

National Aeronautics and
Space Administration

John F. Kennedy Space Center, Florida
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Reply to Attn of: VA-C

August 5, 2021

TO: Liam Cheney, LSP Mission Manager, NASA KSC/VA-C
FROM: Emily D'Elia, Flight Design Analyst, NASA KSC/VA-H1
SUBJECT: CySat-1 Update Memo

The CySat-1 CubeSat, which was previously manifested on the ELaNa 37 mission, is now manifested on the ELaNa 38 mission, which is flying on the SpX-24 mission to the International Space Station. This change in launch date (previously August 28, 2021, now December 1, 2021) warranted a reexamination of compliance with orbital debris requirements.

This memorandum serves as a summary of the results of the updated analysis.

The previous analysis showed that the lifetime of CySat-1 would be 1.183 years. Using the new launch date for lifetime analysis, the lifetime is updated to 1.057 years. This difference is due to minor differences in expected ISS altitude and changes in solar flux data.

There were no significant difference in the re-entry risk or collision risk analysis results due to the launch date change.

CySat-1 is still compliant with all orbital debris requirements.

Please direct any questions regarding this memo to Emily D'Elia, NASA KSC/VA-H1

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Emily S. D'Elia, Flight Design Analyst

Enclosure: ELVL-2021-0045993 (Orbital Debris Assessment for The CySat-1 CubeSat)