

Performance of the Hawkeye Ocean Color Instrument on the Seahawk Satellite

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The Seahawk CubeSat satellite was launched into orbit in December 2018, and since then the Hawkeye ocean color instrument on board has collected over 5000 images of the earth's ocean.

HawkEye has spectral characteristics similar to SeaWiFS, but with 8 times finer resolution and a smaller field of view more appropriate for lakes, rivers, and near-shore terrestrial environments. With a volume of only $10 \times 10 \times 10$ cm (a CubeSat 1U), it can produce 8 bands of image data in a single pass, each with 1800×6000 pixels, with a resolution of 120 meters per pixel. This poster presents a summary of the mission, including example images from space, Hawkeye design and calibration details, optical performance challenges, and orbital operation. Hawkeye is a 1U sized sensor weighing only 1 kilogram, but its performance rivals much larger instruments such as MODIS Aqua.

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