What are the band designations for t satellites?

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Question:

What are the band designations for the Landsat satellites?

Answer:

The **Landsat Multispectral Scanner (MSS)** was carried on Landsats 1-5, and i spectral bands with 60 meter spatial resolution. The approximate scene size is 185 km east-west (106 mi by 115 mi). Specific band designations differ from La Landsats 4 and 5.

Landsat 1-5 Multispectral Scanner (MSS)	**Landsat 1-3**	**Landsat 4-5**	**Wavelength (micrometers)**	**Resolu (meter**
	Band 4 - Green	Band 1 - Green	0.5-0.6	60*
	Band 5 - Red	Band 2 - Red	0.6-0.7	60*
	Band 6 - Near Infrared (NIR)	Band 3 - Near Infrared (NIR)	0.7-0.8	60*
	Band 7 - Near Infrared (NIR)	Band 4 - Near Infrared (NIR)	0.8-1.1	60*

* Original MSS pixel size was 79 x 57 meters; production systems now resamp

The **Landsat Thematic Mapper (TM)** sensor was carried on Landsat 4 and La consist of six spectral bands with a spatial resolution of 30 meters for Bands 1

thermal band (Band 6). The approximate scene size is 170 km north-south by
by 114 mi).

Landsat 4-5	Bands	Wavelength (micrometers)	Resolu (meter
Thematic Mapper (TM)	Band 1 - Blue	0.45-0.52	30
	Band 2 - Green	0.52-0.60	30
	Band 3 - Red	0.63-0.69	30
	Band 4 - Near Infrared (NIR)	0.76-0.90	30
	Band 5 - Shortwave Infrared (SWIR) 1	1.55-1.75	30
	Band 6 - Thermal	10.40-12.50	120* (
	Band 7 - Shortwave Infrared (SWIR) 2	2.08-2.35	30

* TM Band 6 was acquired at 120-meter resolution, but products are resample

The **Landsat Enhanced Thematic Mapper Plus (ETM+)** sensor is carried on L
consist of seven spectral bands with a spatial resolution of 30 meters for Band
resolution for Band 8 (panchromatic) is 15 meters. All bands can collect one of
high) for increased radiometric sensitivity and dynamic range, while Band 6 co
gain (Bands 61 and 62, respectively) for all scenes. The approximate scene size
by 183 km east-west (106 mi by 114 mi).

Landsat 7	Bands	Wavelength (micrometers)	Resolu (meter
Enhanced Thematic Mapper Plus (ETM+)	Band 1 - Blue	0.45-0.52	30
	Band 2 - Green	0.52-0.60	30
	Band 3 - Red	0.63-0.69	30
	Band 4 - Near Infrared (NIR)	0.77-0.90	30
	Band 5 - Shortwave Infrared (SWIR) 1	1.55-1.75	30
	Band 6 - Thermal	10.40-12.50	60 * (3
	Band 7 - Shortwave Infrared (SWIR) 2	2.09-2.35	30
	Band 8 - Panchromatic	.52-.90	15

* ETM+ Band 6 is acquired at 60-meter resolution, but products are resampled

Landsat 8 Operational Land Imager (OLI) and Thermal Infrared Sensor (TI

nine spectral bands with a spatial resolution of 30 meters for Bands 1 to 7 and is useful for coastal and aerosol studies. Band 9 is useful for cirrus cloud detec Band 8 (panchromatic) is 15 meters. Thermal bands 10 and 11 are useful in pr surface temperatures and are collected at 100 meters. The approximate scene south by 183 km east-west (106 mi by 114 mi).

Reference

Barsi, J.A.; Lee, K.; Kvaran, G.; Markham, B.L.; Pedelty, J.A. The Spectral Respons Operational Land Imager. *Remote Sens.* **2014**, *6*, 10232-10251. doi:10.3390/rs6 (http://www.mdpi.com/2072-4292/6/10/10232)

Landsat 8	Bands	Wavelength (micrometers)	Resolut (meter
Operational Land Imager (OLI) and Thermal Infrared Sensor (TIRS)	Band 1 - Ultra Blue (coastal/aerosol)	0.435 - 0.451	30
	Band 2 - Blue	0.452 - 0.512	30
	Band 3 - Green	0.533 - 0.590	30
	Band 4 - Red	0.636 - 0.673	30
	Band 5 - Near Infrared (NIR)	0.851 - 0.879	30
	Band 6 - Shortwave Infrared (SWIR) 1	1.566 - 1.651	30
	Band 7 - Shortwave Infrared (SWIR) 2	2.107 - 2.294	30
	Band 8 - Panchromatic	0.503 - 0.676	15
	Band 9 - Cirrus	1.363 - 1.384	30
	Band 10 - Thermal Infrared (TIRS) 1	10.60 - 11.19	100 * (
	Band 11 - Thermal Infrared (TIRS) 2	11.50 - 12.51	100 * (

* TIRS bands are acquired at 100 meter resolution, but are resampled to 30 m product.

Spectral Characteristics Viewer

The Spectral Characteristics Viewer (spectral-characteristics-viewer) helps visu
satellite bands of Landsat and other sensors, along with selected spectra and
Information about the different bands, and which bands to use can be found
spectral-bands-use-my-study) webpage.

About

Landsat represents the world's longest continuously acquired collection of space-based moderate-resolution land remote sensing data. Four decades of imagery provides a unique resource for those who work in agriculture, geology, forestry, regional planning, education, mapping, and global change research. Landsat images are also invaluable for emergency response and disaster relief.

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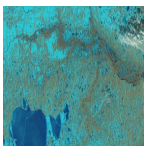
Landsat Updates

The Landsat Update is an informal communication tool, prepared periodically and distribu

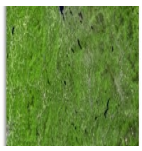
Landsat partners, to provide information about Landsat activities and related topics of inte

user@example.com

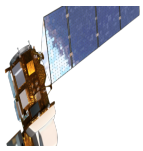
Latest Headlines



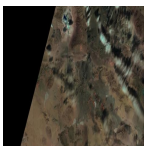
March 28, 2018 - Sentinel-2B Data Now Available from USGS EROS (/march-2 now-available)



March 26, 2018 - Landsat AOI Bulk Metadata Service to be Discontinued (/ma metadata-service-discontinued)



Landsat 9 Spacecraft Passes Latest Critical Design Review (/landsat-9-spacec design-review)



March 14, 2018 - Upcoming Temporary Hold on U.S. Landsat ARD Productio upcoming-temporary-hold-us-landsat-ard-production)

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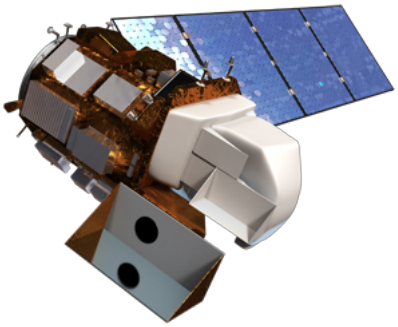
Gallery (http://remotesensing.usgs.gov/gallery/)



(landsat-missions-timeline)