

RADARSAT Constellation Mission: Image Quality and Calibration Status

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Abstract

The RADARSAT Constellation Mission (RCM) is Canada's new Synthetic Aperture Radar (SAR) mission. RCM consists of a constellation of three C-band SAR satellites that were launched in June 2019.

In this presentation, a summary of the current image quality and calibration performance of the three satellites will be given. This will include results from the initial calibration activities that have been accomplished during the RCM commissioning phase. More specifically, the following aspects of the calibration will be presented: radiometry, geolocation, impulse response, pointing, polarimetric calibration (compact-pol and quad-pol). Since the 3 RCM satellites are flying in a tight orbital tube 4 days apart, results from Coherent Change Detection (CCD) calibration will also be presented.

We expect to show a selection of RCM images to illustrate the image quality performance and utility for different applications.

Keywords - Calibration methodology and techniques