

Salient Features for NIR and SWIR Imagery from STS-134 Re-Entry

REFERENCE PR 4200405324

The Hypersonic Thermodynamic Infrared Measurements (HYTHIRM) Project is a remote observation program to understand vehicle surface heating during reentry due to a boundary layer transition from laminar to turbulent flow caused by an anomaly on the vehicle's thermal protection system. HYTHIRM has a need to procure infrared imagery of STS-134 during hypersonic re-entry. STS-134 landed at the Kennedy Space Center at 2:35am on June 1, 2011.

Data required includes imagery of the orbiter captured in the near infrared and the orbiter wake captured in short wave infrared. The data sets shall be delivered with documentation of image number, time stamp, gain, and integration time. Optical/sensor configuration information shall be provided to include serial numbers of each camera component. Camera components include but are not limited to filters, camera ID number, and splitters corresponding to each data set.

Star calibration data, dark frames data, and camera settings shall be provided along with camera gain and integration times. All data shall be provided electronically in the flexible image transport system (FITS) format or supply appropriate translator.