic aperture radar (SAR) along track interferometers (ATI) with greater than two beams. Such a detection theory should allow the construction of constant false alarm rate (CFAR) detection rules for small, slow moving targets in high clutter environments. The technical approach taken is to decompose the multi-beam covariance matrix via an Eigen decomposition and investigate the use of the decomposition parameters and Eigenvalues as ground moving target indication (GMTI) metrics.

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