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NEW LIGHT-WEIGHT STEREOSOPIC SPECTROMETRIC AIRBORNE IMAGING TECHNOLOGY FOR HIGH-RESOLUTION ENVIRONMENTAL REMOTE SENSING – CASE STUDIES IN WATER QUALITY MAPPING

E. Honkavaara, T. Hakala, J. Kirjasniemi, A. Lindfors, J. Mäkynen, K. Nurminen, P. Ruokokoski, H. Saari, and L. Markelin
Finnish Geodetic Institute, Department of Remote Sensing and Photogrammetry, Geodeetinrinne 2, P.O. Box 15, FI-02431 Masala, Finland
Lentokuva Vallas Oy, Taitajankuja 2 A, 33960 PIRKKALA, Finland
Luode Consulting Oy, Sandfallintie 85, FI-21600 Parainen, Finland
VTT Technical Research Centre Finland, P.O.Box 1000, FI-02044 VTT, Finland

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Abstract. A new Fabry-Perot interferometer (FPI) based light-weight spectrometric camera provides new possibilities for environmental remote sensing applications. The sensor collects spectral data cubes with adjustable spectral properties in a rectangular image format, and so stereoscopic data can be obtained by gathering images in block structures with overlapping images. The FPI camera thus enables stereoscopic, spectrometric remote sensing applications with light-weight, low-cost airborne imaging systems. Our objective is to investigate the processing and use of this new imaging technology in a water quality mapping. We carried out imaging campaigns over a small lake in summer and autumn 2012 using a light-weight unmanned airborne vehicle (UAV) and a small manned airborne vehicle (MAV). We present the preliminary results of these campaigns.

[Conference Paper](#) (PDF, 746 KB)

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