

# Mission to Mars

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December 15, 2016 · *Interstellar Communications*

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Twombly K. Mission to Mars: Kristen Twombly. The Galactic Inquirer. 2016 Dec 15 [last modified: 2017 Apr 28]. Edition 1.

## Abstract

Mars represents the first big stepping stone for humanity, as we voyage past the Earth-Moon system into the universe. Human settlement on Mars will aid in our understanding the origins of the solar system, the origins of life, and our place in the larger cosmos.

NASA has a plan to send people to Mars. This will be a great accomplishment, since the only other planetary object that humans have walked on was our closest neighbor; the Moon. Besides exploring the Moon, NASA has remotely explored Mars for 40 plus years. This involved sending satellites and rovers to peer and poke at the red planet. One important rover that will be sent out is Mars 2020. This particular mission will study the availability of Martian resources for future manned missions, most importantly oxygen.

Accessible oxygen will be the critical component, since NASA has plans to send humans to Mars by 2024-2030. Mars, being months away from Earth, will provide serious obstacles for any astronauts who will embark on this mission. Mars One will help with establishing this home away from home. It is Mars One's goal to establish the key infrastructure for a human settlement on Mars — the next giant leap for humankind (see Figure 1).



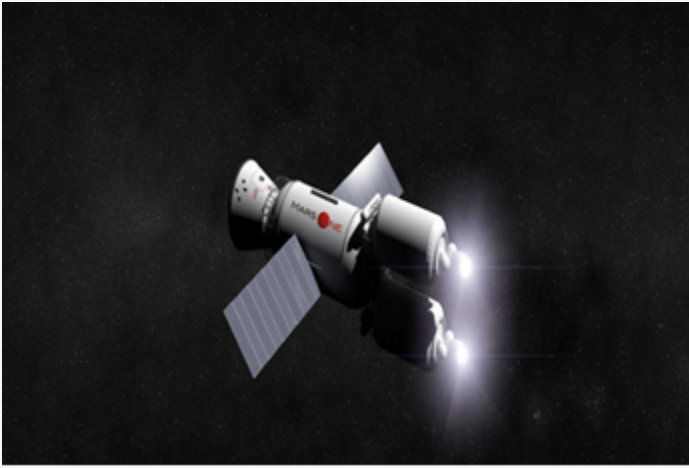
**Fig. 1: Settlement Design**

SettlementMars One – NASA's design for a human settlement on Mars (Credit: NASA)

Mars represents the first big stepping stone for humanity, as we voyage past the Earth-Moon system into the universe. Human settlement on Mars will aid in our understanding the origins of the solar system, the origins of life, and our place in the larger cosmos. With access to the Martian surface, it will be easier to expand out into the solar system and galaxy. As with the Apollo Moon landings, a human mission to Mars will inspire generations to believe that all things are possible, and that anything can be achieved. It is important that this mission succeeds, for it will indeed inspire many generations to come and will prove that we can inhabit other planets besides our own.

Not only will this mission inspire, it will also give us another way to deal with the increasing population on Earth. It is no secret that climate change and the growing population is taking a toll on Earth. We need to start looking for alternate options for the

years to come. This mission to Mars could be the answer we need to survive and keep the human race alive. Not only will we be on another planet, we also will be reaching out farther into our solar system and galaxy with intelligent life. Figure 2 shows a design for the transit vehicle that will carry astronauts from Earth to Mars in the Mars One mission. By designing this to withstand the journey to Mars, scientists can use the design to build different models that will reach even farther out through the solar system and beyond. There is of course the possibility that the people we send will not be able to make Mars habitable for future generations. This dim prospect may be very unlikely, but in the chance that we do fail initially, we must have a backup mission to get the program back on its feet. That means a strong commitment by NASA and its international partners will be needed for decades to come.



**Fig. 2: Transit Vehicle**

Transit Vehicle Design for the Mars One transit vehicle between Earth and Mars (Credit: NASA)

I think that developing a future manned mission to Mars is the most exciting project that has happened in my lifetime so far. For someone who is interested in astronomy and aspires to be an astronaut, I find myself fully embedded in all the details about this upcoming mission. I feel this could make or break the next 50 years of space travel and astrobiology. There will be a spark of interest in this topic for many years to come. As for my goals and aspirations, I want to go to Mars and help in any way I can to make human life on Mars a reality.

#### Works Cited

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