

FUTURE-VISIBLE/INFRARED HIGH-RESOLUTION* SPACECRAFT - Table 1

Military, Civil, and Scientific Mapping - Monitoring and Research Urban, Land, Agricultural, Coastal and Coral Reef Applications

| <u>SATELLITE</u> | <u>SPONSOR</u> | <u>OCEAN-RELATED SENSORS TECHNICAL DETAILS & COMMENTS</u> | <u>LAUNCH</u> | <u>STATUS</u> |
|---|---|--|---|--|
| SSTI/LEWIS (Hyperspectral) | NASA/TRW | HSI (PAN), 5m resolution HIS (384 [ms] bands), 30m resolution LEISA (atmospheric gases) | August 1997 | Failed 1997 Lost Power |
| EarlyBird | Earth-Watch Ball Brothers | HRC (PAN), 3m resolution WFC (3 bands), 15m resolution | December 1997 (Russia Start-1) | Failed Launch |
| SSTI/Clark | NASA/CTA | HRC (PAN), 3m resolution WFC (3 bands), 15m resolution MAPS (atmospheric gases) | | Canceled |
| IKONOS-1 | Space Imaging Corp., Samsung & EOSAT | CRSS PAN, 1m resolution, 11km FOV CRSS MS (4 vis bands), 4m resolution Accurate digital elevation models | April 27, 1999 Athena-2 Launch | Launch Failure |
| IKONOS-2 | Space Imaging Corp., Samsung & EOSAT | CRSS PAN, 1m resolution, 11km FOV CRSS MS (4 vis bands), 4m resolution Accurate digital elevation models | Sept 24, 1999 Athena-2 Launch | Operational |
| EROS Constellation - Earth Remote Operation System A Series: 2000 & 2001+ B Series: 2002 to 2004 | West Indian Space (Israel Aircraft Inds. & Core Software Technology) | PAN (CCD), ~1m resolution, ~16km swaths Multi-spacecraft in various orbits, rapid processing & distribution; & will not carry onboard recorder. | Summer 2000 A-1 launch by Russian Start-1 | Approved for a fleet of 8 satellites |
| QuickBird-1 (Cosmos Launch) | Earth-Watch | HRC-PAN, 1m resolution, 22km swath WFC(3 bands, 1 nir), 4m resolution | Summer 2000 | Approved |

- Resolution is ~1-10m. Others under consideration by private and government sectors.

FUTURE-VISIBLE/INFRARED HIGH-RESOLUTION* SPACECRAFT - Table 2

Military, Civil, and Scientific Mapping - Monitoring and Research Urban, Land, Agricultural, Coastal and Coral Reef Applications

| <u>SATELLITE</u> | <u>SPONSOR</u> | <u>OCEAN-RELATED SENSORS TECHNICAL DETAILS & COMMENTS</u> | <u>LAUNCH</u> | <u>STATUS</u> |
|--------------------------------|--|--|---------------|---------------|
| OrbView-3 (or 4?) | OrbitalScience Corp. (OrbImage) & partners | Pan, 1m resolution, 6km swath MS(color), ~4m resolution | November 2000 | Approved |
| IRS-P5 (CARTOSAT-1) | INDIA (IRSO) | VS (HR-PAN), 2.5m resolution 30km swath, stereo | Late-2000+ | Approved |
| OrbView-4 | Orbital Sciences Corp. (OrbImage) & partners | PAN, 1m resolution, 6km swath MS(color), ~4m resolution Hyper-Spec (color), ~8m resolution, | Early-2001+ | Approved |
| QuickBird-2 (Cosmos Launch) | Earth-Watch Ball Aerospace | HRC-PAN, 1m resolution, 22km swath WFC (3 bands, 1 nir), 4m resolution | Mid-2001 | Approved |
| SPOT-5 | CNES | HRV PAN (~2.5m resolution) HRV XS (2 vis & 2 ir bands), ~10m resolution | Early- 2002 | Approved |
| IRS-P6 (RESOURCESAT-1) | INDIA (IRSO) | VS/NIR (AWiFS), 3 bands, ~200m resolution, ~800km swath NIR/VIS (LISS-IV, 3 bands), 2.5m resolution, 23.5km swath, stereo | 2002 | Approved |
| ROCSAT-2 | TAIWAN (Matra Marconi) | PAN, ~2 m resolution, 60 km swath MSS, 15 m resolution, stereo capability | 2002+ | Approved |

- Resolution is ~1-10m. Others under consideration by private and government sectors.

FUTURE-VISIBLE/INFRARED HIGH-RESOLUTION* SPACECRAFT - Table 3

Military, Civil, and Scientific Mapping - Monitoring and Research Urban, Land, Agricultural, Coastal and Coral Reef Applications

| <u>SATELLITE</u> | <u>SPONSOR</u> | <u>OCEAN-RELATED SENSORS</u> <u>TECHNICAL DETAILS & COMMENTS</u> | <u>LAUNCH</u> | <u>STATUS</u> |
|------------------|----------------|--|---------------|---------------|
| ALOS | NASDA | PALSAR (L-band, variable off-nadir pointing) Prism PAN (3bands), ~2.5 m resolution 35km swath, stereo mapping AVNIR-2 MS (4bands), ~10m resolution 70km swath | 2002+ | Approved |
| CARTOSAT-2 | INDIA (ISRO) | VIS (1m resolution) | 2003 | Approved |

* Resolution is ~ 1-10m. Others under consideration by private and government sectors.