

Status of Landsat Data Continuity Mission

**Spring Land Cover / Land Use Change
Science Team Meeting
April 02, 2012
Rockville, Maryland**

Jim Irons

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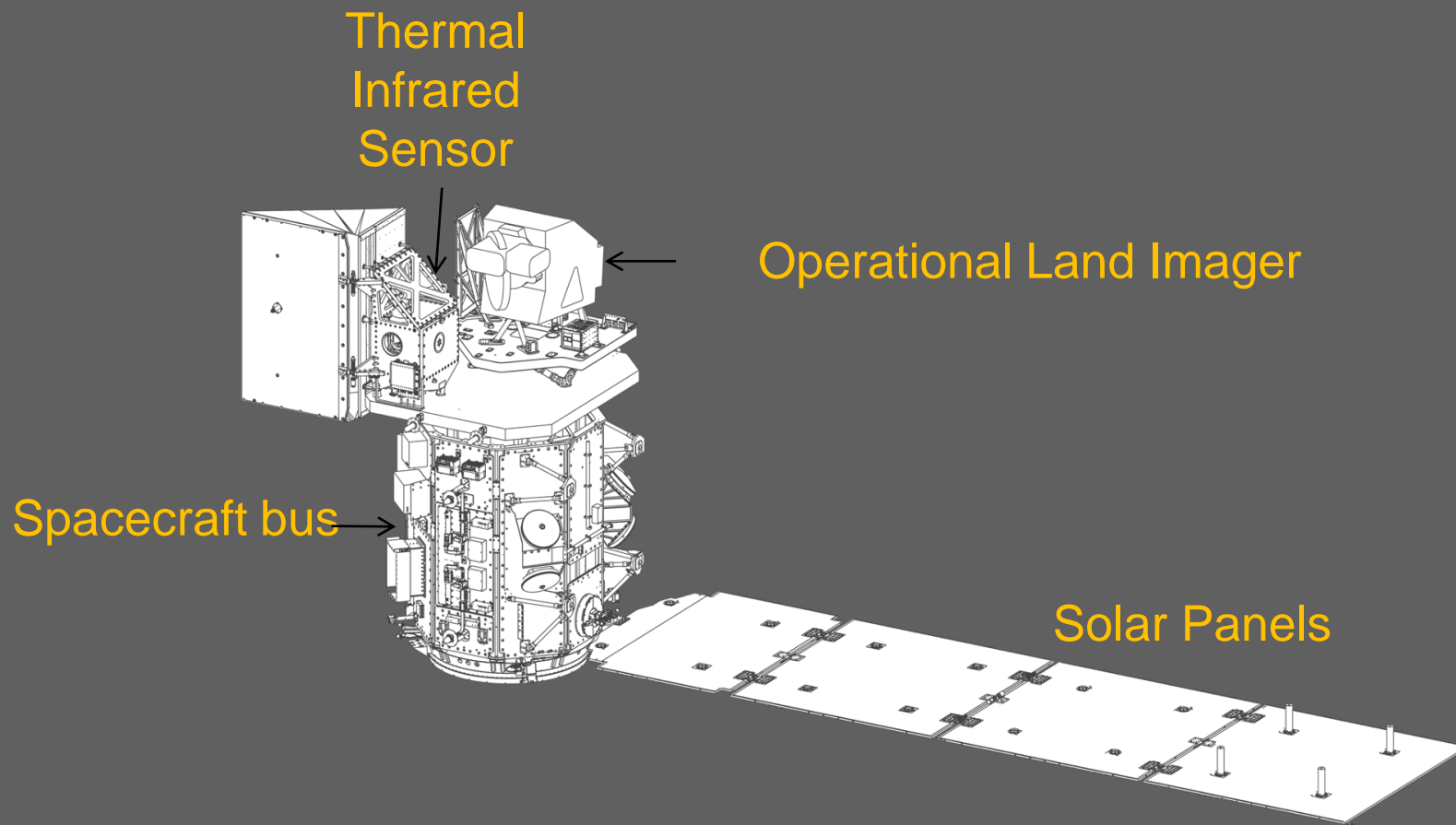
LDCM Launch: February 11, 2013

LDCM



The LDCM Observatory

LDCM



Drawing courtesy of Orbital Sciences Corporation

The LDCM Observatory

LDCM



Operational Land Imager

L I D O M



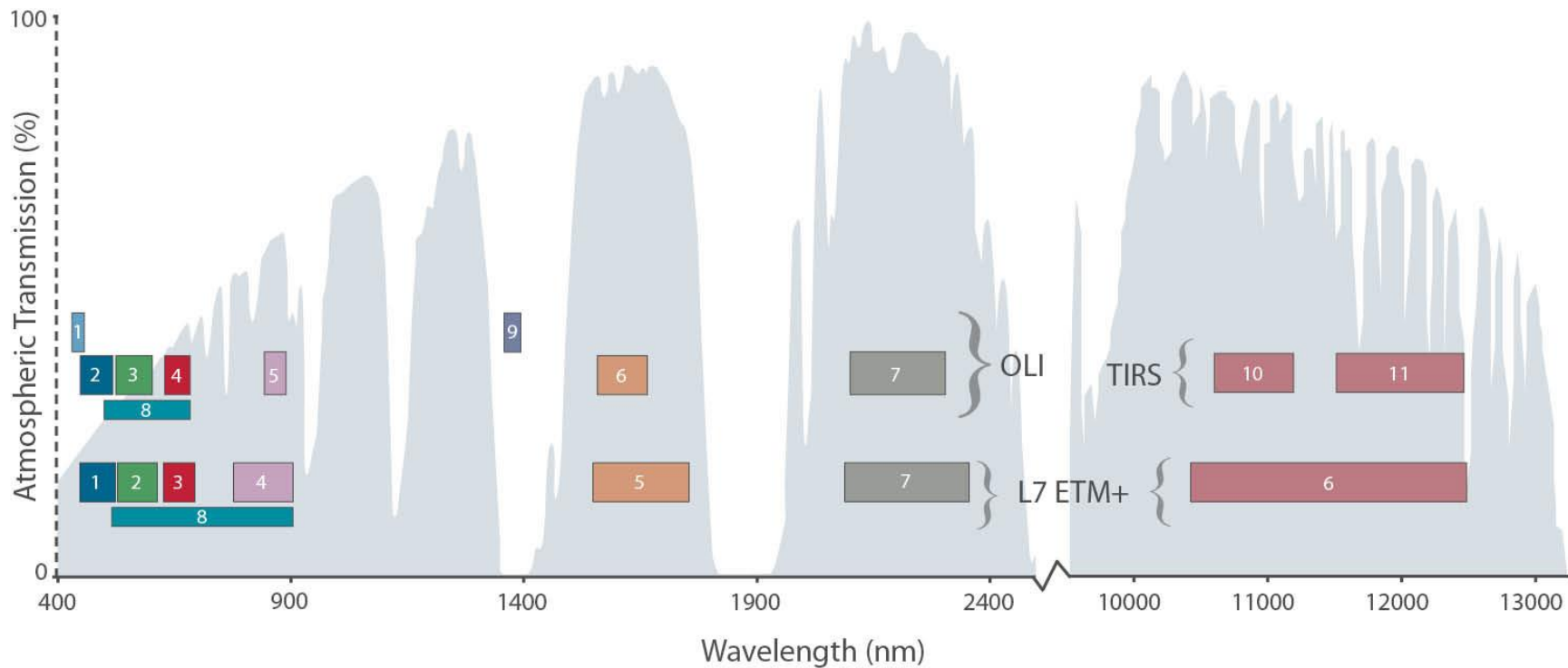
Photo courtesy of Ball Aerospace

Thermal Infrared Sensor

LDCM



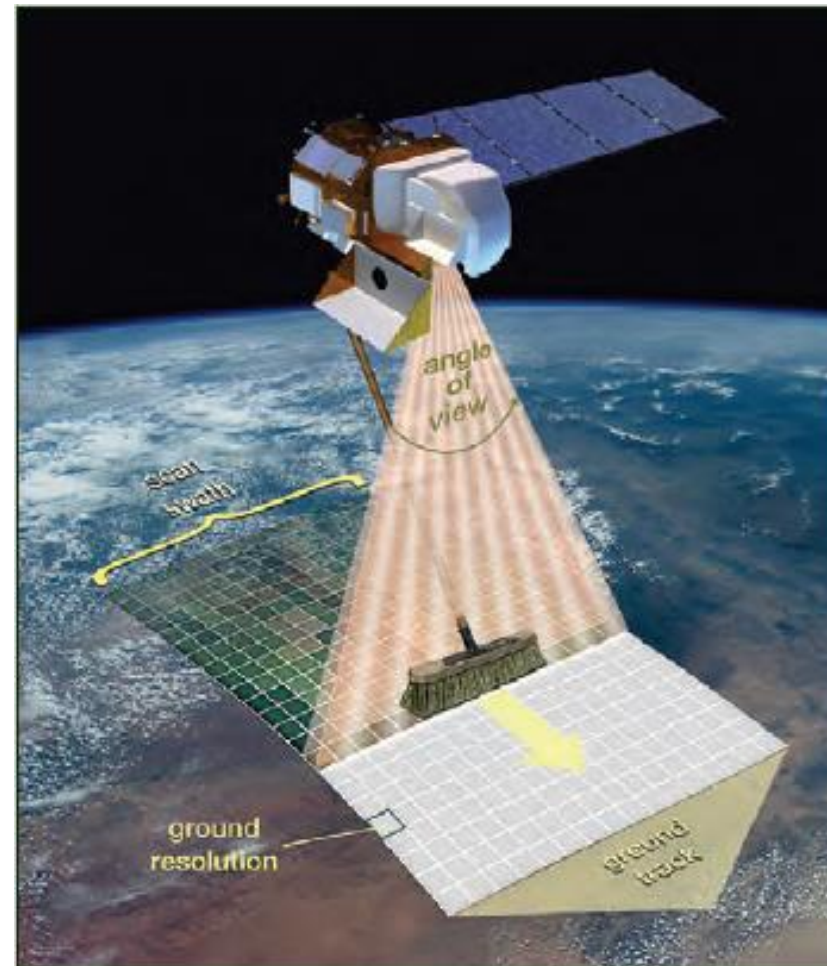
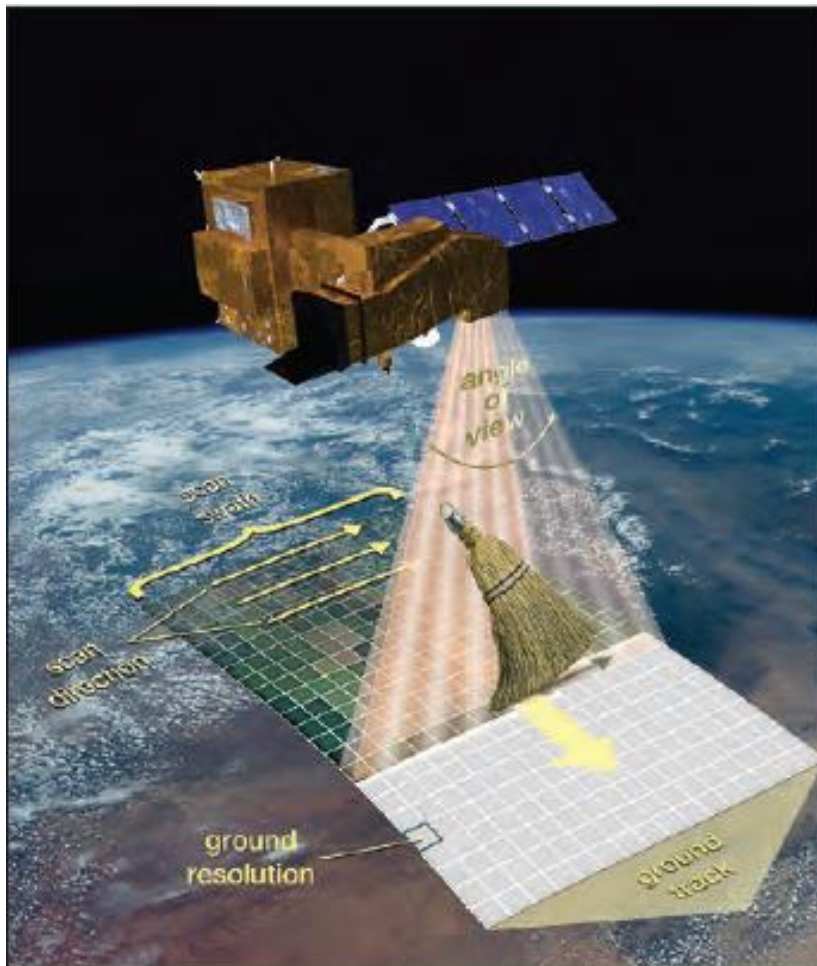
OLI & TIRS Spectral Bands



Sensor Architecture Evolution

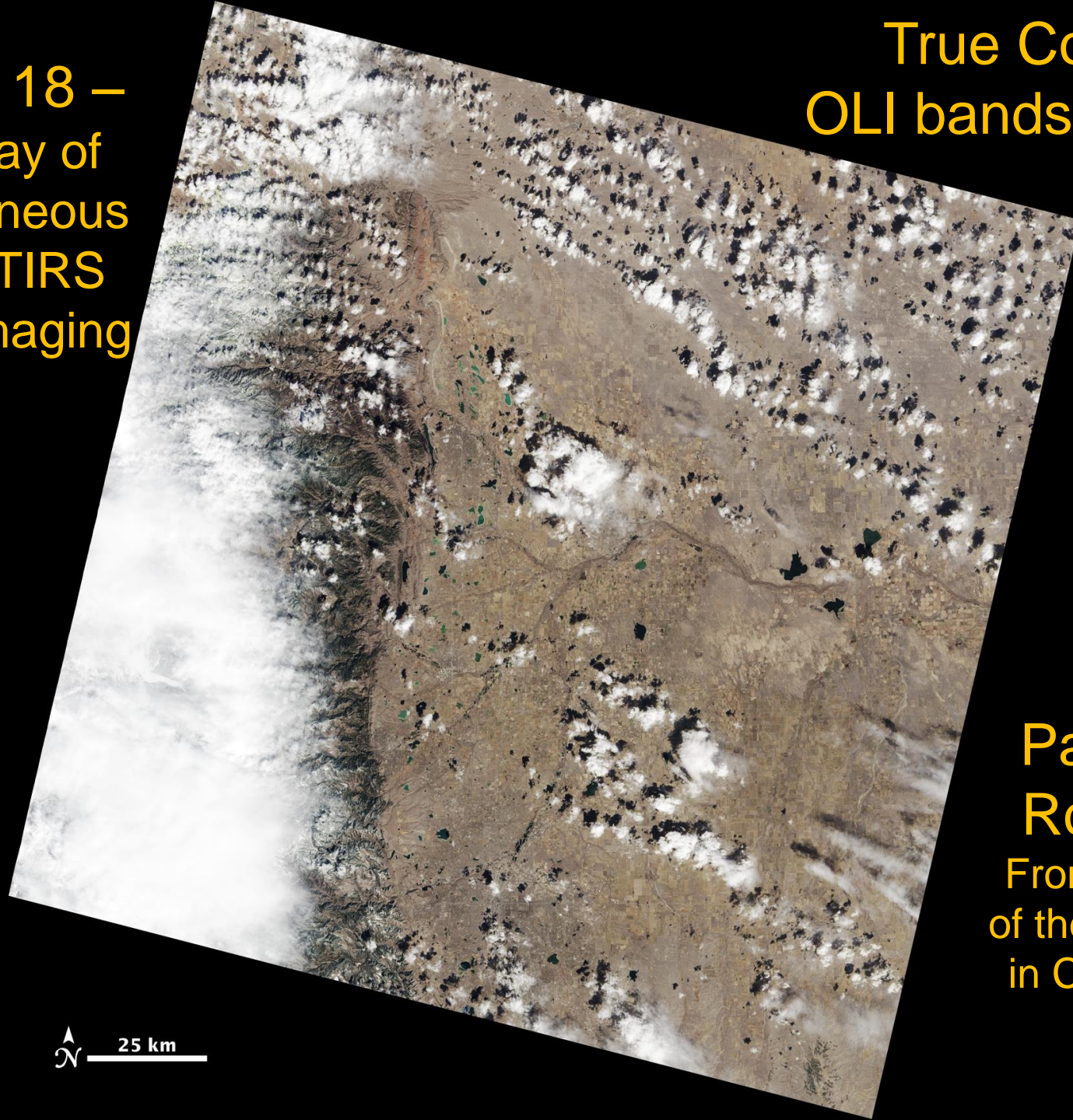
MSS, TM, ETM+
Whiskbroom Sensors

OLI & TIRS
Pushbroom Sensors



March 18 –
First day of
Simultaneous
OLI & TIRS
Earth imaging

True Color:
OLI bands 4, 3, 2



Path 33
Row 32
Front Range
of the Rockies
in CO & WY



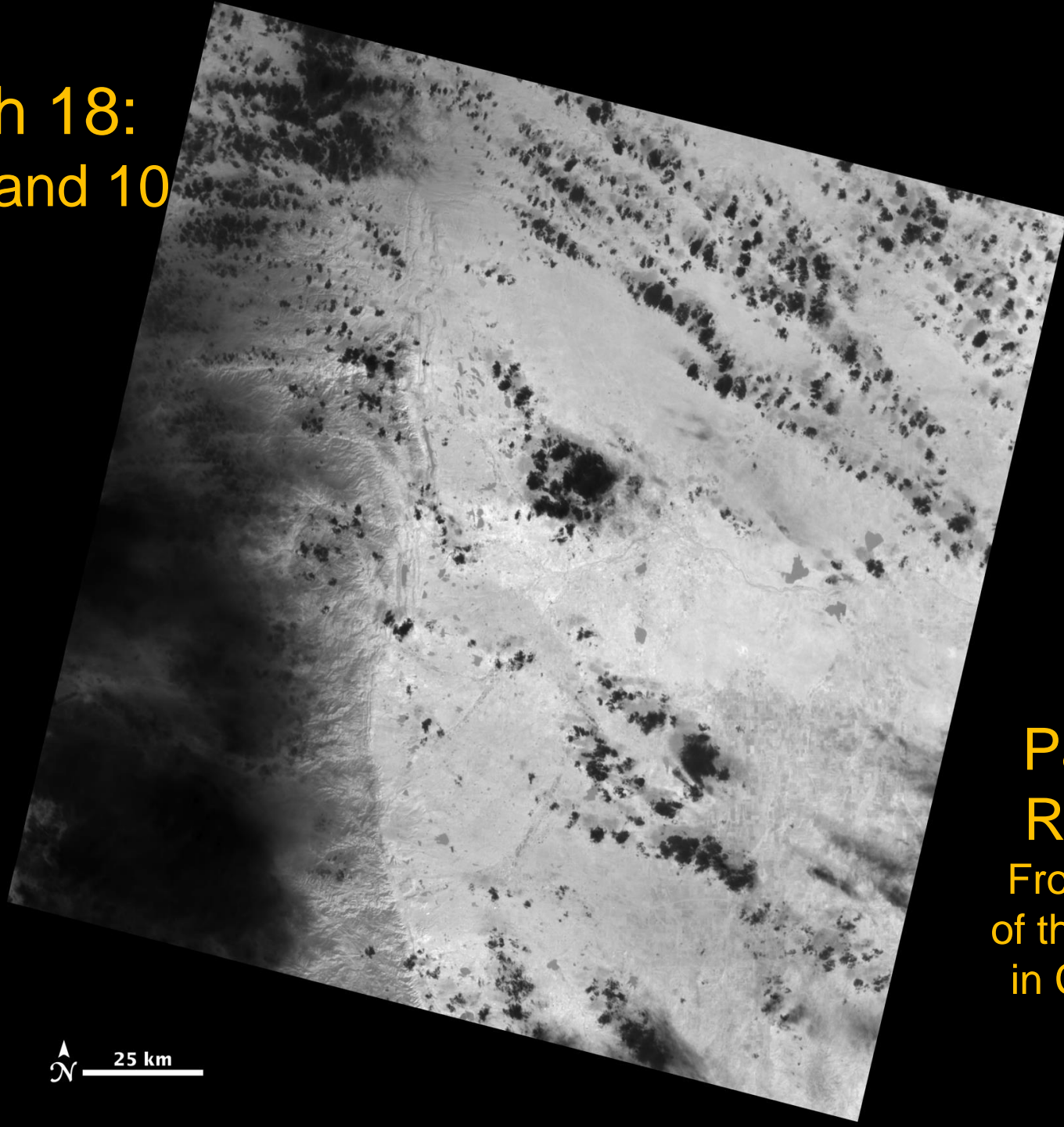
Boulder, CO: March 18, 2013

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<http://www.nasa.gov/landsat>

March 18:
TIRS band 10

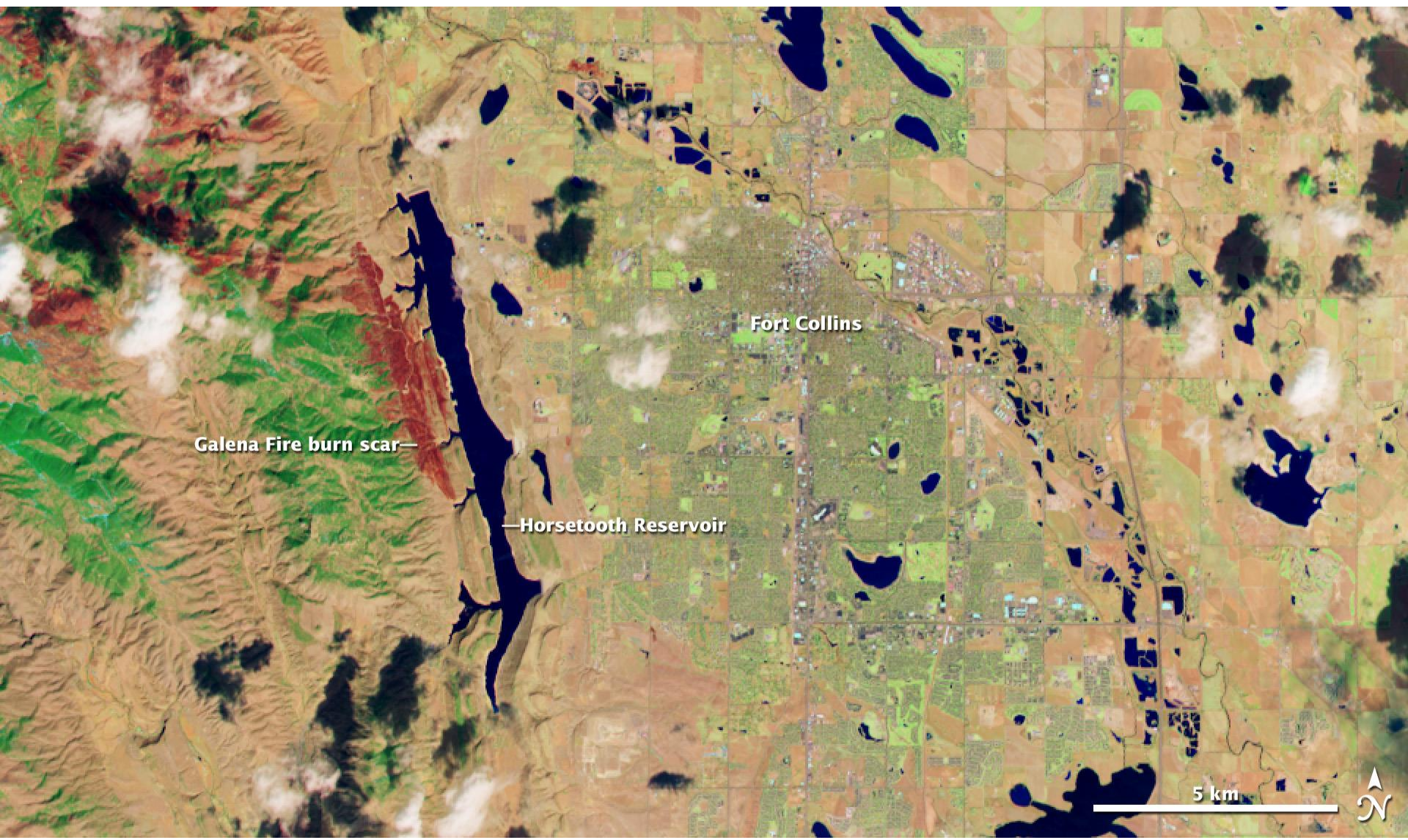


Path 33
Row 32
Front Range
of the Rockies
in CO & WY



Fort Collins, CO: March 18, 2013

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Galena Fire burn scar—

—Horsetooth Reservoir

Fort Collins

5 km 

False Color: OLI bands 7, 5, 3

April 02, 2013

LCLUC Science Team Meeting

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Sample Level 1T Product Available

LDCM

- **USGS posted sample Level 1T Product of the March 18 Rocky Mountain scene on March 29**

http://landsat.usgs.gov/LDCM_DataProduct.php

- **Pixel Size: OLI multispectral bands: 30-meters**
- **OLI panchromatic band: 15-meters**
- **TIRS bands: resampled to 30 meters to match OLI multispectral bands**
- **Data Characteristics:**
 - GeoTIFF data format
 - Cubic Convolution (CC) resampling
 - North Up (MAP) orientation
 - Universal Transverse Mercator (UTM) map
 - 16-bit pixel values

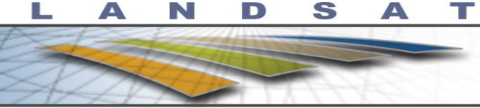
Landsat 7 Underfly

LDCM

- **LDCM flew under Landsat 7 from March 29 – 31**

- **Over 1200 near-coincident Landsat 7 ETM+ and LDCM OLI/TIRS scenes were collected during the under flight for the purpose of cross-calibration**
 - Coordinated vicarious field campaigns at Dolan Springs Playa, AZ and Brookings, SD

- **OLI and TIRS calibration data are being collected, processed, and analyzed**
 - OLI stimulation lamp, shutter-closed, and solar diffuser panel observations
 - TIRS blackbody and deep space observations
 - Vicarious calibration campaigns
 - Dolan Springs Playa, AZ for OLI
 - Salton Sea, Lake Tahoe, and NOAA U.S. coastal buoys for TIRS
 - Lunar Observations
 - “Side Slithers”
 - Geometric calibration sites



Upcoming Activities

LDCM

- **LDCM on WRS-2** April 11
- **On-orbit Acceptance Review @ GSFC** May 14
- **Post-Launch Assessment Review @ EROS** May 29
- **Mission Transition Review @EROS** May 30
 - **LDCM renamed Landsat 8**
- **Full Release of Landsat 8 Data Products!** May 30

Web Sites:

<http://landsat.usgs.gov/>

<http://www.nasa.gov/landsat>





Landsat

Continuing to Improve Everyday Life

