SOCRATES Digital Camera Imagery and Movie Notes

During SOCRATES, the NSF/NCAR GV HIAPER flew forward, left, and right-facing digital cameras for in-flight image capture.

The forward camera is a Point Grey Research Hi-Res Flea Hi-Color, 1024x768 resolution. The Navitar DO-412 lens has a focal length of 4 mm and the field of view is about 62 x 48 degrees with some barrel distortion. This camera is located on the right wing pylon.

The right-facing camera is a Point Grey Research Flea 3 (FL3-FW-14S3C-C) - Color, 1280 x 960 resolution equipped with an Edmund Optics 6mm lens (#67-709). The field of view is 68 x 51 degrees with approximately 6% barrel distortion. This camera was looking out a right-side cabin window, tipped slightly down and aft from perpendicular to the fuselage.

The left-facing camera is a Point Grey Research Hi-Res Flea Hi-Color, 1024x768 resolution, same as the forward camera. This camera was looking out a left-side cabin window, tipped slightly down and aft from perpendicular to the fuselage.

Images were acquired once per second and stored as JPEG-compressed files, roughly 100 kB each. No image processing was performed beyond converting the raw pixel data to 24 bit color images. Applying a sharpening filter as is ordinarily done by consumer digital cameras will considerably improve the appearance. The UTC date and time are encoded in the filename as YYMMDD-HHMMSS.jpg.

The movies are playable with Quicktime, Windows Media Player, mplayer, VLC, and others.

Flight Specific Comments:

TF01, TF02, FF01

The right and left-facing cameras recorded images with transposed labeling. The issue was corrected by updating the file structure for these flights only. This was due to a misconfiguration which was fixed after FF01.

FF07

No imagery captured during this ferry flight from the forward or left facing cameras. The right camera collected a total of 18 images during this flight.

For questions, please contact:

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