



Detailed Instrument design for a post EPS Microwave Mission

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The European Space Agency has undertaken two parallel pre-phase A studies to define instrument concepts for a post EPS (EUMETSAT Polar System) microwave mission at pre-phase A level. Starting with the user needs resulting from the post-MSG (Meteosat Second Generation) consultation process, two different mission concepts have been developed for the frequency range from 18 to 220 GHz.

One concept includes two separate instrument, an AMSU (Advanced Microwave Sounding Unit) like cross track scanner providing improved spatial and radiometric resolution and an EGPM (European contribution to the Global Precipitation Mission) like conically scanning imager.

In the second mission both imaging and sounding are covered by a conically scanning imager/sounder. The instrument achieves the required horizontal resolution for sounding applications but is marginally compliant with the very demanding spatial resolution requirements for imaging applications.

Both mission concepts will be introduced and their potential for an operational post EPS microwave mission will be discussed.