

IBAMA special session on

"Satellite-derived fire and burn scar products throughout the Amazon"

In conjunction with INPE, Atech, NASA's LBA-Ecology, and GOF-C Fire team

7 April 2003

within the 9th Brazilian Remote Sensing Symposium

April 5-10, 2003 (<http://www.ltid.inpe.br/sbsr2003>)

Meeting Objective:

The meeting will bring together researchers interested in the use of satellite technologies to study fire, burned area, and emissions throughout the Amazon region. The focus will be an overview of current fire monitoring activities, user perspectives, and open discussion on future directions. Participants are welcome to bring posters showing related work on fire/burn-scar/emission in the region.

Agenda:

Section 1 - Overview for Fire Monitoring in Brazil

8:30-9:00 Welcome, Introduction, and status of the GOF-C/GOLD regional network (João Pereira and Jeff Morissette)

9:00-9:30 IBAMA's current operational fire monitoring (Wilfrid Schroeder)

09:30-10:00 INPE's current research on fire, burn scar and emissions (Alberto Setzer)

10:00-10:30 Internet products and data access from IBAMA-INPE fire monitoring system (Luis Maurano*)

Break

Section 2 - Fire Monitoring Methods

10:45-11:00 Fire detection with DMSP (Vinita Ruth Hobson)

~~11:00-11:15~~ 11:00-11:15 Fire detection with AVHRR (Alberto Setzer)

11:15-11:30 Fire detection with GOES (material provided by Elaine Prins)

11:30-11:45 Fire detection with MODIS (Morissette)

11:45-12:00 Discussion

(Presenters are asked to limit talks to strictly 15 minutes, covering a description of the sensor, its fire algorithm, and experience with their user community)

lunch

Section 3: Field Validation and User's Experience

1:30-3:30

- Use of satellite fire products in large-scale models (Manoel Cardoso)
- Fire and burn scar research in Acre (Foster Brown et al.)
- GBA 2000 data over Brazil (possible material from Jose Pereira)

3:30-3:45 break

Section 4: Open Discussion:

3:45-5:00

- Possible enhancements for user community
- "Fuel load" products for both fire risk and emissions estimate
- Combined fire and land cover analysis to determine conversion vs. maintenance fires
- Coordinated validation activities through GOF-C/CEOS-LPV

Presenter:
Feltz, Joleen M.

Authors:
Feltz, Joleen M,
Prins, Elaine M.,
Setzer, Alberto

TITLE:
A Comparison of the GOES-8 ABBA and INPE AVHRR Fire Products in South America from 1995-2002.

ABSTRACT:

Since 1995 the Cooperative Institute for Meteorological Satellite Studies (CIMSS) at the University of Wisconsin - Madison has been using the Geostationary Operational Environmental Satellite (GOES)-8 Automated Biomass Burning Algorithm (ABBA) to monitor diurnal biomass burning activity throughout South America during the fire season (June - October). The Brazil Instituto Nacional de Pesquisas Espaciais (INPE) has monitored fire activity in Brazil using the Advanced Very High Radiometer (AVHRR) sensor on board the NOAA-12 satellite since 1987. This paper presents a comparison at the peak of the burning season of biomass burning results from 1995 to 2002 as observed by both instruments. It will include an overview of the spectral, spatial, and temporal observing characteristics of both GOES and AVHRR and discuss respective advantages of each system for fire identification in the region. The high temporal resolution of the GOES provides the ability to capture a large portion of the diurnal fire activity that may be missed at a single time period. The high spatial resolution of the AVHRR provides more detects in a single time period and the addition of a western receiving station in 1998 improved the ability of detection, especially in western South America. Together, these systems provide complimentary information of seasonal and interannual trends in fire activity in South America.