



## **Study on a Radiometric and spectral requirements of a Post-EPS Visible/Infrared Imager**

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We will present results of a study on Radiometric and spectral requirements for EU-METSATs Post EPS Visible/ Infrared Imager (VII). VII will be an imaging radiometer capable of measuring thermal radiance emitted by the Earth and Solar backscattered radiation in presumably 15 channels. However 47 channels have already been selected as candidates. The goal of the study is i) to find the 15 most appropriate channels and ii) to optimize these channels with respect to spectral position and bandwidth. On the basis of simulated measurements for a range of scenarios the instrumental requirements are optimized with respect to potential atmospheric products (cloud optical thickness, cloud top height, effective radius and cloud phase, water vapor column and aerosol optical thickness). The optimization is based on a method by Roger (1996), calculating and maximizing the information content, represented as a reduction in entropy or as the degrees of freedom of the signal with respect to the corresponding observation.