

METEOSAT'S 3-CHANNEL VIEW

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In addition to the conventional visible (VIS, left image) and infrared (IR, right image) channel sensors, the new European geostationary satellite, Meteosat, has a water vapor channel sensor (WV, center image) that provides a previously unobtainable 5-km spatial resolution view of mid-tropospheric water vapor. Color changes in the WV image have the same correspondence as in the IR image, i.e., white regions are relatively colder/wetter than the dark regions which are warmer/drier.

These simultaneous images, when viewed together, can give new insights into those processes that affect cloud/water-vapor patterns. For example, over North Africa's western bulge (center image), a broad convergent band of water vapor changes color from light grey (arrow 1) to light white (arrow 2) and narrows eastward, implying the presence of an upward vertical motion field not otherwise apparent from examination of either the VIS or the IR images.

