

The background of the slide is an aerial satellite image of a forested landscape. A prominent, winding river flows through the scene, its banks clearly defined. The surrounding terrain is a mix of green and brownish-green, indicating different types of vegetation or perhaps seasonal changes. The overall texture is granular, typical of satellite imagery.

Alaska Region Report

Chugach National Forest

Tongass National Forest

USDA Imagery Planning and Coordination Meeting
December 5-7, 2006

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1:15,840 Resource Imagery

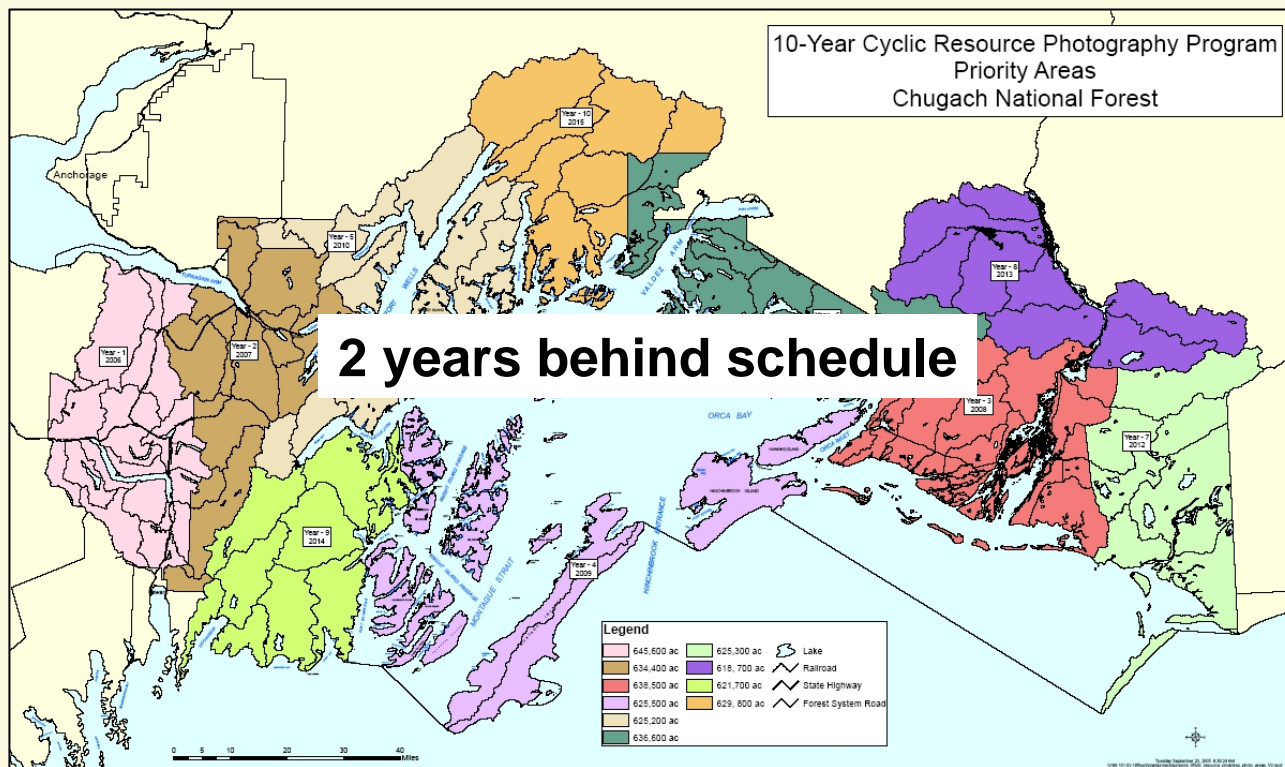
Tongass National Forest

- Imagery collect field season 2005 by North West Group, Calgary, Alberta (~45% TNF)
- Missed 2006 weather window: no collection
- Natural color positive film with RC20 and RC30 and gyro-stabilized mount
- +/- 5 meter ABGPS center point, refined from 0.25 miles
- No IMU (not even collected for later purchase)
- Scanned at 14 microns for ~18cm pixel and 760MB file size (+80mb for pyramid layers)
 - really close to system resolving power
- Iterative delivery May – August 2006 on external hard drive (APFO)
- 5.5TB+ storage required for 7,444 delivered images and compressed imagery
 - using four 2TB LaCie F800 external RAIDs (RAID 0 for memory optimization)
- Images renamed to roll_image_acquisition date (0605_142_050811.tif/jp2)
- Compressed to Jpeg2000 format in ERDAS 9.0 at 50:1 (15MB) for customer delivery on external HD
 - Jp2 is compatible with ESRI and ERDAS, plugin for Internet Explorer and Adobe, free viewers are available
- Project level orthorectification (TNF, RSAC, Leica) or 9x9” quality print for \$4-\$6
- We’re still waiting for a validated image center index

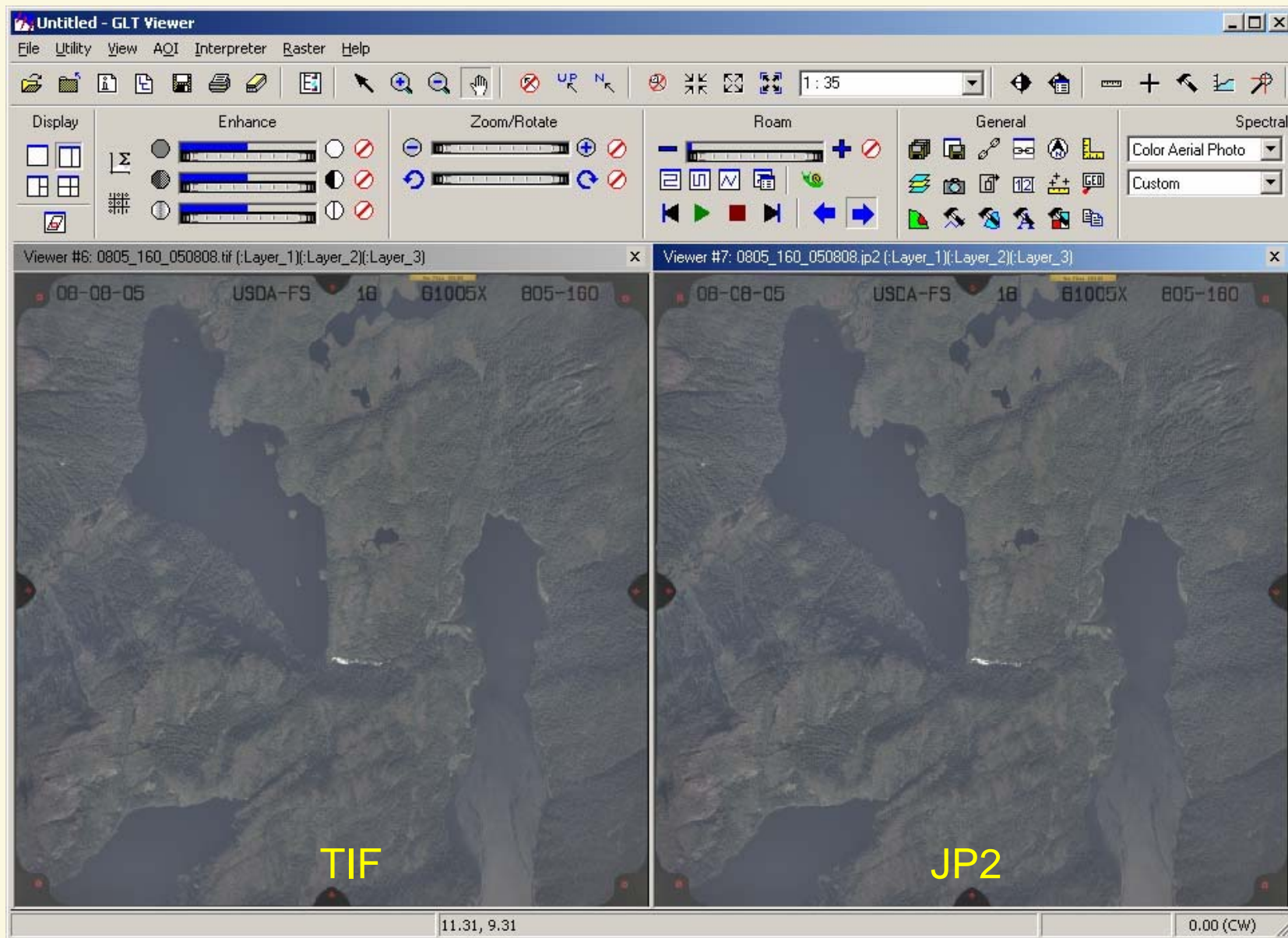
1:15,840 Resource Imagery

Chugach National Forest

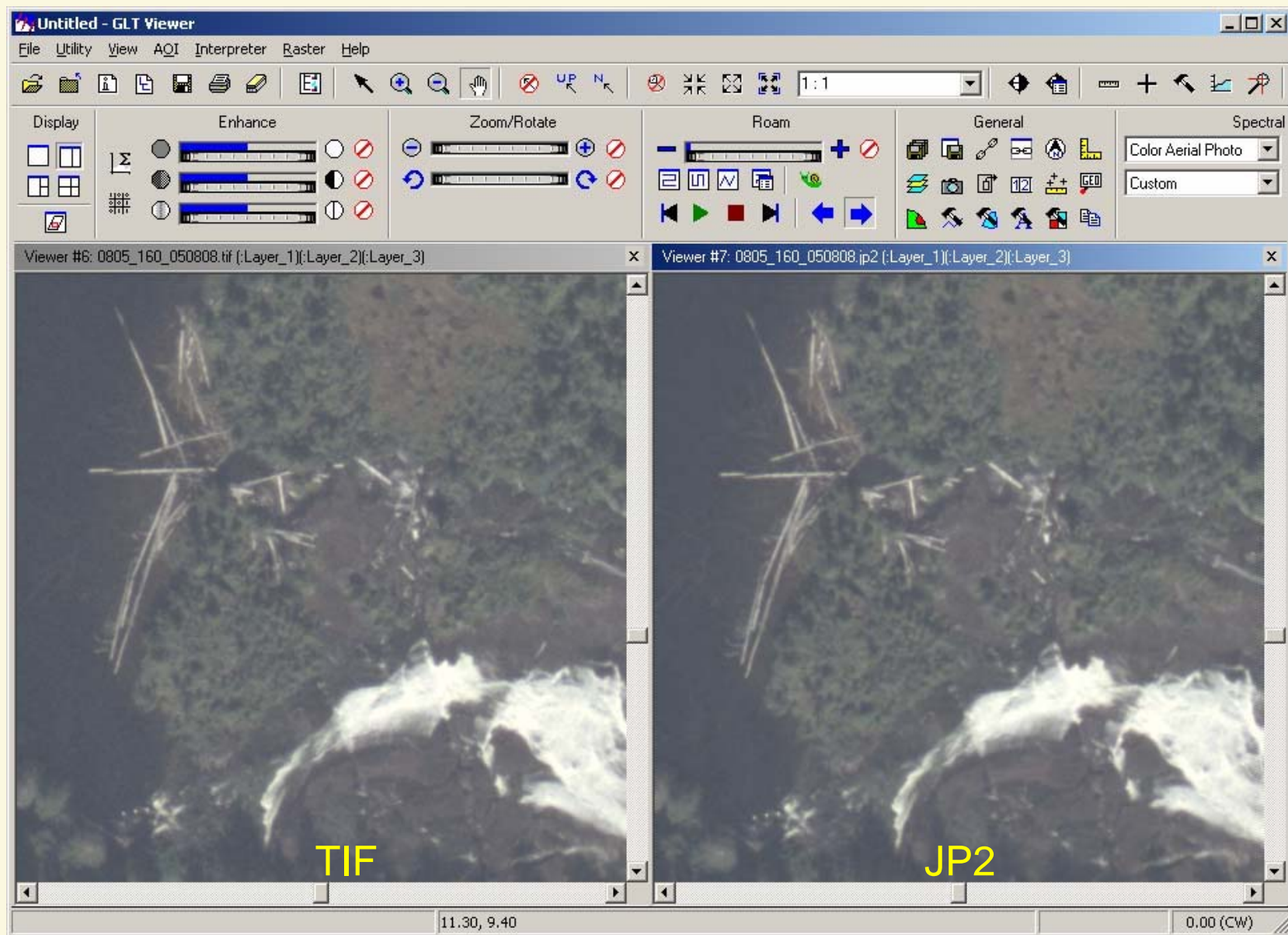
- Direct digital with ABGPS and IMU RFP in 2006
- 2 years behind proposed schedule
- IDIQ for direct digital or....scanned film, smaller area for digital, more funding



Jp2 maintains color, 3 minutes to compress 1 image (batch, almost exclusively CPU time)



Marginal loss of sharpness even at 50:1, LPS ingestion (issue with recompression)



1:40,000 Imagery for Ortho-image Generation

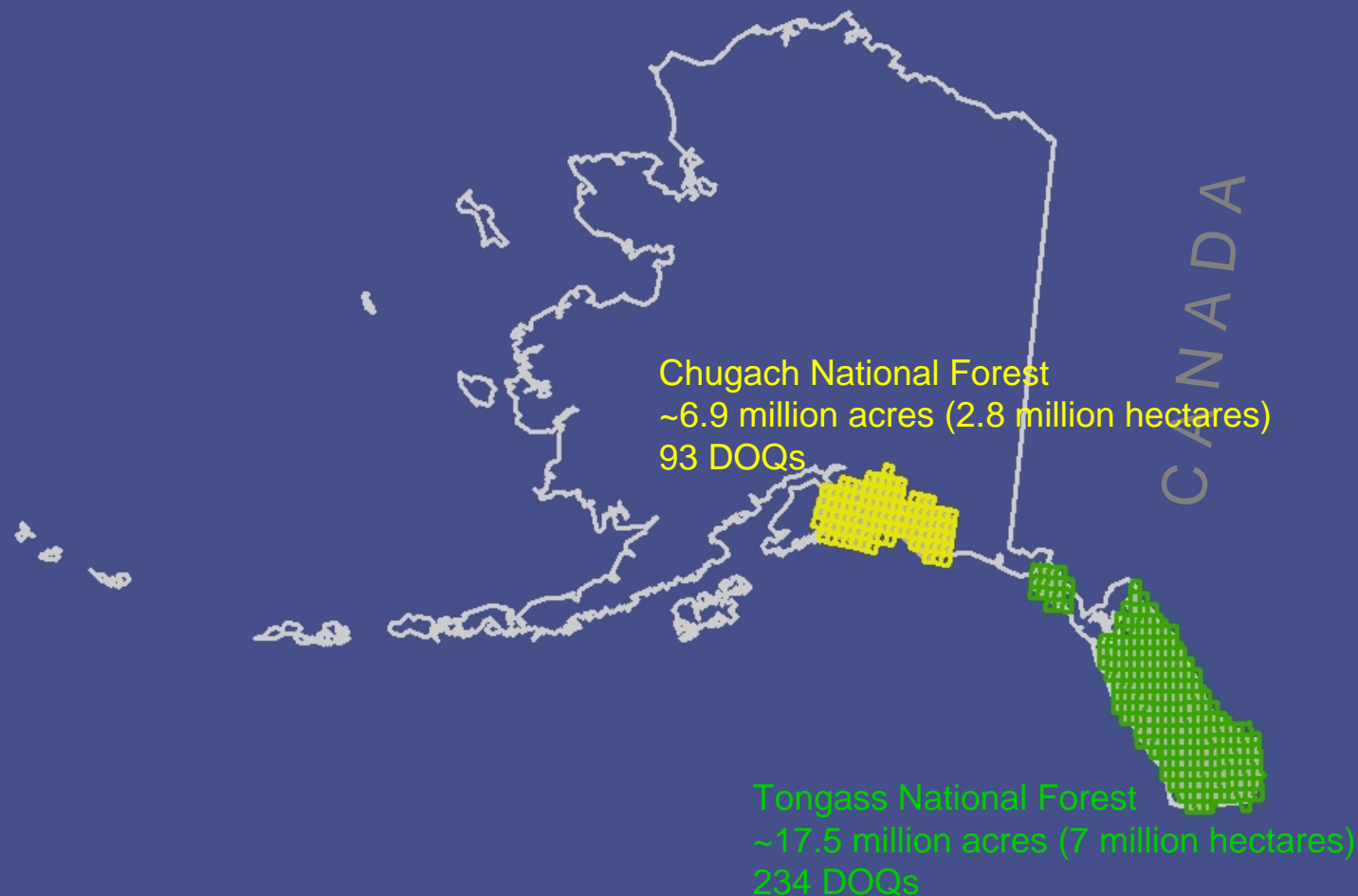
Tongass National Forest

- 2,700 images collected 2006 season by AeroMetric, Anchorage, AK (46% TNF)
- Natural color film without IMU
- Captured one of 2 multi-day acceptable weather windows
- Images currently in APFO inspection process
- Scanning for 1-meter GSD
- Additional ground control to supplement survey generated by GSTC using DOD imagery (need accuracy report and metadata, assume exceeds NMAS even for Alaska)
- At least 1-year behind collection schedule, probably 2-years out for DOQ delivery
- Existing orthos from imagery collected in 1996 and 1998, poor geometric and radiometric quality

Chugach National Forest

- No contract in place for airborne
- Evaluate NGA archive for possibilities (Ikonos, Quickbird, GeoEye)
- InSar with INS, focus on geometric quality, DEM
- Possible survey with DOD supplement for ground control
- Current orthos mixed bag of dates and resolutions

15-minute DOQs, 7.5-minute DOQQs for Alaska




1 min=1 nautical mile

Other Activities

- Acquisition of archived Quickbird and Ikonos from NGA for CNF and TNF districts (via WARP and order through NGA with delivery from vendor)
 - Around 25+ full scenes at no cost to Forest (~ \$250k actual savings)
 - L1A processing (may require orthorectification or co-registration)
 - NextView licensing
 - Project-level work
 - National Imagery Transmission Format (NITF) requires import
- Evaluation of archived NGA imagery for possible ortho (CNF)
- 2005 and 2006 SPOT 5 for vegetation mapping and timber, 5m pan and 10m multispectral (L1A) with ClearView or equivalent (RSAC and Region 10 RO) – 5m easier sell to leadership and resource specialists than 15-30m Landsat

Other Activities

- 2006 RADARSAT-1 for Hubbard Glacier, shared with CRREL and UAF, new acquisition
- 20m SPOT 5 HRS DEM (10-15m H and V accuracy) for CNF – over half CNF collected and validated in 2006 (current DEM 60m and pre-dates AK statehood) \$112k for entire forest, probable delivery of complete DEM fall 2007 – not consistent with 10m/5m AK protocol
- Lively data sharing and collaboration with AGDC, NRCS, UAF, UAS, BLM, AKDFG (NOAA Mermaid 1.2 online metadata tool), and CRREL
- Possible SPOT 5 receiving station for UAF (mostly for western AK)
- Airborne TIR for wildlife with TNF and AK Dept. Fish and Game (07 RSSC proposal pending)

An aerial photograph of a landscape, likely a tundra or wetland area. The terrain is characterized by a mix of green, yellow, and brownish-green patches, suggesting different types of vegetation or soil conditions. A prominent, winding river or stream flows through the scene, its path curving from the upper right towards the lower left. The overall appearance is that of a natural, undisturbed environment.

Models come and go, but a good data set lasts forever.

**Direct digital image near Yakutat, AK
Collected August 2005 with modified COTS Kodak DC4800
Image collected during a NASA lidar mission**