

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Assessing and Mitigating the Global Freshwater Crisis (6)

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FIRST LOOK ON WATER SPECTRUM OF FRESH WATER SYSTEMS FROM HYPSON-1
ALONGSIDE SENTINEL-2/3

Abstract

Freshwater systems play a critical role in mitigating the ongoing global challenges of changing climate and water stress. The remote monitoring of freshwater is a uniquely powerful tool for combating these crises. The vantage point of space offers a unique opportunity to make vital measurements related to freshwater. This work focuses on HYPSON-1, a 6U CubeSat mission capable of rapidly recording hyperspectral images of targeted areas and compares it to the multispectral measurements as seen by the Sentinel-2/3 of the ESA Copernicus program. This work presents and discusses aspects related to error sources in remote sensing spectral signals from freshwater systems, conventional algorithms for biogeochemical parameter retrieval, and alternative data-driven algorithms.