



Chutes.NL 2023 end-of-the-year review

2023 was anything but a boring year for Entry Descent and Landing systems. Even though there was no Mars landing this year we saw several moon landings. Ranging from the failed Luna 25 and HAKUTO-R landers to the successful Chandrayaan 3 landing making India the fourth nation to soft land on the moon! Japan launched their SLIM lander, which has entered lunar orbit, but has not yet landed.

Talking about India, the country has been very busy with both the Gaganyaan human crewed capsule and their new spaceplane. Several tests have been performed for both programs including drop tests and rocket sled testing. For the Gaganyaan program, an inflight abort test was done in late 2023. India was not the only country to have newsworthy updates on their human spaceflight program, Iran has announced a new bio satellite with possible human space flights in the near future.

2023 also marked the return to flight for both Blue Origin and Virgin's suborbital crewed spaceships.

New earth return

Many capsules have made their way back to Earth this year. This includes Osiris-REX but also some new names including Ispace's DEAR-1 returnable capsule and Varda's capsule. The latter was supposed to land in the US but will now land in Australia as they could not reach a formal landing agreement.

ESA has EDL news both in Space Rider reaching permission to go to phase D, which includes testing with a new commercial contract for ISS cargo capabilities including return to earth capabilities.

Misses and near misses

The year was also full of partial success stories for the EDL sector.

PLD launched their Miura 1 sounding rocket but after a safe landing failed to retrieve it. Currently, it is thought the rocket sank quickly after flight.

Even though Osiris-REX completed a very successful mission, the mission almost ended in disaster when the drogue parachute failed to deploy. Fortunately, the main parachute was able to take the loads and ensured a safe landing and retrieval.

SpaceX lost the famous booster 1058 after landing on the barge in heavy weather.

NASA lost an expensive telescope after the main parachute failed to detach after flight. The telescope flew on a balloon mission and was dragged for miles after a safe landing. Fortunately, the data was saved and recovered before the landing.