

Elon Musk's vision to colonize Mars updated in New Space

March 26 2018

VOLUME 6 • NUMBER 1 • 2018

ISSN 2168-0256

NEW SPACE

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Editor-in-Chief



The Official Journal of



Mary Ann Liebert, Inc. publishers
www.liebertpub.com/space

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In "["Making Life Multi-Planetary"](#) Elon Musk, CEO and Lead Designer at SpaceX, presents the updated design for the Big Falcon Rocket (BFR), the powerful rocket intended to propel a newly modified space vehicle to the International Space Station and beyond to fulfill his vision for establishing a human presence on Mars. The article, a summary of Mr. Musk's presentation at the 68th International Astronautical Congress, is published in *New Space*, a peer-reviewed journal from Mary Ann Liebert, Inc., publishers. The article is available free on the *New Space* website.

Mr. Musk not only provides details on the BFR's updated design but, importantly, presents a plan for how to pay for it. He describes the development of a huge carbon fiber tank that is capable of holding the cryogenic liquid oxygen needed to fuel the [rocket](#), and the key to the SpaceX business case, how on orbit refueling will take place. The article also reports on progress toward perfecting propulsive landing and achieving rendezvous and docking. Included is information on the changes to the vehicle as its design has evolved, and the dramatic differences in payload capabilities between previous and current versions of the vehicle and BFR designs. Mr. Musk summarizes his vision and goals for a future manned Mission to Mars.

"Elon's description of the Big Falcon Rocket, along with the stunning recent success of the Falcon 9 Heavy indicates just how far SpaceX has come in establishing the elements needed to dramatically lower the cost for deep [space](#) exploration," says Editor-in-Chief Scott Hubbard, Stanford University. "I look forward to seeing SpaceX contribute to human exploration as well as near-term science goals like the Mars Sample Return."

More information: Elon Musk, Making Life Multi-Planetary, *New Space* (2018). [DOI: 10.1089/space.2018.29013.emu](https://doi.org/10.1089/space.2018.29013.emu)

Provided by Mary Ann Liebert, Inc

Citation: Elon Musk's vision to colonize Mars updated in New Space (2018, March 26) retrieved 26 March 2023 from <https://phys.org/news/2018-03-elon-musk-vision-colonize-mars.html>

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