

Oliu-1, Armando

From:
Sent: To:

Subject:

Oliu-1, Armando

Friday, January 17, 2003 7:08 PM

Abner, Charlie; 'Adams, Randall'; 'Ayotte, William'; Blue, John B; 'Brown Kenneth'; 'Buckingham, Bruce'; Bulloch-1, Steve; Bursian, Henry; 'Byrne, Greg'; Chitko, Pete J.; 'cookjh@thiokol.com'; 'Derry Steve'; 'Disler, Jon'; 'Disler, Jon (2)'; 'Eastwood Martin'; Estrada- 1, Carlos; 'Fricke, Robert'; Gaetjens, William; Glenn-1, Malcolm; 'Gomez Reynaldo'; 'GRP DOC Mission Support Room'; Guidi-1, John; Hawkins, Tyrell; Herman, Robert S; Herst, Terri; Holloway, Darrell.L; 'Holmes Steve'; Huff, Joy N.; 'Jay.Sambamurthi@msfc.nasa.gov'; Jones- 1, Frank; Kelley-1, David; 'Khodadoust, Abdollah'; Kienitz, Fred; 'Kinder Gerald'; 'Koenig Lisa'; 'Kopfing, Philip A'; Lafleur, Tom C; Leggett, Kenneth D; Leinbach-1, Mike; 'Linda Ham'; 'Mango, Ed'; 'McClymonds, Jack'; 'MCCORMACK, DONALD L. (DON) (JSC-MV)'; Mosteller-1, Ted; Mulligan-1, Melanie; Nguyen-1, Bao; 'O'Farrell Mike'; 'Ortiz, Carlos'; 'Otte Neil'; 'Otto, Scott'; 'Page, Robert'; payne-1, Michael; 'Ramirez, Juan'; Revay, Kenneth P; 'Rieckhoff, Tom - PC'; 'Rieckhoff, Tom -UNIX'; 'Roe Ralph'; 'Schomburg Calvin'; 'Schricker, B.'; 'snichols@hq.nasa.gov'; Sofge, AI (NASA HQ); 'Speece, Robert'; Stevenson-1, Charlie; 'Stone, Jeff; Tenbusch-1, Ken; Wells-1, Joel; Wilson, Thomas F.; Rivera, Jorge; Greenwell-1, Shawn; Oliu-1, Armando; Crisafulli, Anthony; Brewer, Raymond J; Marren, Tom; Thompson-1, Becky J.; Key, John; Lorick, Vicky K; Champagne, Lorraine C; Kent, William T. "Tim"; Spaulding-1, Jeff; Altemus-1, Steve; Mullins, Michael B; Powell, Doug; Cross, Donald G; Hammel-1, Donald; Stoner-1, Michael D; Greby, Mark J

STS-107 Post-Launch Film Review -Day 1

Attached is the Day 1 report and an MPG of Anomaly #1

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STS-I07 POST LAUNCH FILM REVIEW
KSC PhotoNideo Analysis Team
17 January 2003

Anomalies

1. At approximately 80-84 seconds (accurate timing off of film will be done tomorrow) after T-O a large piece of debris is observed striking the underside (-Z) of the LH wing of the orbiter. The debris appears to originate from the area of the -Y bipod attach point on the external tank. (E- 208, E-212) No damage to orbiter TPS is apparent. Further analysis will continue.

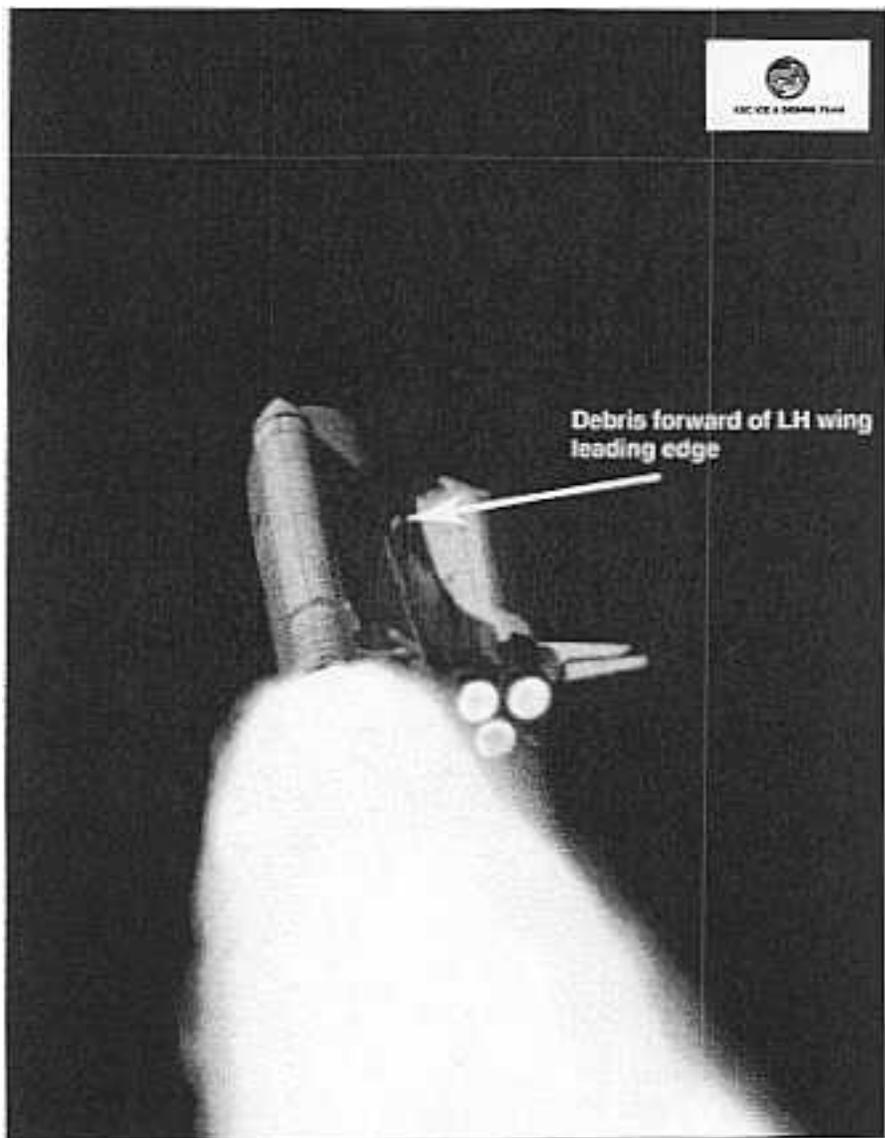


Photo 1.

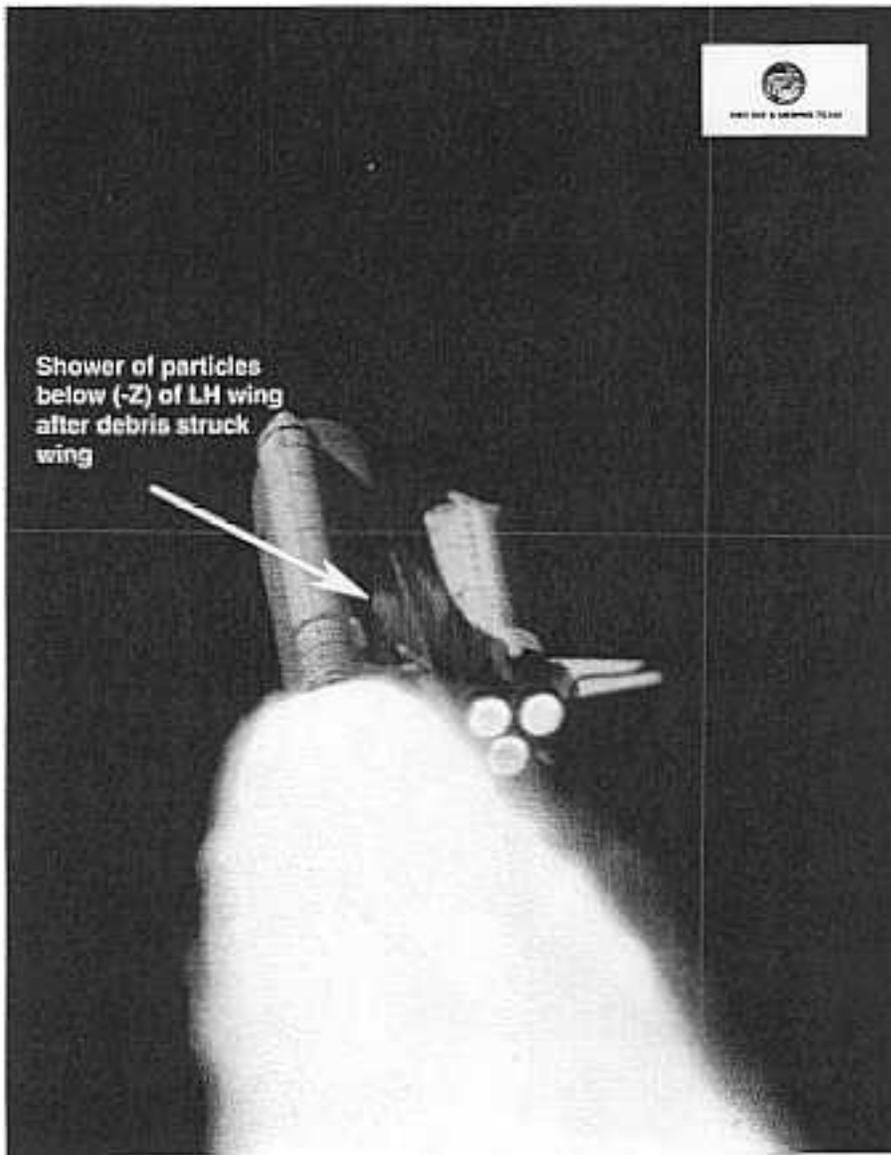


Photo 2

2. Approximately 33 seconds after T-0 several particles are observed falling away from the -Z portion of the LH SRB ETA ring. Particles are probably pieces of the instafoam closeout on the ETA ring. (E-220, E-222, E-223, E-224)

Observations

Forward RCS paper covers were observed falling aft during early ascent. Several pieces can be seen falling over LH and RH wings. (E-52, E-222)

GUCP separation and retraction appeared nonnal. (E-33, E-34, E-39)

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Ice particles from the GH2 disconnect fell at T-0. (E-33)

Umbilical purge barrier baggie material fell during ascent. (E-31, E-52, E-207, E-222, E-223) SRB separation appeared normal. (E-208, E-212)

Particles of SRB aft-skirt instafoam fell along side the SRB plume during ascent. (E-223)

55MB Mach diamond formation sequence was 3-2-1. (E-76, E-77)

Numerous flashes occurred in SSME plume during ascent. (E-208, E-220, E-222, E-223)

Ice particles fell from ET/ORB umbilicals after lift-off. No impact to orbiter lower surface was noted. (E-31, E-52, E-63)

Charring on the ET aft dome was typical. (E-212)

Numerous pieces of facility debris entered field of view after vehicle cleared tower. (E-31, E-36).

Light frost and GOX vapors were present on -YET louver. (E-40)

Throat plug material ejected from SRB exhaust hole after T -0. No contact with vehicle. (E-52)

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Review of high-speed films will continue on Saturday, January 18, 2003.

Annando Oliu

NASA-KSC

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