

MONITORING ARGENTINA 92S MAR CHIQUITA LAKE WITH AVHRR IMAGES

Alberto Flores

Dept. Ciencias de la Atmosfera
Universidad de Buenos Aires (Argentina)
e-mail: flores@at.fcen.uba.ar

ISPRS Commission VI - Working Group 3

ABSTRACT:

Data from NOAA polar orbiting satellites are used to analyze the Mar Chiquita Lake. It is located in the Cordoba province (Central Argentina) and its center is approximately located at 30° 40' S, 62° 40' W.

Mar Chiquita Lake is a closed catchment area of three rivers. Its only possible outflow is by evaporation. For that reason the lake is characterized by large water level fluctuations. Between March 1977 and February 1979 its average level rose by more than 2m. This increase is a significant one, its mean depth is about 7.3 meters.

AVHRR measurement are used from two images: December 27, 1995 and January 5, 1997. They are considered representative ones for two summers.

The images were obtained for the afternoon pass (1500 local time) from Internet in format 1b. Afterwards they were calibrated and geo - referenced. In this presentation some preliminary results are shown: lake surface estimation, soils flooded, vegetation and surface temperatures on and around the lake for the two summers sample. The methodology used is based on the Normalized Vegetation index (NDVI) and the surface radiant temperature computed from the "split-window" method.

These two variables are shown along two transects: North-South and East-West. The shapes of the variables along the transects are discussed.