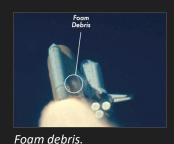
Safety Moment - Stop Work Authority



After reviewing the film footage from the launch of the Space Shuttle Columbia in 2003, engineers noted a piece of foam from the external fuel tank had broken off and impacted the leading edge of the shuttle wing.



Damage from a simulation of the foam hitting the wing at 525 mph.

Most felt it was essentially harmless, comparing it to a Styrofoam cooler blowing out of a pickup ahead of you and striking your windshield, and that nothing untoward would happen.

Rodney Rocha email.

HA, ALAN R. (RODNEY) (JSC-ES2) (NASA)

SHACK, PAUL E. (JSC-EA42) (NASA); HAMILTON, DAVID A. (DAVE) (JSC-EA) (NASA); MILLER, GLENN J. (JSC-EA) (NASA) MILLEH, GLENN J. (1960-EA) (NASA); ROGERS, JOSEPH E. (JOE) (JSC-ES2)
SERIALE-GRUSH, JOYCE M. (JSC-EA) (NASA); ROGERS, JOSEPH E. (JOE) (JSC-ES2)
(NASA); GALBREATH, GREGORY F. (GREG) (JSC-ES2) (NASA); CAMPBELL, CARLISLE
(NASA); GALBREATH, GREGORY F. (GREG) (JSC-ES2) (NASA); CAMPBELL, CARLISLE C., JR (JSC-ES2) (NASA); JACOBS, JEREMY B. (JSC-ES4) (NASA); MADDEN, CHRISTOPHER B. (CHRIS) (JSC-ES3) (NASA); RICKMAN, STEVEN L. (JSC-ES3) (NASA); CHRISTOPHER B. (CHRIS) (JSC-ES3) (NASA); CURRY, DONALD M. (JSC-ES3) (NASA); CURRY M. (JSC-ES3) (NASA); C GOMEZ, REYNALDO J. (RAY) (JSC-EG3) (NASA); LEVY, VINCENT M. (JSC-EG) (NASA) RE: STS-107 Wing Debris Impact, Request for Outside Photo-Imaging Heip

To:

Cc:

In my humble technical opinion, this is the wrong (and bordering on irresponsible) answer from the SSP and Orbiter not to in my numble technical opinion, this is the wrong (and dordering on irresponsible) answer from the operand orbitel fig. (and dordering on irresponsible) answer from the operand of an area of the operand of the fig. (and obtained the operand of th request additional imaging neip from any outside source. Thuse emphasize (again) that severe enough damage (multiple tiles knocked out down to the densification layer) combined with the heating and resulting damage to the underlying structure at the most critical location (viz., MLG Door/wheels/tires/tydraulics or the X1191 spar cap) could present potentially grave hazards. The engineering team will admit it might not achieve definitive high confidence answers present potentially grave nazards. The engineering team will admit a might not admite definitive right confidence also even with additional images, but, without action to request help clarify the damage visually, we will guarantee it will not.

Can we talk to Frank Benz before Friday's MMT? Remember the NASA safety posters everywhere around site stating, "If

it's not safe, say so."? Yes, it's that serious.

Structural Engineering Division (ES-SED)

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- NASA engineer Rodney Rocha felt otherwise. He advocated, albeit unsuccessfully, to have earth-based or space-based telescopes try to obtain images and assess the potential damage.
 - Although he referenced NASA safety posters that said: "If it's not safe, say so." ...unfortunately, NASA management did not "Stop Work".
- The crew of STS-107 died upon reentry.



