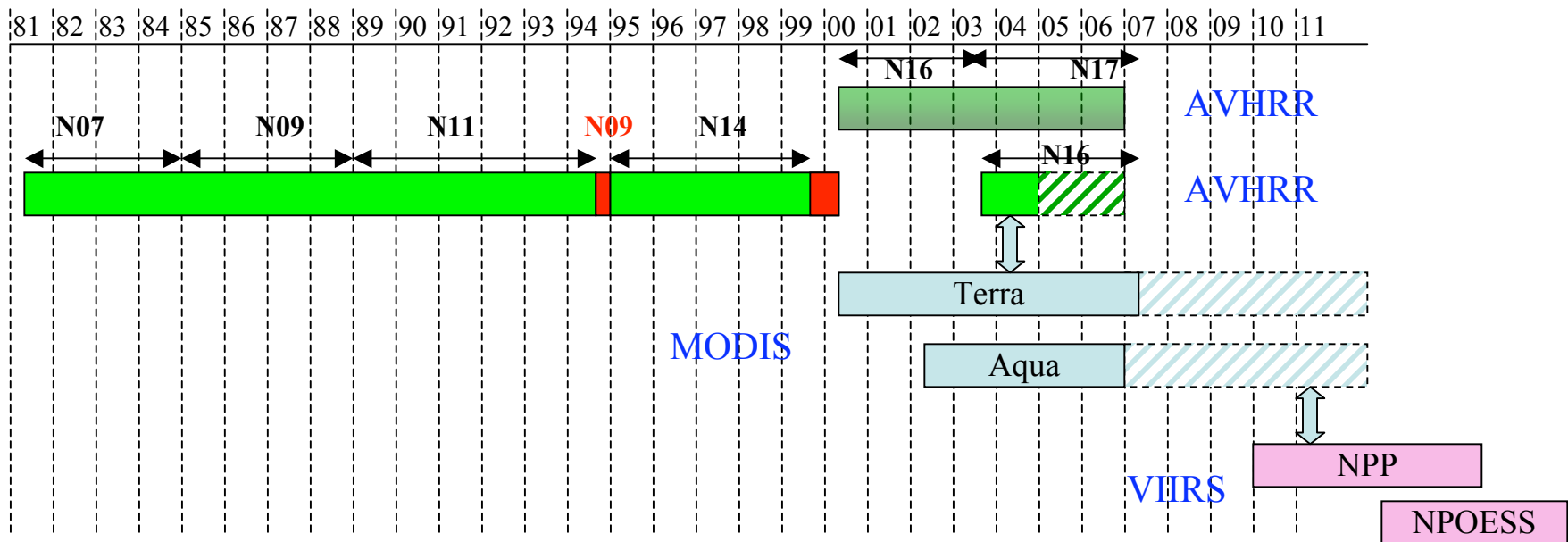


A 0.05 degree global climate/interdisciplinary long term data set from AVHRR, MODIS and VIIRS

- *NASA* : Ed Masuoka (MODAPS), Namzi Saleous, **Jeff Pedelty (Processing)**, **Sadashiva Devadiga (Quality Assessment)**, Jim Tucker & Jorge Pinzon (Assessment)
- *UMD*: **Eric Vermote (Science)**, Steve Prince (Outreach), Chris Justice
- *NOAA*: Jeff Privette (Land Surface Temperature)
- *South Dakota State University*: David Roy (Burned Area)
- *Boston University*: Crystal Schaaf (BRDF/Albedo)

# Data Sources



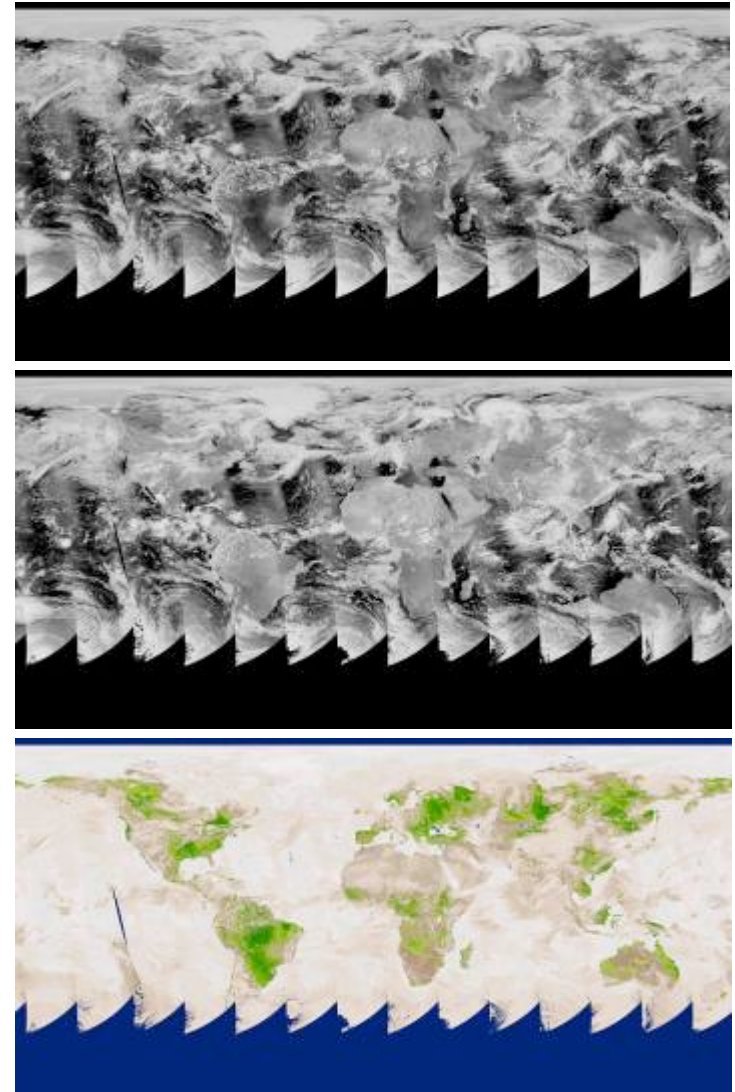
# LTDR Web Page

The image shows two browser windows. The left window displays the main LTDR website, which includes a navigation menu with links such as "Project Overview and Science Background", "Documents and Presentations", "AVHRR Vicarious Calibration", "Data Products", "Participants", "Feedback", and "Updates/ Changes History". Below the menu is a list of file links for AVHRR data. The right window shows the "AVHRR Calibration" page, which features two scatter plots. The top plot, titled "Degradation in channel 1 (from ocean observations)", shows a downward trend in degradation from 1980 to 2005, with data points color-coded by satellite mission: NOAA7 (black), NOAA9 (blue), NOAA11 (green), NOAA14 (red), and NOAA16 (magenta). The bottom plot, titled "Channel 1/Channel 2 ratio (from Coastal observations)", shows a similar trend, with data points color-coded by satellite mission: NOAA7 (black), NOAA9 (blue), NOAA11 (green), NOAA14 (red), and NOAA16 (magenta).

<http://ltdr.nascom.nasa.gov/ltdr/ltdr.html>

# Beta Data Set

- Algorithms:
  - Vicarious calibration (Vermote/Kaufman)
  - Cloud screening: CLAVR
  - Partial Atmospheric Correction:
    - Rayleigh (NCEP)
    - Ozone (TOMS)
    - Water Vapor (NCEP)
- Products:
  - Daily NDVI (AVH13C1)
  - Daily surface reflectance (AVH09C1)
- Format:
  - Linear Lat/Lon projection
  - Spatial resolution: 0.05 Deg
  - HDF-EOS
- Time Period:
  - 1981 – 2000 completed
- Archive and Distribution:
  - Over 1 TB stored online.
  - Distributed by ftp and web



NOAA-11 - 1992193 (7/11/1992) : Ch1,  
Ch2 and NDVI

## 2006 activities

- Produce an AVHRR surface reflectance and NDVI beta data set using Pathfinder 2 algorithms (vicarious calibration; Rayleigh, ozone and water vapor correction).
- Setup a web/ftp interface for data distribution.
- Identify a set of validation sites for use in the evaluation of the products.
- Evaluation of produced data set and start operational QA activity (global browse, known issues, time series monitoring and trends).
  - problems with geolocation, cloud screening, water vapor correction in Beta data set

# 2007

- Produce improved AVHRR surface reflectance and NDVI data set (vicarious calibration; Rayleigh, ozone and water vapor correction) 1981-1999, 2003 [Feb-Mar]
- Produce aerosol-corrected data set [June]
  - *Use coincident MODIS and AVHRR data to improve aerosol retrieval and correction in AVHRR*
- Release aerosol-corrected Surf Reflectance [July]
- *Produce BRDF/Albedo [July]*
- Produce Land Surface Temperature [August]
- Release Land Surface Temperature [December]
- Produce Burned Area [December]