

## **Appendix F**

### **Airborne Sensors**

Presented here is a short list of common airborne sensors and their general performance capabilities. For a larger list of airborne sensors (acronyms and full names) see  
<http://carstad.gsfc.nasa.gov/Topics/instrumentlist.htm> and  
[http://ioc.unesco.org/oceanteacher/resourcekit/M3/Data/Measurements/Instrumentation/gcmd\\_sensors.htm](http://ioc.unesco.org/oceanteacher/resourcekit/M3/Data/Measurements/Instrumentation/gcmd_sensors.htm).

Sensor	Spatial Resolution (metric)	Band/ Wavelength or Frequency	Application	General Information
AC	250	0.89-1.58μm	Used to atmospherically correct high-spatial, low-spectral resolution multispectral sensors	<a href="http://eo1.gsfc.nasa.gov/Technology/AtmosCorr.htm">http://eo1.gsfc.nasa.gov/Technology/AtmosCorr.htm</a>
ACE-FTS	0.02–1cm 4km vertical resolution	2-13 μm (infrared)	Measures the temperature, vertical distribution of trace gases and aerosols in thin clouds	<a href="http://www.space.gc.ca/asc/eng/csa_sectors/space_science/atmospheric/scisat/fts.asp">http://www.space.gc.ca/asc/eng/csa_sectors/space_science/atmospheric/scisat/fts.asp</a>
ATM	10- to 20-cm vertical resolution	LIDAR-based sensor (microwave)	Beach topography, ice mapping, sea-surface elevation, and wave morphologies	<a href="http://aol.wff.nasa.gov/ATMindex.html">http://aol.wff.nasa.gov/ATMindex.html</a>
AVIRIS	4 – 20 m	400 - 2500 nm	Aerosols, ice, and water quality mapping and ecologic and geologic applications	<a href="http://popo.jpl.nasa.gov/html/aviris_overview.html">http://popo.jpl.nasa.gov/html/aviris_overview.html</a> and <a href="http://popo.jpl.nasa.gov/html/aviris_free_data.html">http://popo.jpl.nasa.gov/html/aviris_free_data.html</a>
CAMIS	26 – 156 cm	450, 550, 650 and 800 nm	Terrestrial and oceanographic applications	<a href="http://www.flidata.com/prod02.htm">http://www.flidata.com/prod02.htm</a>
CASI	0.5 – 10 m	400 – 1000nm	Environmental monitoring, forestry, pipeline engineering, military, agriculture, and water quality	<a href="http://www.itres.com/">http://www.itres.com/</a>
EMERGE	0.3 – 0.6 m	Visible and infrared	Land use and agricultural surveys	<a href="http://www.emergeweb.com/">http://www.emergeweb.com/</a>
HYDICE		400 - 2500 nm	Agriculture, forestry, environmental, mapping, disaster management, and surveillance	<a href="http://www.oss.godrich.com/HyperspectralDigitalImagerCollectionExperiment.shtml">http://www.oss.godrich.com/HyperspectralDigitalImagerCollectionExperiment.shtml</a>
HYMAP	2 – 10 m	VIS,NIR, SWIR, MIR and TIR	Agriculture, forestry, environmental, urban, geologic, and soil mapping	<a href="http://www.intspec.com/">http://www.intspec.com/</a>
IFSAR	Can at collect <1 m	Microwave region	Topography	
JPL Airsar	100 m	Microwave region	All-weather terrain imager. Can penetrate forest canopy	<a href="http://airsar.jpl.nasa.gov/index.html">http://airsar.jpl.nasa.gov/index.html</a>
SHOALS	4 – 8 m	Visible and infrared	Bathymetry	<a href="http://shoals.sam.usace.army.mil/">http://shoals.sam.usace.army.mil/</a>
TIMS	~1 – 50 m	Thermal infrared (8-12 μm)	Mineral mapping and archeologic applications	<a href="http://www.dfrc.nasa.gov/airsci/ER-2/tims.html">http://www.dfrc.nasa.gov/airsci/ER-2/tims.html</a>