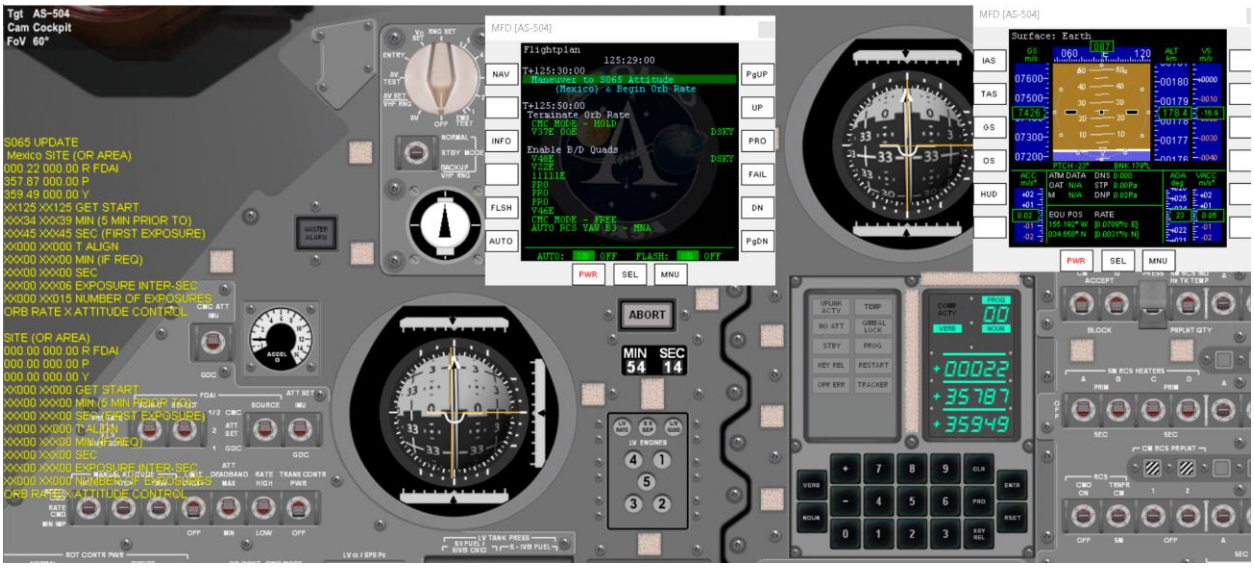
FDAI 0-0-0 ORBITAL RATE ISSUES?

Scenario: "T +125h 25m 10min to start orb rate for next S065"

We are at about -9min to reach the position to start the ORB RTE according the PAD -> at 125:34:45 --- the FDAI 1 (INERTIAL driven) will read 0-0-0 at 125:39:45 and the FDAI 2 (ORDEAL driven) will read 0-0-0 at the same time, as it was set LVLH according to V83E 5 min earlier …

So at time 125:34:45 FDAI 2 is LVLH (compare with SRF MFD) and ORB RTE is started …

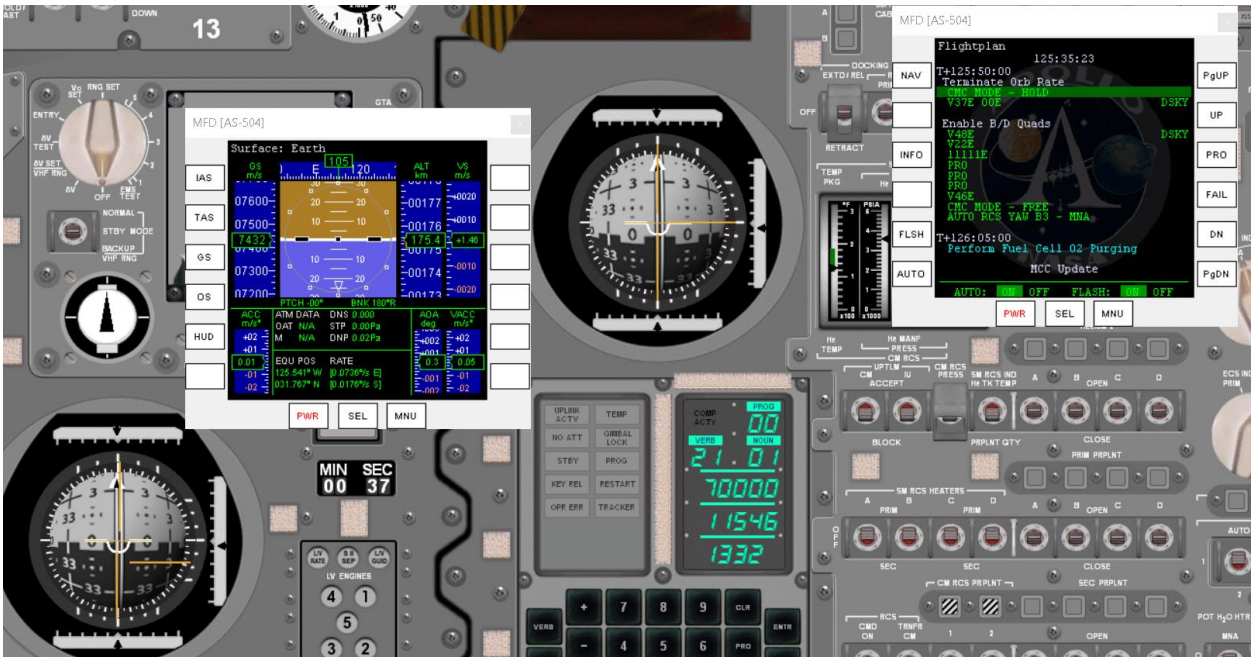
-> avg ALT = 114 -> set in ORDEAL



less than 6 min to start ORB RTE --- FDAI 1 is holding the PAD attitude for time 125:34:45

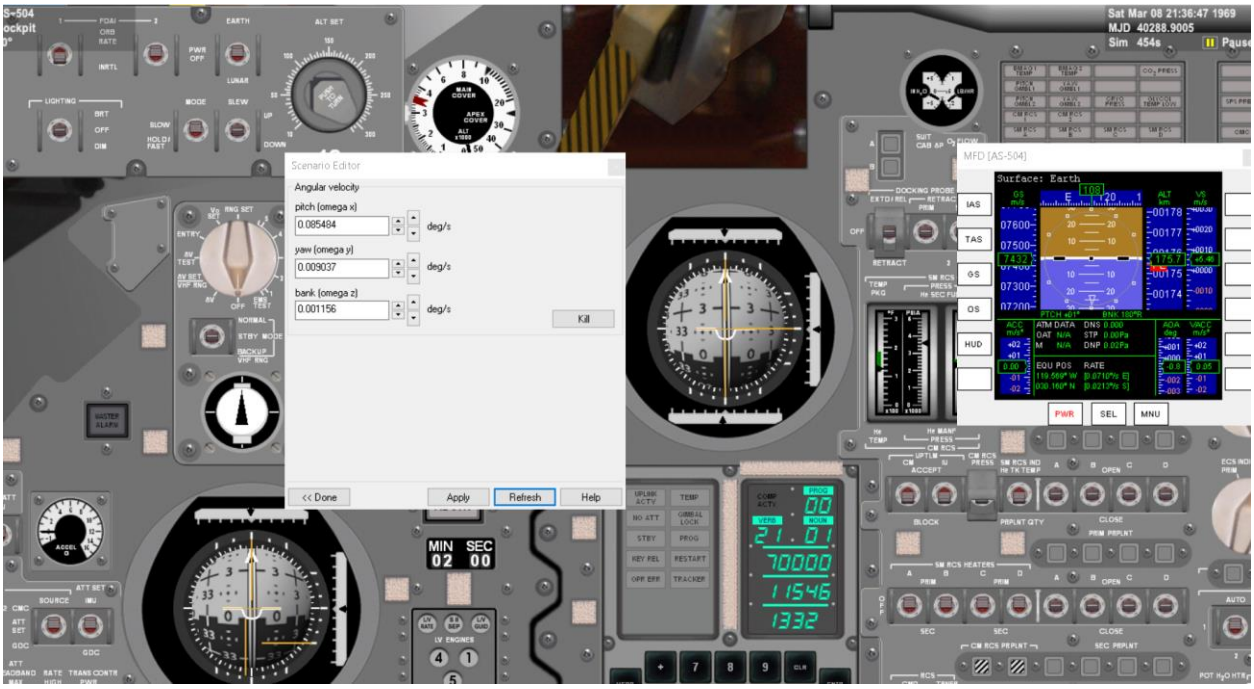
FDAI 2 has been set ORDEAL and is aligned with V83E and Orbiter SRF MFD.

➔ Scenario "T -5min to start ORB RTE".



ORB RTE started at DET = 00:00 -> the SRF MDF is in LVLH but FDAI 2 is already not anylonger in 0-0-0 while FDAI 1 (inertial) was almost at 0-0-0 at time ORB RTE was started.

After 2 min from start ORB RTE we are still LVLH but FDAI 2 is not 0-0-0 …

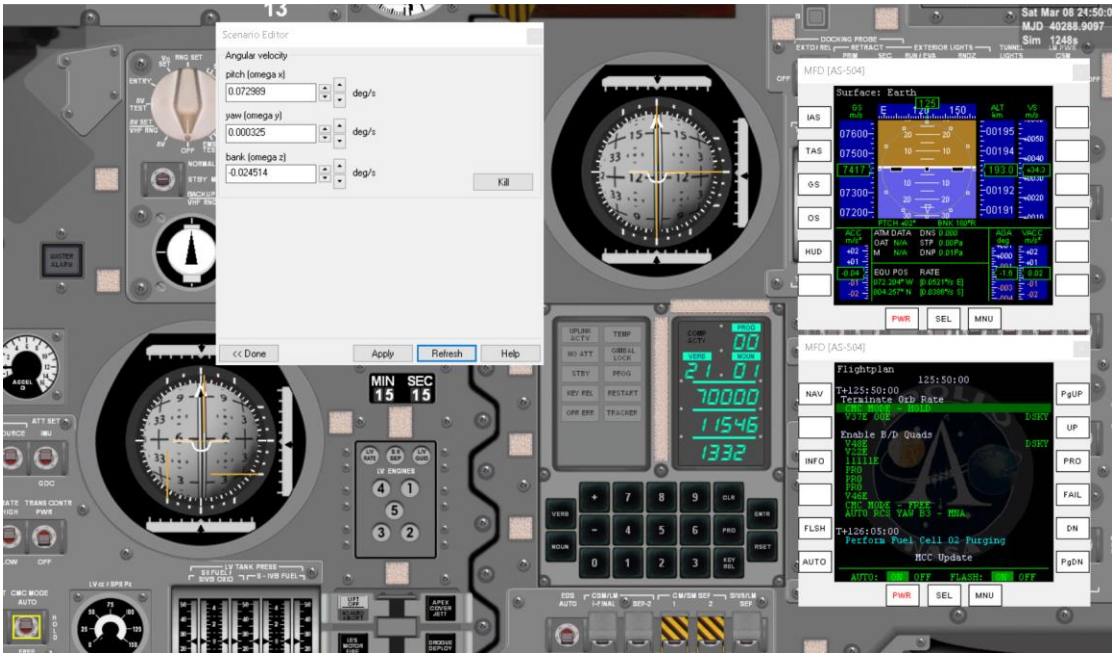


Commanded pitch rate is +0.085 about …

After 3 min -> still in LVLH but FDAI 2 doesn't keep the 0-0-0 attidue -> pitch orb rate about +0.091

After 5 min at T 125h 39m 45s (PAD time) we are still LVLH and “photos” should start over Mexico 5 min later (according my PAD interpretation)…indeed seems the case as “Mexico” is ahead of us …

… ORB RTE should be terminated at 125:50:00 … by that time we are in this situation:



The pitch rate is still around 0.073 and we are still LVLH but the FDAI 2 is far off scale …

Just 1 min after the stop ORB RTE indeed the CSM is free floating in inertial space and also SRF MFD is no longer LVLH.

So why the FDAI 2 is not keeping 0-0-0? It seems it doesn’t move correctly (Can the large orbit eccentricity be responsible for this, as you suggested?).