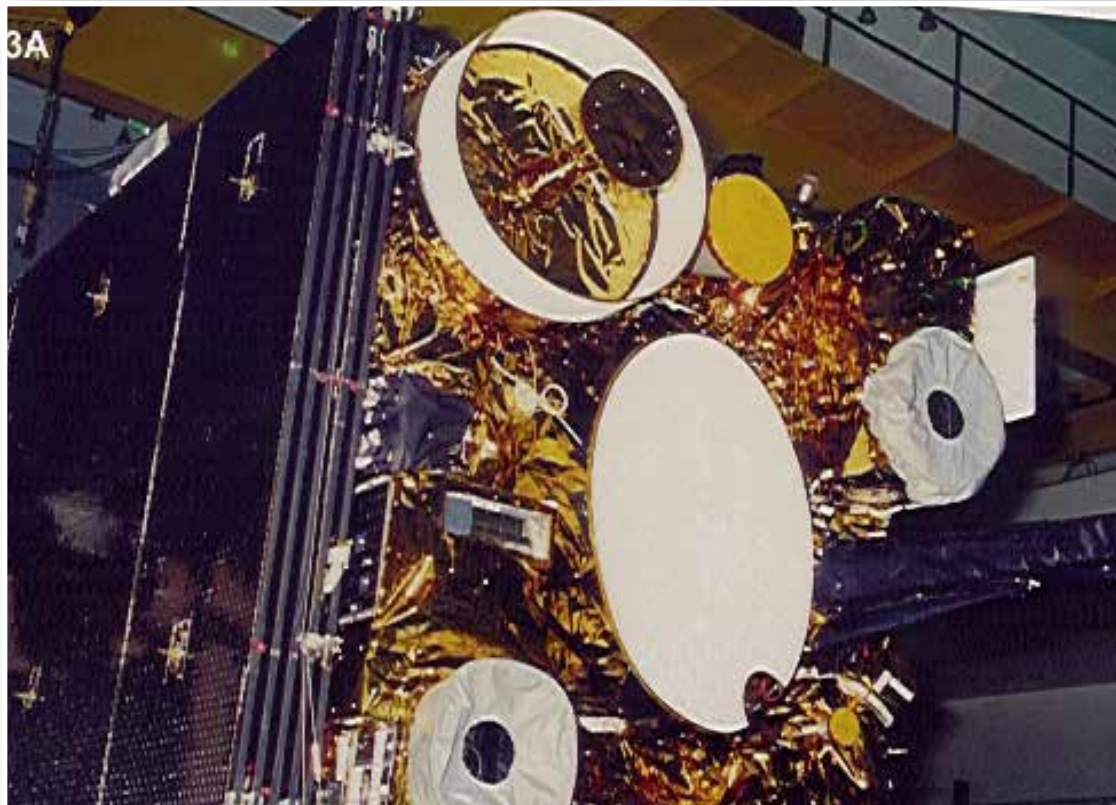
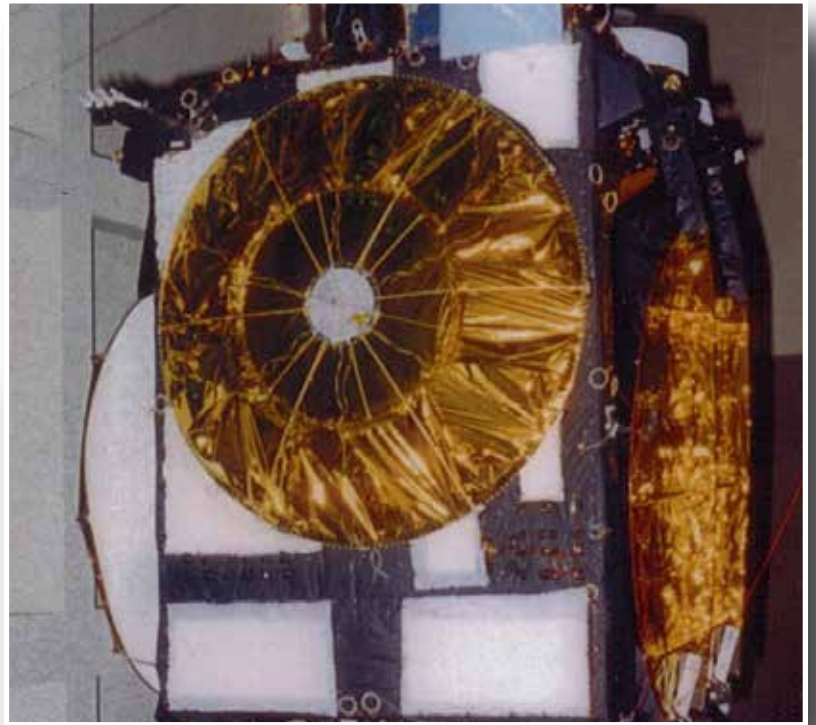
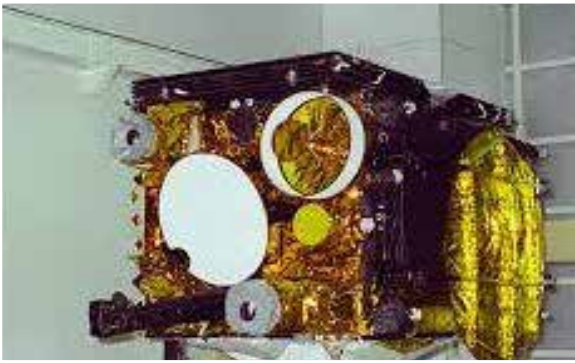


# INSAT-3A Mission

10 April, 2003

## THE MISSION

The Indian National Satellite (INSAT-3A) on-board the Ariane 5-V160 lifted-off from Kourou, French Guiana on April 10, 2003. INSAT-3A, the 3<sup>rd</sup> satellite in INSAT-3 series is a multipurpose satellite for providing telecommunications, television broadcasting, meteorological and search & rescue services.



*Ariane 5-V160*

# INSAT-3A

## THE SATELLITE

The spacecraft employed the I-3K bus with single sided solar array and power generating capability of around 3,100 W. It carried 24 transponders – 12 operating in the normal C-band, 6 in extended C-band and 6 in Ku-band.

INSAT-3A also carried a Ku-band beacon. For meteorological observations, INSAT-3A carried a three channel Very High Resolution Radiometer (VHRR) with 2 km resolution in visible band and 8 km resolution in infrared and water vapour band. In addition, INSAT-3A carried a Charge Coupled Device (CCD) Camera which operated in the visible and short wave infrared bands providing a spatial resolution of 1 km. A Data Relay Transponder (DRT) operating in UHF band was incorporated for real time hydro meteorological data collection from unattended location on land and river basins. The data is then relayed in extended C-band to a central location. INSAT-3A also carried another transponder for Satellite Aided Search & Rescue (SAS & R) as part of India's contribution to the international Satellite Aided Search Programme.

## SPECIFICATIONS

<b>Weight</b>	2950 kg
<b>Power</b>	Solar Array: 3100 W Batteries: Ni-H2 70 Ah
<b>Stabilization</b>	3-axis body stabilized using Momentum / Reaction Wheels, Solar Flaps, Magnetic Torquers
<b>Type of Satellite</b>	Communication & Meteorological
<b>Payloads</b>	<b>1. Communication Payload</b> <ul style="list-style-type: none"><li>• 12 C-band Transponders</li><li>• 6 Upper Extended C-band Transponders</li><li>• 6 Ku-band Transponders</li><li>• 1 Satellite Aided Search &amp; Rescue Transponder</li></ul> <b>2. Meteorological Payload</b> <ul style="list-style-type: none"><li>• Very High Resolution Radiometer (VHRR)</li><li>• Charged Coupled Device (CCD)</li><li>• Data Relay Transponders (DRT)</li></ul>
<b>Mission Life</b>	12 Years

