

ARIANE 6 - FLIGHT 267

This rocket, the first Ariane 6 with four boosters and a long-fairing version, was launched on February 12, 2026, at 4:45 PM UTC (1:45 PM French Guiana local time) from the launching pad ELA 4 at the Guiana Space Center in Kourou



This add-on is designed for Open Orbiter 2024

ELA-4 for Ariane 6 add-on installation is mandatory

(Launch zone #4 for Ariane 6 for Orbiter 2024 and 2016)

Otherwise, when launching the scenarios you will have a CTD..

Here :

<https://www.orbiter-forum.com/resources/ela-4-for-ariane-6.5681/>



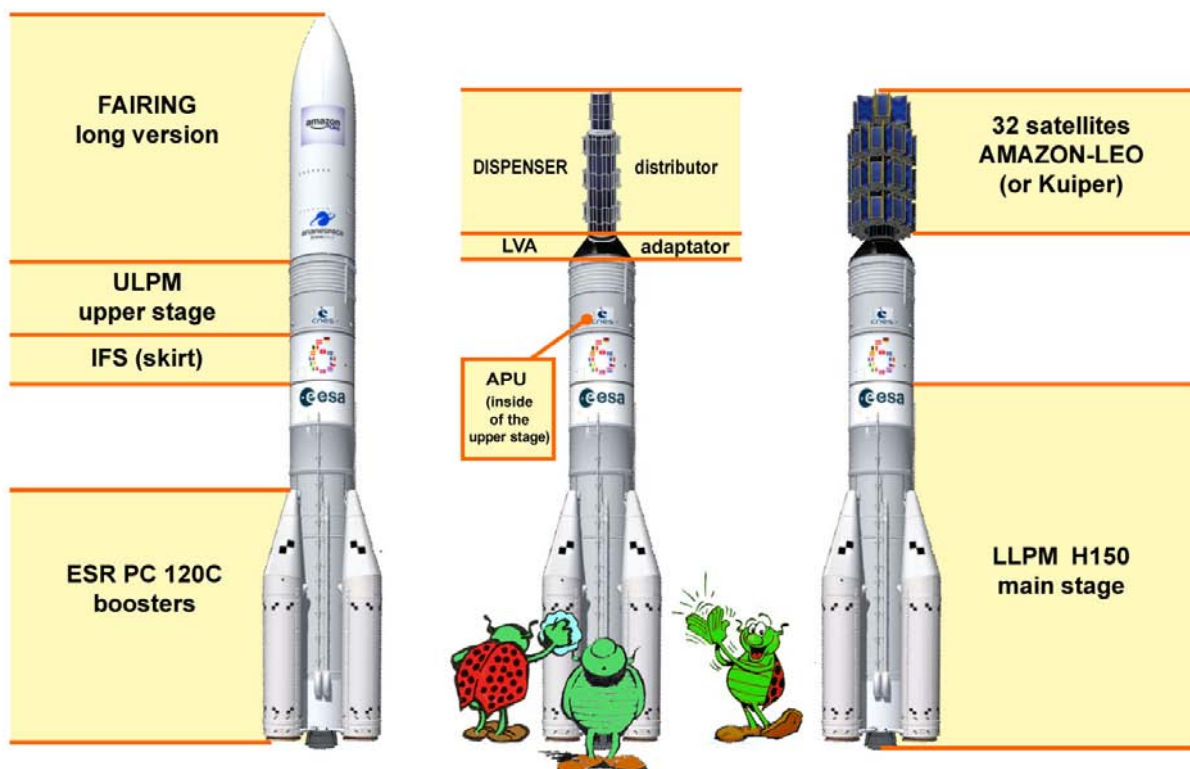
SUMMARY

I - THE ARIANE 6 ROCKET.....	page 2
II - ARIANE 6's PASSENGERS.....	page 4
III - COMMANDS and CONTROL KEYS.....	page 5
IV - SOME USEFUL INFORMATIONS.....	page 6
V - MULTISTAGE with OPENORBITER 2024.....	page 9
VI - TEST ? did you say TEST ?.....	page 10

I - THE ARIANE 6 ROCKET

A) Rocket's configuration for its 267th flight

- 1) **ESR (*Equipped Solid Rocket*) PC120C** (Boosters)
These are monobloc thrusters with a composite envelope. There are four of them for this version, which is therefore named Ariane 6.4 and operate with solid propellant. Their operating time is approximately 135 seconds, helping the first stage to propel the rocket to an altitude of 70 km.
- 2) **LLPM (*Lower Liquid Propulsion Module*) H150** (first stage or main stage)
Thrust is provided by a **Vulcain 2.1** engine running on a mixture of liquid oxygen and hydrogen. Its operating time is 460 seconds.
- 3) **IFS (*InterFace Structure*)** ("skirt" above **LLPM** and below **ULPM**)
Carbon fiber structure serving as an intermediate piece between the 1st and 2nd stages.
- 4) **ULPM (*Upper Liquid Propulsion Module*) H30** (second stage or upper stage)
Cryogenic stage powered by a **Vinci** engine running with a mixture of liquid oxygen and hydrogen. Its special feature is that it can be re-ignited during flight. Its operating time will vary depending on the mission and can be up to 900 seconds.
- 5) **FAIRING**
These are two half-shells forming the top of the launcher and which give it its aerodynamic shape. Their separation in flight is ensured by pyrotechnic charges
- 6) **LVA (*Launch Vehicle Adapter*)**
Structure providing the transition between the **ULPM** and the **Main Passenger Payload Adapter** (or **PAF**)
- 7) **DISPENSER**
Discreet, hidden in the launcher's fairing and protected by trade secrets, the "dispenser" (which could be translated as distributor) is used to attach all the satellites.
- 8) **APU (*Auxiliary Power Unit*)**
These are small thrusters that correct the attitude of the upper stage. They are part of the main innovation of the Ariane 6 rocket to allow it to maneuver between different orbital planes.



B) General information about the mission and the flight procedure

Mission VA267 is the 6th flight of Ariane 6, the first Ariane 64 configuration flight (the most powerful launcher version), and the first flight of an Ariane 6 with a long fairing.

VA267 represents several firsts for Ariane 6 :

- First flight in year 2026 from the **CSG** (Guiana Space Center)
- First launch for a commercial customer
- First flight of the most powerful version of the launcher equipped with four boosters
- First flight of Ariane 6 in its 20-meter-long fairing configuration
- Launch of the heaviest payload ever entrusted to Ariane 6 to date

Named **LE-01** (for *Leo Europe 01*) by Amazon, this mission is the first launched by a European rocket for the **Amazon-LEO** constellation.

The 32 Amazon LEO satellites are under a 20-meter-long fairing and placed into a Low Earth Orbit.

Amazon LEO is the Amazon's low-orbit satellite network, which aims to provide fast and reliable internet connectivity (like *Starlink*) to populations currently deprived of access to existing networks. For this mission, Amazon deploys thousands of satellites in Low Earth Orbit (**LEO**) connected to a global network of antennas, fiber optics and internet connection points on the ground.

The constellation will include around 3200 satellites on several orbital planes. These will work through cluster deployments. Each launch will insert several satellites into the orbital plans planned for the constellation.

Why the name “Amazon LEO” ?

In the 1990s, website directories were listed alphabetically. Jeff Bezos therefore had to choose a name starting with the letter A to find himself at the top of the list. He then flipped through a dictionary to the letter A until he came across the word "**Amazon**", the English translation of "Amazon".

Leo is the Latin word for lion. It most often refers to the constellation Leo (the astrological sign of the zodiac) and the first name Leo, generally masculine, is used in several languages.

Mission **VA267** adds 32 satellites to this constellation, bringing the total number of Amazon Leo satellites in orbit following this launch to 212. This mission will be the first of 18 planned launches for **Amazon LEO**.

IN SUMMARY :

The rocket carries **32 Amazon Leo (or Kuiper) satellites**.

Customer: Amazon (Mission: Global connectivity, high-speed broadband).

Payload mass at takeoff : 20 tones.

Takeoff : on February 12, 2026 at 1:45 p.m. (Kourou), 5:45 p.m. (Paris), 4:45 p.m. (UTC)

Mission duration (from takeoff to separation of the last satellites) : 1 hour and 54 minutes

Orbit reached : Low Earth Orbit (**LEO**) of 460 x 465 with an inclination of 51.88°

3 stages of 9 satellites and 1 stage of 5 satellites are attached on the dispenser.

The separation sequence is programmed in the following order :

- 9 successive separations of 3 satellites (stages 1-2-3)
- 2 successive separations of 2 satellites (stage 4)
- 1 separation of the last satellite (stage 4)

- 0:07:52 1st ignition of the Vinci engine
- 1:11:00 2nd ignition of the Vinci engine
- 1:29:50 separation of satellites numbers 1-2-3
- 1:32:05 separation of satellites numbers 4-5-6
- 1:34:20 separation of satellites numbers 7-8-9
- 1:36:35 separation of satellites numbers 10-11-12
- 1:38:50 separation of satellites numbers 13-14-15
- 1:41:05 separation of satellites numbers 16-17-18
- 1:43:20 separation of satellites numbers 19-20-21
- 1:45:35 separation of satellites numbers 22-23-24
- 1:47:50 separation of satellites numbers 25-26-27
- 1:50:05 separation of satellites numbers 28-29
- 1:52:20 separation of satellites numbers 30-31
- 1:54:35 separation of last satellite number 32 (and end of separation of all Satellites)
- 2:42:00 3rd ignition of the Vinci engine for deorbiting (Please read explanation at page 6)

II - ARIANE 6's "PASSENGERS" (the 32 Kuiper satellites)

I have not been able to find the real characteristics of the Kuiper Amazon Leo satellites because it seems that Amazon avoids publishing the official dimensions of its satellites... The following is necessarily very approximate, and very probably incorrect

We know (at least I hope) that the general shape of Kuiper satellites is compact cubic or rectangular with three steerable parabolic antennas and three array antennas.

About the dimensions (in meters), here is what I found according to the different sources :

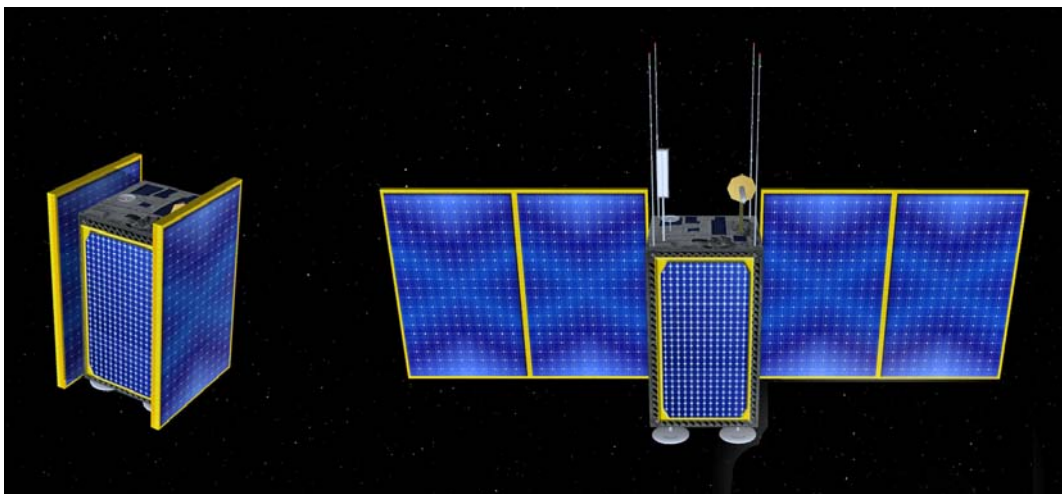
- height = 0.60 ? or 0.76 ? or 0.80 ? or 2.8 ???
- width = 0.48 ? or 1.40 ? or 0.60 ?
- depth = 0.60 ? or 0.76 ? or 0.80 ? or 1.2 ???
- span (solar panels deployed) = 0.30 or 3 m ???

Mass = 600 kg to 800 kg (probable estimate around 700 kg) ?



All this is not very clear... So I based myself on the flight video (the satellite ejection animation) and the relative size of the dispenser (same, I did not find its characteristics) to arbitrarily decide the dimensions of these satellites for the **Orbiter** simulation.

- For the central part of the satellite : height = 2.10 m
width = 1.20 m
depth = 1.30 m
- For the scale of the solar panels deployed = 7.35 m
- For the value of the total mass of the satellite = 500 kg



NOTE :

Kuiper project is now named **Amazon Leo**. But I will continue to call these satellites "Kuiper" numbered from 01 to 32.

Launch and flight Video :

<https://www.youtube.com/watch?v=5liH09mCG5A&t=2166s>

III - COMMANDS AND CONTROL KEYS

A) For the Ariane 6 rocket

- P** Manual engagement of the automatic launch and rocket guidance program.
- NOTE :** A second press on the key **P** pauses the rocket's automatic guidance program. If you decide to take back manual control of the rocket (especially the upper stage after orbit) before the end of the program, you risk ending up with uncontrollable RCS operation. So, in this case, consider disabling the automatic guidance system.
- F** Manual control for fairing separation.
- J** Manual control of booster separation, then upper stage separation, then satellites (10 consecutive groups32 in total).

B) For the ejection of satellites numbers 30-31-32

As we have seen, the ejection of the satellites is controlled by the **J** key (focus **Ariane6**).

But for the last series (satellites no. 28 to 32) the procedure is different :

After pressing the **J** key satellites no. 28 and 29 are released. But if you press again the **J** key, nothing will happen anymore...

This is because of the **multistage** limitation of 10 payloads maximum. So I created an automation (with **VesselBuilder**) so the satellites 30-31-32 will be released automatically in this order :

- 2 minutes 15 seconds after the ejection of satellites 28 and 29: release of satellites 30 and 31
- 2 minutes 15 seconds after the ejection of satellites 30 and 31: release of the last satellite 32

If you don't want to wait 2:15 for the next drop, and another 2:15 for the last one, you have the option of doing it manually by yourself :

- F3** then focus **Leo4**
- J** for satellites 30 and 31 jettison
- K** for the last les satellite 32 jettison

IMPORTANT :

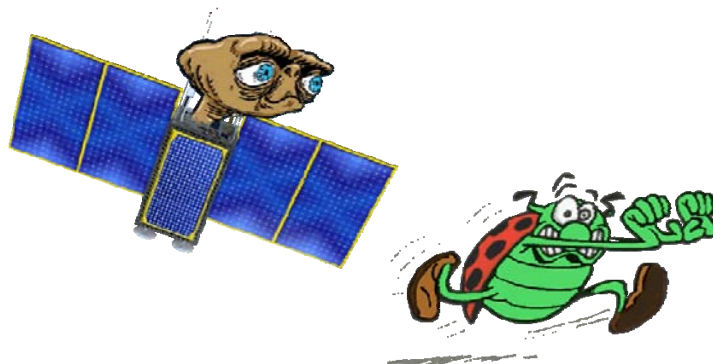
Once satellites 28 and 29 are ejected, avoid changing the orientation of Ariane 6 because the satellite "block" 30 to 32 is no longer attached on the dispenser.
(This is not visible if you avoid any acceleration on the Ariane 6 spacecraft)

C) For satellites

The deployment of the antennas and solar panels is automatic : it takes place 10 seconds after the ejection of the satellites. But you can use the following command keys :

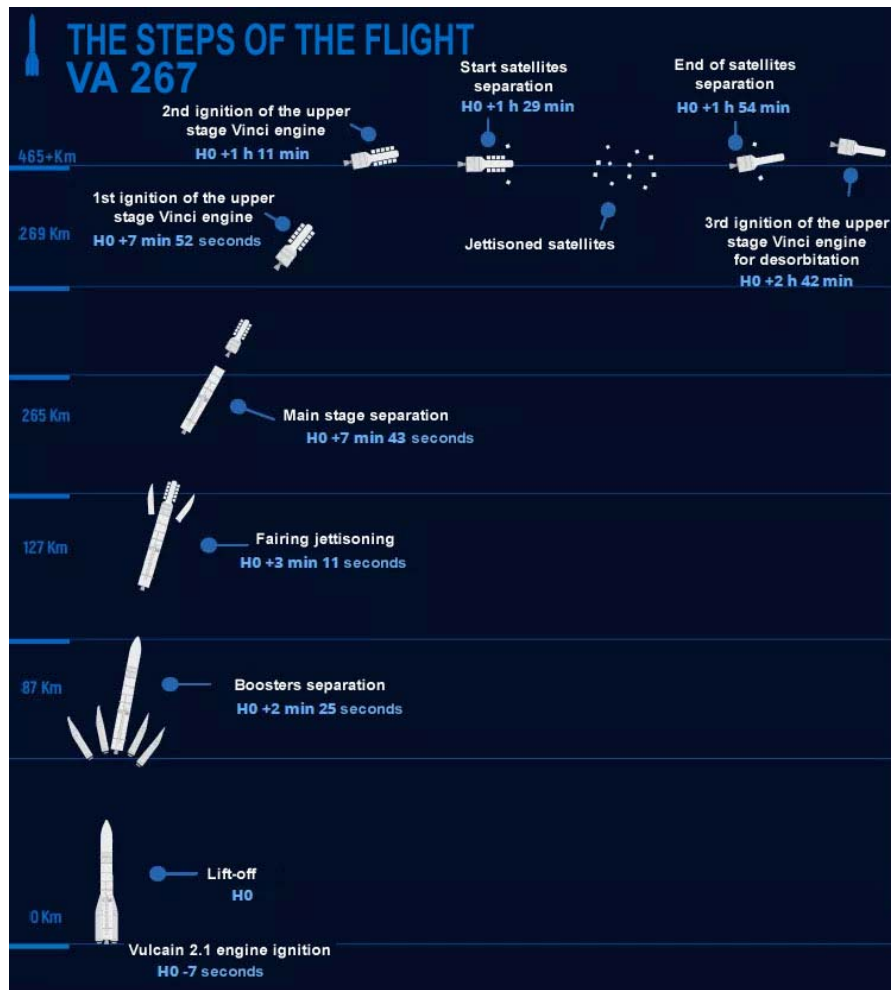
- Shift + K** Manual deployment of antennas and solar panels
- Ctrl + Shift + K** Manual storage of antennas and solar panels

NOTE : This command is only useful here if you want to have fun folding or redeploying these accessories



IV - SOME USEFUL INFORMATIONS

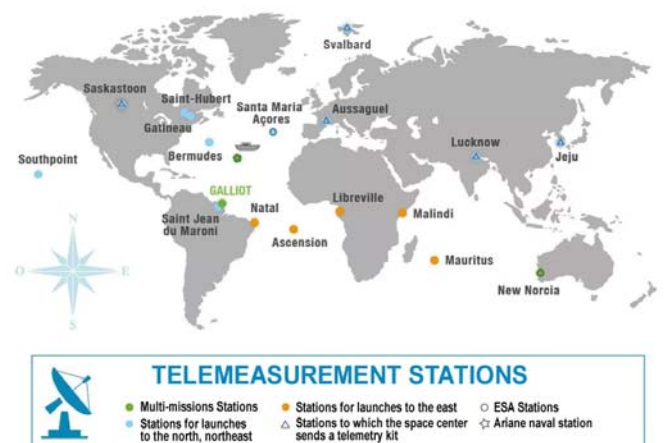
A) Flight progress (summary table)



B) Flight progress (telemetry stations)

Knowing the exact position of the launch vehicle in flight and its operational status is essential to ensuring the safety of people, the environment, and property. To determine the launch vehicle's location and ensure its proper functioning in flight, radars and telemetry antennas track it at all times. If it deviates from its planned trajectory, it would need to be neutralized to prevent ground impacts.

At the Guiana Space Center, the tracking teams are responsible for monitoring the launch vehicle from liftoff until the satellites are placed into orbit. Using the **CSG's** four radars and telemetry antennas, relayed by a global network of tracking stations, flight data is collected and analyzed in real time to ensure a successful launch.

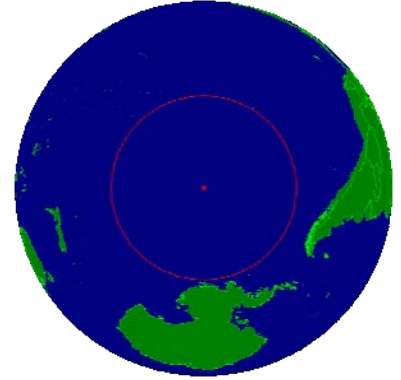


During launch, all the radars at the Guiana Space Centee (**CSG**) are synchronized and activated, interrogating the launcher in turn. Speed, position, altitude, propulsion data, pressure, temperature, vibrations, voltages, currents... With over a thousand parameters measured, the telemetry antennas receive vital data from Ariane 6. When the radars in French Guiana lose sight of the rocket, the telemetry antennas become indispensable. They are the only ones capable of confirming that the launcher and its payload(s) are in good condition and on the correct trajectory, as well as that it is executing its propulsion phases as planned. Finally, it is the telemetry antennas that confirm the mission's success. The data on the launcher's position and behavior are processed instantly and displayed on the screens of the Jupiter Control Center.

B) About Nemo point

The **Nemo Point** is the maritime pole of inaccessibility, that is, the point of the ocean furthest from any landmass on planet Earth. Located in the South Pacific off the coast of Chile, its coordinates were calculated in 1992 by the Canadian-Croatian geodesic engineer Hrvoje Lukatela. This point is named as Captain Nemo, the hero of Jules Verne's *Twenty Thousand Leagues Under the Sea*, whose name Nemo in Latin means "nobody".

This vast area of the South Pacific is used as a vast graveyard to house the remains of still controllable obsolete space vessels.



C) Provided Scenarios

5 scenarios comes with this add-on :

a) Folder ...\ Scenarios \ Ariane 6

- 🚀 v267 - 1 Automatic Launch
- 🚀 v267 - 2 Manual Launch
- 🚀 v267 - 3 Satellites jettison (auto)
- 🚀 v267 - 4 Satellites jettison (man)

b) Folder... \ Scenarios \ Ariane 6 \ Historic Flights

- 🚀 v267 - Automatic (T-10s)
(same as "v267 - 1 Automatic Launch")

A detailed description is displayed when a scenario is selected in the **OpenOrbiter Server Launchpad**.

The "Automatic Launch" scenario is programmed to achieve a final orbit as close as possible to that of the real rocket flight. However, due to certain inaccuracies related to **Orbiter** and to the **Multistage guidance file**, this orbit may not be exactly the desired one.

NOTS :

- Using the simulation's *acceleration mode* can also negatively impact the final result.
You can use simulation acceleration - **T** key - at x10 and even at x100.
Above this value, it will be at your own risk...
- You can disable the *autopilot* at any time by pressing the **P** key once.
A second press of the same key will reactivate this autopilot.
If you use the 🚀 v267 - 2 Manual scenario, You have the option to activate the autopilot either **before** or **after** liftoff.

The flight director and the author of these notes decline all responsibility in case of mission failure due to a fault in the autopilot, or for any malfunction of the piloting program. In case of loss of satellites or for any claim, please write your claims on the forum, my lawyer will think about the next steps.



D) Jettison satellites procedure

The 32 Kuiper (or Amazon Leo) satellites are fixed on a sophisticated **dispenser** which will eject them in groups of three (except for the last five satellites).

Between each release, the role of the **APU (Auxiliary Propulsion Unit)** is to automatically correct the trajectory to compensate for the change in mass after each ejection, so that the satellites end up perfectly spaced in orbit.

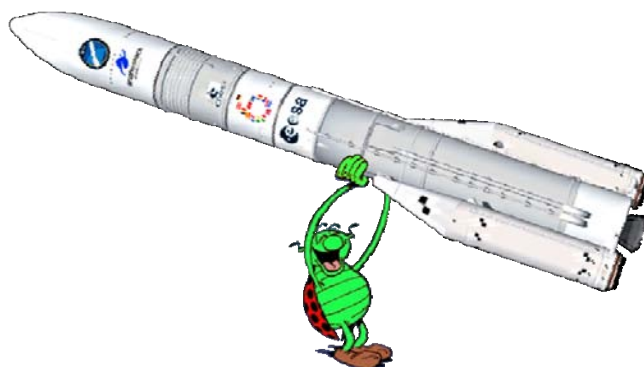
This APU engine is not simulated in Orbiter. Therefore, you will need to determine this orientation yourself.

Once all the satellites are deployed, the Vinci engine must ignite one last time to bring the upper stage back down in a controlled manner, so as not to pollute space with debris..

Here too, it will be up to you to perform this maneuver.

The 32 Amazon-Leo satellites :

International Designator	NORAD Catalog Number	Name	Period (minutes)	Inclination (degrees)	Apogee Height (km)	Perigee Height (km)	Eccentricity	Latest Data	SupGP Age (days)
2026-030A	799649826	KUIPER-00159	93.81	51.89	464	458	0.0003946	📄 📅	0.28
2026-030B	799649827	KUIPER-00160	93.82	51.88	464	458	0.0004313	📄 📅	0.17
2026-030C	799649828	KUIPER-00177	93.76	51.89	459	458	0.0001059	📄 📅	0.11
2026-030D	799649829	KUIPER-00178	93.83	51.89	466	458	0.0005552	📄 📅	0.15
2026-030E	799649830	KUIPER-00180	93.95	51.88	478	457	0.0014966	📄 📅	0.11
2026-030F	799649831	KUIPER-00197	93.78	51.89	461	458	0.0001870	📄 📅	0.11
2026-030G	799649832	KUIPER-00198	93.80	51.88	462	458	0.0002717	📄 📅	0.19
2026-030H	799649833	KUIPER-00199	93.90	51.88	472	458	0.0010396	📄 📅	0.19
2026-030J	799649834	KUIPER-00200	93.74	51.88	459	456	0.0002476	📄 📅	0.26
2026-030K	799649835	KUIPER-00203	93.92	51.88	475	457	0.0012538	📄 📅	0.10
2026-030L	799649836	KUIPER-00205	93.78	51.88	461	458	0.0001656	📄 📅	0.26
2026-030M	799649837	KUIPER-00208	93.94	51.89	477	457	0.0014813	📄 📅	0.10
2026-030N	799649838	KUIPER-00209	93.93	51.89	475	458	0.0012744	📄 📅	0.25
2026-030P	799649839	KUIPER-00213	93.93	51.88	477	457	0.0014618	📄 📅	0.10
2026-030Q	799649840	KUIPER-00214	93.75	51.89	459	456	0.0002242	📄 📅	0.11
2026-030R	799649841	KUIPER-00215	93.89	51.89	472	458	0.0010250	📄 📅	0.25
2026-030S	799649842	KUIPER-00218	93.84	51.89	467	458	0.0006244	📄 📅	0.18
2026-030T	799649843	KUIPER-00220	93.87	51.88	469	458	0.0008250	📄 📅	0.10
2026-030U	799649844	KUIPER-00222	93.96	51.88	480	456	0.0016949	📄 📅	0.25
2026-030V	799649845	KUIPER-00223	93.91	51.89	474	457	0.0012262	📄 📅	0.28
2026-030W	799649846	KUIPER-00225	93.81	51.88	463	458	0.0003616	📄 📅	0.26
2026-030X	799649847	KUIPER-00226	94.00	51.88	484	457	0.0019662	📄 📅	0.25
2026-030Y	799649848	KUIPER-00259	93.85	51.88	468	458	0.0007731	📄 📅	0.25
2026-030Z	799649849	KUIPER-00260	93.77	51.88	460	458	0.0001408	📄 📅	0.11
2026-030AA	799649850	KUIPER-00262	93.76	51.88	460	457	0.0002239	📄 📅	0.22
2026-030AAB	799649851	KUIPER-00266	94.02	51.88	486	456	0.0022046	📄 📅	0.10
2026-030AAC	799649852	KUIPER-00268	93.79	51.89	462	459	0.0002259	📄 📅	0.22
2026-030AAD	799649853	KUIPER-00270	93.88	51.88	471	458	0.0010026	📄 📅	0.10
2026-030AAE	799649854	KUIPER-00274	93.97	51.89	481	457	0.0017224	📄 📅	0.35
2026-030AAF	799649855	KUIPER-00275	93.86	51.89	469	458	0.0007953	📄 📅	0.11
2026-030AAG	799649856	KUIPER-00276	93.98	51.88	482	456	0.0019489	📄 📅	0.25
2026-030AAH	799649857	KUIPER-00279	93.84	51.88	466	458	0.0005930	📄 📅	0.25



V - MULTISTAGE 2015 with OpenORBITER 2024 and BUGS

1°/ Reminder about Multistage and OpenOrbiter 2024 :

While **Multistage2015**, revised and improved by **Fred18**, worked perfectly with Orbiter 2016, there is some issues when used with OpenOrbiter 2024.

*The included version in this add-on is the one recompiled by **Matias**, dated from October 31, 2025. Until a newer, more efficient version is released, use this one; I've managed to fix all the current imperfections.*

2°/ Multistage known bugs with OpenOrbiter 2024 :

- Issues with [BOOSTER]

To overcome malfunctions, the boosters are defined like [STAGE]

- If you use **manual** mode to pilot the rocket, the first-stage engine will stay cut off after the boosters shut down and separate. You will need to re ignite it yourself using the **Ctrl** + **+** keys.

Same for the second-stage engine, which will not automatically start after the first stage separates.

You will also need to restart this engine using the **Ctrl** + **+** keys.

In **automatic** mode, the engine ignition is triggered by the *guidance file*. So if you use this mode, everything will work perfectly.

3°/ Known limitations of Multistage2015 :

This is not a surprise, it's in the Multistage documentation : a maximum of 10 [PAYLOAD]s is allowed.

However, if you remember what I explained earlier, there are 12 satellite release waves. That's 2 too many. To get over this problem, I used **VesselBuilder**.

For the tenth separation, here's what happens :

- Pressing the **J** key => a **VesselBuilder** vessel is created with a mesh representing the last 5 satellites.
- Automatically, at **MET=0**, **VesselBuilder** creates 2 satellites (numbers 28 and 29).
- After 2 minutes and 15 seconds, two more satellites (numbers 30 and 31) are created (automatically).
- 2 minutes and 15 seconds later, the last satellite (number 32) is created (automatically).
- And finally, the initial " vessel " disappears.

It works, and I must admit I'm quite proud of it...

4°/ Unknown limitations of Multistage2015 :

So, I stumbled upon this problem by chance : because I had put a lot of sound files in the *guidance file*, at one point no more rocket display... disappeared !!! And there was something strange in the *Orbiter.log* file. After much research and testing, I came to the following conclusion : Multistage only allows a maximum of 149 lines in the *guidance file* (see the number of steps displayed at the bottom left of the screen) and — though I'm not 100% sure about this — a maximum of 40 sound files.

So I managed to remove a few phrases or announcements from the Operations Director, which is completely unnoticeable..

5°/ Issue during satellites separations :

During the deployment of the so-called "Kuiper" satellites, I encountered a strange problem : it's as if some of the 32 satellites aren't using their respective meshes as defined in their **CFG** files. I've checked and rechecked that there are no writing errors... Consequently, during the deployment of their solar panels, since the axes aren't correct, it's a complete mess... Fortunately, only 4 satellites are affected by this anomaly: Kuiper 28, 30, 31, and 32.

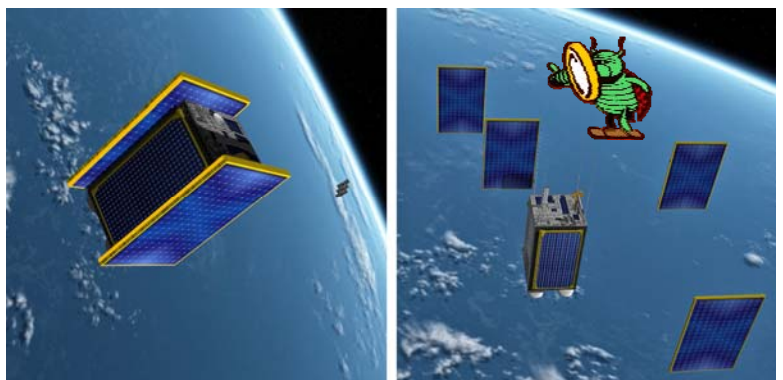
For example, here's what happens to the small Kuiper satellite #28 after its separation ➡

So I intentionally disabled the deployment of the solar panels on these four satellites.

Note : *The Shift+K or Ctrl+Shift+K commands work... if you want to see for yourself...*

And if you want more details, I explain the problem here (sorry, it's in French):

<http://orbiter.dansteph.com/forum/index.php?topic=14989.msg230039:topicseen#new>

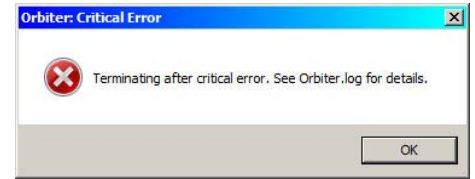


Is it a VesselBuilder bug ? Multistage ? Orbiter itself? I don't know... Perhaps 32 vessels at once causes some kind of saturation.....

VI - TEST ? did you say TEST ?

For Orbinauts suspicious...

As I say (or rather write) at the beginning of this documentation, you **must** install my **ELA-4 for Ariane 6** add-on, otherwise this is what you will get when starting one of the included scenarios :



And if you edit the **Orbiter.log** file, here is what you will be able to read at the end :

```
000029.766: ===== ERROR: =====
000029.766: File not found: .\Config\Kourou\ELA4_Mat-L.cfg
000029.766: No vessel class configuration file found for: Kourou\ELA4_Mat-L
000029.766: [Vessel::OpenConfigFile | D:\a\orbiter\orbiter\Src\Orbiter\Vessel.cpp | 254]
000029.767: =====
000029.767: >>> TERMINATING <<<
```



So if you still want to test this rocket, there's a very simple way :

- Edit all the **SCN** files included in this add-on.
- delete all the following segments :
 - ELA4_Ombilic-Tower:Kourou\ELA4_Mat-L (...) END
 - ELA4_Tower:Kourou\Towers\VB-ELA4-Tower (...) END
 - Palette 62:Kourou\Towers\VB-ELA4-Palette64 (...) END
- keep only the following section :
 - Ariane6:Kourou_Rockets\Ariane6\A6_267 (...) END



And then, it will work fine. Of course, you won't have the mobile tower, the umbilical tower, in short... nothing !
And if you haven't installed my **French Guiana Tiles**, here's what you'll see :



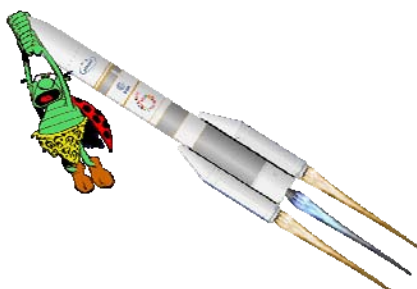
Ariane 6 rocket completely naked



With the "ELA-4" and "French Guiana Tiles" add-ons

Free for you to choose...

I wish you a pleasant flight !!!



JacquesMomo 2026