

### 13) POSTER

#### **MODELING INTERCEPTED SOLAR RADIATION FOR TWO DIFFERENT TYPES OF VEGETATION (RAIN FOREST OF REBIO-JARU-RO AND MANGROVE FOREST -PA)**

Mourai, Rildo. G.; Total, J.; Manzi, A. O.; Gu, L.

<sup>1</sup>CPTEC - INPE, Cachoeira Paulista-SP, Brasil

<sup>2</sup>Uc Berkeley Biometeorology Lab, DESPM, Berkeley, CA 94720-3110, US

rildo@cptec.inpe.br

#### **ABSTRACT**

Measurements of solar radiation were made over a *terra firme* forest, at the Biological Reserve of Jaru-RO, as part of the LBA and over a mangrove area in the City of Bragança- PA, as part of the MADAM project. Data of short wave radiation flux were collected with Kipp & Zonen pyranometers, and photosynthetically active radiation (PAR) flux, with LICOR quantum sensor, in the top of the towers installed at each site, and in the ground of the forests. In the first site, information regarding the leaf area index (LAI) was also collected, using a digital photographic camera, model CID-110, with fish-eye lens of 8mm. The results show that, on average, the fraction of short wave radiation and PAR fluxes that reach the ground are smaller at the rain forest than at the mangrove. In this work the observations of short wave radiation and PAR at the top of the forests of *terra firme* and mangrove are used to evaluate the performance of the radiative transfer model proposed initially by Sellers (1985) and modified by Gu (1998). The results of the model showed that he is capable to reproduce the radiation fluxes that reach the ground at both sites reasonably well, when forced with the average values of the incident short wave radiation and PAR observed at the top of the towers.