

International Direct Broadcast User's Training Workshops

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Ways Forward

SSEC/CIMSS along with NASA and NOAA partners are devoted to continuing to host training workshops tailored for the international DB community as part of an ongoing effort to maintain and expand the use of the International MODIS/AIRS Processing Package (IMAPP), and in preparation for the development of the polar orbiting satellite processing package for the NPP and JPSS.

DB Training Workshop conducted in 2011

30 May to 3 June 2011 East China Normal University, Shanghai, China (http://cimss.ssec.wisc.edu/dbs/China2011/)

IMAPP & its Future

Application in China

Content Background

MODIS Data/Imagery Lab

EOSShop software package





Monthly NDVI of China



HYDRA

Visualization Software http://www.ssec.wisc.edu/hydra/



Earth Observing System (EOS) Background and History **MODIS Instrument and Measurement Characteristics** Level-1 Processing, Geolocation and Calibration Algorithms Image Artifacts including Bowtie Distortion Image Reprojection



True Color Image Creation

Familiarization with MODIS visualization software (Hydra) Examination of MODIS spectral band features for land, ocean, and clouds Atmosphere, Land, and Ocean Algorithms and Products Cloud Mask Algorithm

Cloud Top Properties Algorithm (Pressure, Phase, Emissivity) Aerosol Algorithm

Clear Sky Retrieval Algorithm (Temperature, Water Vapor, Ozone) Interpretation of MODIS Cloud Mask, Cloud Phase and Aerosol Products

Snow/Ice Detection Polar Winds Ice Motion Detection **MODIS** Polar Winds

MULTI-LAYER CLOUD INITIALIZATION



Cloud-water mixing ratio (grayshades) 500 hPa streamlines (yellow)

Cachoeira Paulista, Brazil: 26-30 November 2007 Review of Remote Sensing Fundamentals

in Chinese FY-3 Meteorological Satellite **MODIS and FY Applications in Meteorological Disasters** Management **MODIS Products Lecture/Lab AIRS Lectures/Lab** Hyperspectral Sensor Characteristic (FTS Vs. Grating) Hyperspectral Measurement Characteristics **Hyperspectral Retrieval Theory** Hyperspectral/AIRS Information Content Lectures/Lab A Cluster System to Optimize IMAPP Direct Broadcast Processing

Beijing, China: 19-24 May 2005

The Current Status and Development Trend of Remote Sensing

MODIS Measurements Characteristics, Overview & Information

MODIS-like instrument MERSI and IR sounding instrument IRAS

and Space Technology for Multi-disciplinary Research and

MODIS Data Sharing Network and Applications in China

DVB-S technique-based MODIS Data Sharing Platform



Nanjing, China: 6-12 June 2004 **LEVEL-1 Data/Products MODIS Data/Imagery Lab Session MODIS Products Lecture/Lab** Hyperspectral/AIRS Lectures Hyperspectral Lab Session **Remote Sensing Science & Application Lectures**



Source Regions "2001 Perfect Dust Storm" Airborne Dust 4/13 TOMS Aerosol Index - time series

Multispectral Imager and Sounder **Measurement Information Content** MODIS Data/Imagery MODIS Atmosphere, Land & Marine Products Ordering of MODIS Products Direct Broadcast CIMSS Regional Assimilation System (DB-CRAS) **MODIS Products** Overview of NOAA Geo Program SSEC Remote Sensing Expertise GOES-10 Images/ Products GOES-10 Soundings





Web Fire Mapper: Southern Africa

ArcIMS Viewer - Netscape

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Overview of IMAPP and IPOP

MODIS Atmosphere Products

Direct Broadcast Capability Overview

MODIS Products (Land/Atmosphere & Marine)

Refresh Map | Show Legend Active Fire Detection 🗹 💿 Fires Last 48H 📃 🔘 Fires Last 7 Da E Fires (2006) Fires (2005) Fires (2004) 📃 🔘 Fires (Archive) 🗹 🔘 World Countries 🗹 🔘 Countries (outlin 🔲 🔘 Administrative E . 🔲 🔘 African Fire Re 🔲 🔘 Central Africa I Central Africa 3 Protected Area 📃 🔘 Botswana Prot Date Query (Help) Start Date 2006-03-21 End Date 2006-03-23 9 11 13 15 17 19 21 23 25 27 29 31 3 <u>Display Fires</u> MODIS MODIS

Chung-Li, Taiwan: 12-14 January 2005 EOS Big Picture Long-range Transport of Air Pollution Hyperspectral Sounding of the Atmosphere Multispectral Imaging of Earth-Atmosphere **EPA Perspective (TEPA)** Remote Sensing for Weather & Climate NCU Remote Sensing Applications & Education Aura Chemistry **Cloud Chemistry MODIS Instrument & Measurement Characteristics MODIS Imagery, Product & Application** MODIS Data, Imagery, & Products Lab **MODIS Operational Product, Characteristics and Applications MODIS Specialized Products/Applications Lab**

Floreat, Western Australia: 26-29 November 2002

Introduction to MODIS Survey of MODIS Spectral Bands Scanner Characteristics MODIS Instrument Characteristics MODIS Realtime Processing and Applications at DLR MODIS Ocean Products Reprojection, True Color Images, Data Ordering MODIS Cloud Masking **MODIS Water Vapor Retrieval** Masking and Fire Detection **User Driven Case Studies**



Clouds; Atmospheric Profiles; Aerosol Optical Thickness MODIS Land Products Fire Detection; Surface Reflectance MODIS Ocean Products Sea Surface Temperature SeaDAS (Ocean) **AIRS Introduction**

Pretoria, South Africa: 3-7 April 2006

MODIS Measurement Characteristics & Information Content

MODIS/NPP & NPOESS Seminar for Decision Makers

Hyperspectral/AIRS

MODIS Data/Imagery







DB training is to serve more than 1000 in 65 countries global IMAPP users