



# Aerial Videography DataBase

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## The 1999 VOAM

The **1999 survey** was conducted in June over the Legal Brazilian Amazon by INPE and University of California/Santa Barbara (UCSB).

## The Aerial Survey Plane



Brazil's National Institute for Space Research (INPE) made available its Bandeirante aerial survey plane, which has a camera mount custom-built in which both cameras can operate in tandem and vertically oriented.

## The Video Aquisition System

Developed by the **Natural Resource Conservation and Computer Science of the University of Massachusetts at Amherst (UMASS)** (Schultz et al., 1999) included:

- **2 Digital Camcorders:** vertically oriented (one in wide-angle mode and one in zoom mode);
- **a Laser Ranger Finder** (904 nm wavelength): which measured aircraft height above ground or canopy;
- **an AHRS- Attitude and Heading Reference System:** which measured aircraft tip and tilt;
- **a system GPS:** which received a real-time, differentially corrected GPS signal from the Omnistar commercial GPS satellite network;
- **a Horita GPS3 Timecode Generator:** the differential GPS signal that was received by Trimble 132 GPS throught an externally mounted L-band receiver, was converted to SMPTE



### Institutions



Instituto Nacional de  
Pesquisas Espaciais



University of  
California/UCSB



Instituto Nacional de  
Pesquisas da Amazônia



NASA Aeronautics and  
Space Administration

format by Horita, to encode the GPS signal on audio tracks of digital videotapes.

## The Flight Lines

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The flight lines were designed to provide coverage of intensive study sites for the LBA-ECO projects including:

- **Human-Impacted Areas:** secondary forests, selectively logged forests, and pastures;



- **Major Floodplains of:**

- **Whitewater Rivers:** central Solimões, Amazon, lower Purus, lower Japurá;

- **Blackwater Rivers:** lower Negro, including Anavilhanas archipelago; lower Jaú; the Balbina Reservoir; interfluvial blackwater wetlands in the Jaú basin; blocked-valley lakes: Tefé, Mamirauá.

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