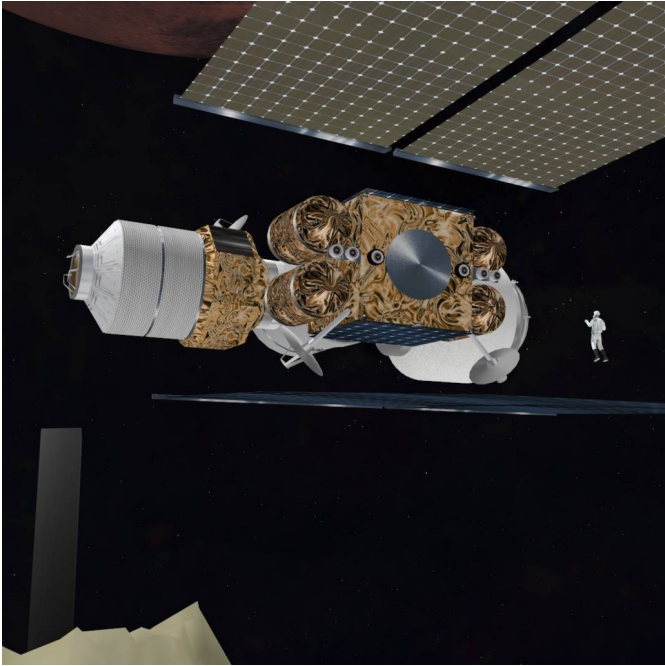


# The Janus Expedition



This story is based on the book [Janus](#) by Phillip P. Peterson.

Photos taken from orbit indicate that the monolith on the Mars moon Phobos may be an artificial structure. Earth's nations race to Mars to become the first to capture possible alien technology.

Makeshift spacecrafts are assembled. The USA and Europe re-purpose the Lunar Gateway, adding extra fuel and engines to it, as well as an inflatable heatshield for aerodynamic capture in the Martian atmosphere.

## Key Commands

E ...	Toggle camera view; a prompt is shown in the HUD when the camera looks back
F ...	Transfer <u>f</u> uel from a vessel docked at the front centerline docking port
[Ctrl] J ...	<u>J</u> ettison the HIAD heat shield
M ...	Switch spacecraft <u>m</u> odes
	0 - stowed, 1 - Heat shield closed during transit 2 - Heat shield open for aerobraking 3 - Heat shield disposed, vessel only
S ...	Change <u>s</u> olar panels state
	0 - stowed 1 - swiveled back 90° for aerobraking 2 - swiveled back 45° for acceleration 3 - fully extended
V ...	Spawn an <u>E</u> VA astronaut, or delete him (while in the same Orbiter session)
INS / DEL ...	Trim control, when in Atmosphere.

## Scenarios – Janus Expedition Description

1 Launch	Launch a CrewDragon to rendezvous with the Janus spacecraft. ** This requires the Falcon9 and CrewDragon addons. **
2 Transfer Injection	Plan your course and depart to the red planet. Use a prograde burn to 10.23k orbital speed and later an orbital plane alignment maneuver.
3 Mars Capture	The Janus is approaching Mars, with its heat shield deployed. Brake into a stable orbit. Aim for a periapsis of 12 km. 2 – 3 aerobraking maneuvers will be needed.
4 Save the Soyuz	After the last aerobraking jettison the heat shield with [Ctrl] [J], adjust the solar panels with [S] and rendezvous with Phobos. A distress call is received from the competing Russo-Chinese expedition. Approach their vessel to assist them.
5 Stickney Crater	The Janus has arrived over the Stickney crater. The monolith is visible on the horizon to the left.
6 Monolith	Spawn an EVA with [V]. Investigate the monolith. What will you find? After returning to the Janus, delete the EVA with [J]
7 Tanker	The tanker has arrived, to provide fuel and supplies for the trip back to Earth. Find and dock to the tanker in Mars orbit. When docked press [F] to re-fuel for the return flight.

Thanks to Buck Rogers for the Prograde Transfer scenario!

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### Tech Notes

Whenever possible use the ion (main) drive to maneuver. It has a high ISP and is more fuel efficient. Use the translational RCS only for fine tuning during docking or landing.

The ion drive thrust is exaggerated by a factor of 1000. This is due to my impatience when flying ...

The aerodynamic trim is active when in an atmosphere. This can be used to align the orbital plane with Phobos while aerobraking. The solar panels are used as guide vanes to adjust the angle of attack slightly.

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