

Re: MMU Question

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"Keith F. Lynch" <kfl@KeithLynch.net> wrote in message
news:d22mkc\$rlj\$1@panix1.panix.com...

>

> *What if the MMU gets stuck in the on position? Does the shuttle have
> enough delta-V to catch him after the MMU gas is all expended? Could
> it cause reentry? How much spin could a malfunctioning MMU put on an
> astronaut, and what could be done if that happens? Thanks.*

MMU had about 80 ft/sec total delta V, so even if 100% was expended
in a linear runaway the orbiter should have enough OMS delta V to
retrieve. In general OMS delta V is about 20x that, but it varies based
on propellant load and whether any is expended on ascent.

I can't imagine a failure mode where that commenced and the MMU
pilot didn't immediately shut it down.

In theory it could build up very high pitch/yaw/roll rates, unless this was
inhibited by automatic systems. Maybe it had a rate limiter to prevent
a pitch/yaw runaway.

A Gemini 8 situation where the MMU was spinning at 3 revs/sec and moving
away at a few ft/sec would be difficult. Possibly the other MMU could
match rates grab him and bring him back.

Currently it's a non issue since MMU isn't flying and SAFER is for emergency
use only.