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# Clouds-Aerosols-Precipitation Satellite Analysis Tool (CAPSAT)

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Abstract. A methodology for representing much of the physical information content of the METEOSAT Second Generation (MSG) geostationary satellite using red-green-blue (RGB) composites of the computed physical values of the picture elements is presented. The physical values are the solar reflectance in the solar channels and brightness temperature in the thermal channels. The main RGB compositions are (1) "Day Natural Colors", presenting vegetation in green, bare surface in brown, sea surface in black, water clouds as white, ice as magenta; (2) "Day Microphysical", presenting cloud microstructure using the solar reflectance component of the 3.9 µm, visible and thermal IR channels; (3) "Night Microphysical", also presenting clouds microstructure using the brightness temperature differences between 10.8 and 3.9 µm; (4) "Day and Night", using only thermal channels for presenting surface and cloud properties, desert dust and volcanic emissions; (5) "Air Mass", presenting mid and upper tropospheric features using thermal water vapor and ozone channels. The scientific basis for these rendering schemes is provided, with examples for the applications. The expanding use of these rendering schemes requires their proper documentation and setting as standards, which is the main objective of this publication.

◻ Final Revised Paper (PDF, 5762 KB)   ◻ Discussion Paper (ACPD)

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