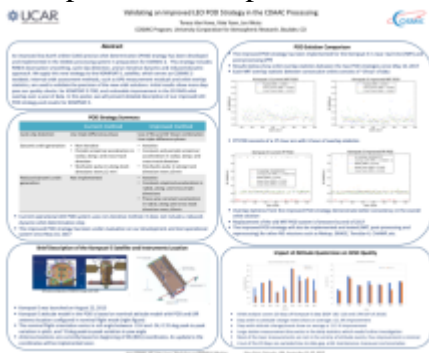Teresa
VanHove
COSMIC
Jan Weiss, COSMIC
Yoke Yoon, COSMIC
Poster

An improved low Earth orbiter (LEO) precise orbit determination (POD) strategy has been developed and implemented in the CDAAC processing system in preparation for COSMIC-2. This strategy includes RINEX observation smoothing, cycle slip detection, and an iterative dynamic and reduced dynamic approach. We apply this new strategy to the KOMPSAT-5, Metop-A, and Metop-B satellites, which serve as COSMIC-2 testbeds.

Internal orbit assessment methods, such as GPS measurement residuals and orbit overlap statistics, are used to validate the precision of the new orbit solutions. Initial results show more days pass our quality checks for KOMPSAT-5 POD, and noticeable improvement in the 3D RMS orbit overlap over a year of data. In this poster, we will present detailed description of our improved LEO POD strategy and additional results for KOMPSAT-5, Metop-A and Metop-B.

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