

Abstract :

The Pantanal wetland in South America is the world's largest tropical wetland. The duration and amplitude of flooding in this area vary both temporally and spatially. In 1997, the Japanese Earth Resources Satellite (JERS-1) L-band Synthetic Aperture Radar (SAR) acquired imagery of this region through the National Space Development Agency of Japan's (NASDA) Global Rain Forest Mapping (GRFM) project, in order to assess the ability of the JERS-1 SAR to monitor the flooding extent of this area, and to assemble baseline imagery for future studies. The SAR imagery was obtained during the high flood period of the southern part of the Pantanal. Field data obtained in 2001 will be used to help interpret the imagery. In the future, L-band SAR imagery from the NASDA Advanced Land Observing Satellite (ALOS) SAR (scheduled for launch in 2003) will be capable of regular monitoring of change in inundation for this entire region. This first look at the regional Pantanal SAR imagery from JERS-1 provides insights as to what may be derived from this future data set. We expect in the ALOS era to be able to map the dynamics of flooding and therefore understand the biogeochemistry, evapotranspiration processes, and habitat change and availability for the Pantanal, as well as assess the impact of human activities.