Pre-Launch Assessment of NPOESS/NPP VIIRS Land Algorithms

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The NPOESS system will produce a wide range of land products from instantaneous swath products to time averaged/composited products on a nominal 1km sinusoidal grid.

The swath products consist of the surface reflectance IP (Intermediate Product), the surface albedo EDR (Environmental Data Record), the vegetation index EDR, the Land surface temperature EDR, the active fires EDR and the Surface type EDR. Many of these swath products are then gridded and composited to produce the following gridded IPs: Monthly gridded vegetation index, Monthly gridded brightness temperatures, Monthly gridded surface reflectance, Quarterly surface type, Daily surface reflectance collection and 17 day Gridded land albedo.

This talk will give an overview of the algorithms used by NPOESS to produce these products and provide insight as to their generation, processing and use. When possible a connection to heritage algorithm will be pointed out and an initial evaluation of the performance of the algorithms using synthetic and proxy datasets will also be presented.