

Future Plans of INSAT satellites for meteorological applications

This paper describes the future plans of INSAT-3 series of satellites for meteorological applications. The INSAT-3D satellite scheduled for launch in 2005 will incorporate major improvements in meteorological capabilities. It will carry a 6-channel imager of improved resolution and a 19-channel sounder and will have capabilities somewhat identical to the existing satellites of GOES I-M series of the USA.

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1.1 INSAT -3A

The next satellite of INSAT series i.e., INSAT-3A is scheduled for launch in December, 2002. For meteorological services it will have VHRR and CCD payloads similar to INSAT-2E.

1.2 INSAT-3D

Under the INSAT -3 program, a new Geostationary Meteorological Satellite is being designed. It will have an advanced imager with six channels and a Nineteen channel sounder for derivation of atmospheric temperature and moisture profiles. It will provide 1 km resolution imagery in Visible band, 4 km resolution in IR band and 8 Km in water vapour channel. This new satellite INSAT - 3D is scheduled for launch by the end of 2004 or beginning of 2005 and will provide much improved capabilities to the users of meteorological data from satellites.

A New ground segment is also being planned for reception and processing of data from this satellite.

Appendix-B gives brief technical details of above two future satellites of INSAT-3D series.

Appendix-B**INDIAN NATIONAL SATELLITE (INSAT) – FUTURE****INSAT-3: Geostationary Satellite Series**

Satellite	Launch Date	Met. Payload with Wavelength Bands	Major Applications
INSAT-3A (Similar to INSAT-2E)	December, 2002	1. VHRR : payload Band : 0.5 – 0.75 μ m 10.5 – 12.5 μ m 5.7 – 7.5 μ m 2. CCD Payload Bands : 0.63 -0.79 μ m 0.77-0.86 μ m 1.55-1.70 μ m	<ul style="list-style-type: none"> • Monitoring cyclones & monsoon • CMV Winds • OLR • Rainfall Estimation • Mesoscale features • Flood/intense precipitation advisory • Snow detection
INSAT-3D	End of 2004 or 1 st Quarter of 2005	1. Imager Bands : 0.55 - 0.75 μ m 1.55 - 1.70 μ m 3.80 - 4.00 μ m 10.2 - 11.2 μ m 11.5 - 12.5 μ m 5.7 - 7.1 μ m 2. Sounder Bands : 19 channels between 0.69-14.71 μ m	<p style="text-align: center;">-do-</p> <p>Temperature and humidity profiles in the atmosphere.</p>