

# VISIBLE/INFRARED MEDIUM-RESOLUTION\* SPACECRAFT - Table 1

## Agricultural, Urban, Land, Coastal and Coral Reef Ecological Assessments

<u>SATELLITE</u>	<u>SPONSOR</u>	<u>OCEAN-RELATED SENSORS TECHNICAL DETAILS &amp; COMMENTS</u>	<u>LAUNCH</u>	<u>STATUS</u>
LANDSAT-1 LANDSAT-2 LANDSAT-3	NASA/NOAA	MSS (3 vis & 1 ir bands), ~80m resolution same as LANDSAT-1 same as LANDSAT-1 & 2	#1, 1972 - 1978 #2, 1975 - 1982 #3, 1978 - 1983	Completed Completed Completed
SPACE SHUTTLE	NASA	Astronaut hand-held photographs using Hasselblad & Nikon cameras	1981	On-going
LANDSAT-4	NASA/NOAA	MSS (3 vis & 1 ir bands), ~80m resolution TM (3 vis & 4 ir bands), ~30m resolution	1982 - 1992	Completed
LANDSAT-5	NASA/NOAA	same as LANDSAT-4	March 1984	Operational
SPOT-1, 2 & 3 (#3 failed Nov 1996)	CNES	HRV PAN, ~10m resolution HRV XS (2 vis & 1 ir bands), ~20m resolution	#1 - '86, #2 - '90, #3 - '93	Operational (#3 Fini 1996)
IRS-1A & 1B	INDIA	LISS-I (3 vis & 1 ir bands), 72m resolution LISS-II (3 vis & 1 ir bands), ~36m resolution	1A - 1988 1B - 1991	Off end of 1994 Operational?
LANDSAT-6	NASA/NOAA	ETM & PAN (30m & 15m resolution)	October 1993	Failed at Launch
IRS-1C	INDIA	LISS-III (3 vis & 2 ir bands), ~23m resolution PAN (5.8m resolution), stereo WiFS (1 vis & 1 nir), 188m resolut., 810km swath	December 1995	Operational
MIDORI (ADEOS-1)	NASDA	AVNIR-1 (3 vis & 1 nir bands), ~ 16m resolution PAN (~8m resolution), 80km swath	August 1996	Failed June 1997

\*Resolution is ~5-80m

## VISIBLE/INFRARED MEDIUM-RESOLUTION\* SPACECRAFT - Table 2

### Agricultural, Urban, Land, Coastal and Coral Reef Ecological Assessments

<u>SATELLITE</u>	<u>SPONSOR</u>	<u>OCEAN-RELATED SENSORS TECHNICAL DETAILS &amp; COMMENTS</u>	<u>LAUNCH</u>	<u>STATUS</u>
IRS-1D	INDIA	LISS-III (3 vis & 2 ir bands), ~23m resolution PAN (5.8m resolution), stereo, 70km swath WiFS (1 vis & 1 nir), 188m resolut., 810km swath HRV XS (2 vis & 2 ir bands), ~20m resolution Vegetation-1 (2 vis & 2 ir bands), 1km resolution	Sept 1997	Operational
LANDSAT-7	NASA-NOAA	Adv.TM (4 vis & 3 ir & PAN bands) ~15m resolution	April 15, 1999	Operational
CBERS-1 (Zi Yuan 1) (China-Brazil Earth Resources Satellite)	CHINA-BRAZIL	CCD (PAN & MS, 3 bands), 20m resolution IR/MSS (Multi-Spectral Scanner, 4 bands), 80-160m resolution VS/WFI (Wide Field Imager, 2 bands) 260m resolution	October 14, '99 Long March 4B Launch	Operational
EO-1* (Earth Orbiter)	NASA	MS/ALI (6 [LANDSAT/ETM+] + 3 bands) 30m resolution, 37km swath PAN/ALI, 10m resolution, 37km swath Hyperion/HS (0.4-2.5 $\mu$ m, 220 bands) 10m resolution, 7km swath LAC/HS (0.9-1.6 $\mu$ m, 256 bands) 250m resolution, 185km swath width	April 13, 2000	Approved
CBERS-2 (Zi Yuan 2) (China-Brazil Earth Resources Satellite)	CHINA-BRAZIL	CCD (PAN & MS, 3 bands), 20m resolution IR/MSS (Multi-Spectral Scanner, 4 bands), 80-160m resolution VS/WFI (Wide Field Imager, 2 bands) 260m resolution	Late-2000 Long March 4B Launch	Approved

\*Resolution is ~5-80m, \*Hyperspectral

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## VISIBLE/INFRARED MEDIUM-RESOLUTION\* SPACECRAFT - Table 3

### Agricultural, Urban, Land, Coastal and Coral Reef Ecological Assessments

<u>SATELLITE</u>	<u>SPONSOR</u>	<u>OCEAN-RELATED SENSORS TECHNICAL DETAILS &amp; COMMENTS</u>	<u>LAUNCH</u>	<u>STATUS</u>
NEMO* (Navy Earth Map Observer) (Hyperspectral)	US Navy Space Sys. Loral	HS (COIS, 210 bands), 30m resolution, 30km swath PAN, 5m resolution	June 2001 (Russian Rocket Launch)	Approved
SPOT-5	CNES	HRV PAN (~2.5m resolution) HRV XS (2 vis & 2 ir bands), ~10m resolution	Early -2002	Approved
ARIES-1* (Australian Resource Information & Environmental Satellite) (Hyperspectral)	AUSTRALIA (Auspace Ltd.)	HS (96 bands), 30m resolution, ~15km swath PAN, 10m resolution Sun sync. orbit	Early-2002+	Approved
ALOS	NASDA	PALSAR (L-band, variable off-nadir) Prism PAN (3 bands), ~2.5m resolution, 35km swath, stereo mapping AVNIR-2, MS (4 bands), ~10m resolution, 70 km swath	2002+	Approved

\*Resolution is ~5-80m, \*Hyperspectral