OCEAN OPTICS XXIV
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Monday, October 8
Poster Session 1
16:00–18:00

Poster 105

INFLUENCE OF VARIABLE ATMOSPHERIC CORRECTION PROCESSING ON SATELLITE IMAGERY ON PHYSICS-BASED SEAGRASS DETECTION ALGORITHM

This study examined the effect of different atmospheric correction methods on the surface reflectance and the determination of seagrass distribution and density. The methods employed the standard Harris ENVI package algorithms for radiometric corrections to top of atmosphere radiance and reflectance followed by atmospheric contribution corrections to the scene. Calibration approach incorporated both the image metadata gains and offsets as well as the post launch vicarious calibration coefficients. The resulting images were corrected for atmospheric contribution by application of a dark object subtraction technique that incorporated a Rayleigh scattering approximation of the shorter wavelengths to the atmospheric contribution. Modtran and 6S was also applied to the radiometric calibrated data for alternative approach to atmospheric contribution. The resulting seagrass density maps demonstrate the sensitivity the preprocessing steps have on the final estimates for seagrass density and subsequent carbon determinations.

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