

A Brighter Future

By Cassie Dong

Excitement filled the air as staff members scurried around making last minute check-ups. I myself had a few proofreadings to accomplish and final edits to make on the official report for the record. The launch of the first manned mission from Florida to Mars is set for tomorrow at 8:27 a.m. Eastern Standard Time. This project included the combined effort of private companies such as SpaceX and Mars One with space programs from countries around the world. Countries involved with the International Environmental Restoration (IER), the organization made to restore Earth's environment, includes America, China, India, Japan, and Russia. Members of the IER came together five years earlier in the year 2025 to discuss the urgency of the environmental changes. This was the result of animals going extinct, pollution, growing landfills, global warming, and overpopulation.

Over the years, those problems had grown worse and more drastic to the extent that human ignorance could no longer suffice. Although there were already many changes being made to fix these issues, the efforts were proven futile. Human activities to correct our mistakes before it became too late remained fruitless. It continued that way until substantial events began to occur. I remember how we still did not come together prior to the extinction of the polar bears in 2024, which happened 34 years earlier than predicted due to loss of habitat and food. I have memories of overpopulation and overbearing waste production dominating society, but yet an international meeting was not initiated. I recall the effects of plastic pollution and deforestation that affected us all, nevertheless, the human race still did not propose a plan for a solution in advance to it. We, as the general human population, did; however, finally join together to solve these issues when the world received a wake-up call by activists that spoke out and when we finally took a good look at the land around us. We pushed aside greed and ignorance in order to

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focus on the common good of Earth. On March 1st, 2025, 164 countries and organizations around the world met at an international meeting to find a solution for the destruction wrecking our surroundings, in which IER was instituted. Researchers and scientists from around the world studied and worked vigorously to publish reports and test experiments. The world came together and contributed individual ideas to restore our habitat. People from all different backgrounds united under one cause to ensure an active future. Those people worked on different projects concerning with various aspects of rebuilding our economy and environment. One of those projects implicated a manned mission to Mars, which would determine the possibility of human habitation on another celestial body, advance human knowledge of the universe, and extend the human presence beyond Earth's orbit.

I, Isla Viechtenstein, am a part of the project to land a crewed spaceship on Mars along with scientists from the Chinese National Space Agency (CNSA), the European Space Agency (ESA), the Indian Space Research Organization (ISRO), the Japanese Space Agency (JAXA), the National Aeronautics and Space Administration (NASA), and the State Space Corporation (Roscosmos). I joined this part of the IER, because I had lost faith in humanity due to all the environmental problems, but what could I do? I decided that I, myself, had to take action in order for the rest of the people to. Considering my love for astronomy and science, this undertaking was perfect. The project is called Exploration Mission 2, and the Orion 2 spacecraft will bring the first people to Mars. NASA had been working on this mission for nine years before the IER was established. We joined in collaboration with international space stations to further enforce our goal in connection with the IER, in which we will reach that achievement of sending the first humans to Mars by 2030 tomorrow. Exploration Mission 2 had four phases that included

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Exploration Mission 1. Exploration Mission 1 was the stage that NASA had managed before the partnership, and it went through Phase 0 to Phase 1. Phase 0 was testing on the International Space Station and understanding if and when lunar resources are available. Phase 1 was assembling Deep Space Gateway and Deep Space Transport to operate in the lunar vicinity. Deep Space Gateway, in association with commercial and international partners, utilized missions to deep space and lunar surfaces. It allowed NASA to gain experience for longer duration operations far from Earth and to develop new innovations. This deep space gateway had a power bus, a habitat, an airlock, and logistics modules. Deep Space Transport certified that NASA's capabilities built for humans could complete assignments to destinations further in the solar system and beyond the moon, counting Mars. A deep space transport spacecraft is a reusable vehicle that runs on electric and chemical propulsion, which was designed for crewed missions to Mars. Exploration Mission 2 incorporated the combined efforts of international space stations and private companies to send a manned mission to Mars. Phase 2 was completing the Deep Space Transport continued operations in cislunar, the area between the earth and the moon, and directing the Mars verification mission. Phases 3 and 4 was leaving the Earth-Moon system and reaching Mars orbit, the surface of Mars. We are on Phase 4 with the first crewed mission to Mars tomorrow.

There is also a massive rocket called the Space Launch System (SLS) that is a heavy-lift launch vehicle. Orion 2 will launch off on top of the SLS, and the rocket will carry Orion 2 to Mars with the crew on board. The spacecraft, which will transport the first humans to Mars, is called Orion 2 because Orion 1 was a test mission to the moon that occurred before. This test run of Orion 1 lasted 24 days, and Orion 1 orbited around the moon to further parts of space. After

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Orion 1 was tested, we went into a more detailed process with Orion 2 since we had new information and a confident plan. This procedure included the final selection process for the crew, which consisted of astronauts from all the countries' space programs and private companies. Choosing the crew of astronauts first required looking at the interviews of 208 people out of more than 8,000 applications. The basic qualifications needed before submitting an application were a Bachelor's degree in engineering, biological science, physical science, computer science, or mathematics, being able to pass the NASA Astronaut physical which examines hearing and vision, and at least 3 years of related professional experience following a degree or at least 1,000 hours of flying a jet. Then after interviewing the 208 applicants, 12 participants were chosen to become a candidate for the crew to Mars. Those 12 new astronauts trained rigorously in physical tests like the "vomit comet", the "drop and drag", and a simulator, which are reasons why I could never be an astronaut. They also learned everything about how the Orion 2 worked, how to put on a space suit, how to survive in the water, how to give first aid, the location of the stars, and they studied scientific subjects. After years of training, four astronauts were carefully chosen for the first crew to arrive at Mars. Those four, extremely qualified astronauts are Zelia Cardson, Karen Melsinki, Weston Lee, and Carter Rossi. They will carry the human race to greater heights and discoveries.

Leaving on that train of thought, I snapped back to reality. Sometimes, I reel back every memory concerning a certain topic in my mind to get a grasp of a situation. I could see that most people were starting to leave, so I hurried back at my work. Once I finished reviewing and inspecting the entire outline of the mission, I left for home. The next day, June 16, 2030, is the critical day. I arrive at the Kennedy Space Center in Florida at 5:00 a.m. EST to prepare for the

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launch. I could tell that everyone, including me, felt nervous, but also eager for this world-changing event. I hear the Shuttle Test Director's booming voice perform the calls for T-3 hours, T-20 minutes, T-9 minutes holding, and T-9 minutes and counting. Then with the main engine starting at T-6.6 seconds, the solid rocket booster ignites and it is liftoff at T-0! I watch together with the rest of the world the Orion 2 as well as its crew blast through Earth's atmosphere into a brighter future.

Works Cited

NASA, NASA, astronauts.nasa.gov/default.htm.

“You May Be the First to Mars’: NASA Names Its Most Competitive Class of New Astronauts.”

Fortune, fortune.com/2017/06/08/nasa-mars-astronaut/.

Dunbar, Brian. “Astronauts in Training.” *NASA*, NASA,

www.nasa.gov/audience/forstudents/5-8/features/F_Astronauts_in_Training.html.

Dunbar, Brian. “Countdown 101.” *NASA*, NASA,

www.nasa.gov/mission_pages/shuttle/launch/countdown101.html.

Dunbar, Brian. “What Is Orion?” *NASA*, NASA, 2 June 2015,

www.nasa.gov/audience/forstudents/5-8/features/nasa-knows/what-is-orion-58.html.

Garcia, Mark. “Orion Overview.” *NASA*, NASA, 12 Apr. 2015,

www.nasa.gov/exploration/systems/orion/about/index.html.

Hambleton, Kathryn. “Deep Space Gateway to Open Opportunities for Distant Destinations.”

NASA, NASA, 28 Mar. 2017,

www.nasa.gov/feature/deep-space-gateway-to-open-opportunities-for-distant-destinations.

Northon, Karen. “NASA Announces Its 2017 Astronaut Candidates.” *NASA*, NASA, 7 June

2017,

www.nasa.gov/press-release/nasa-s-newest-astronaut-recruits-to-conduct-research-off-the-earth-for-the-earth-and.

Quora. “Which Space Agencies Are Considered The Best In The World?” *Forbes*, Forbes

Magazine, 22 May 2017,

www.forbes.com/sites/quora/2017/05/22/which-space-agencies-are-considered-the-best-in

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-the-world/#579480252454.

Seemangal, Robin, and Robin Seemangal. "Everything We Learned About a Real Human Mars Mission From NASA (Part 1)." *Observer*, Observer, 7 Oct. 2015, observer.com/2015/10/everything-we-learned-about-a-real-human-mars-mission-from-nasa-part-1/.

"Space Programs Around The World." *Interesting Engineering*, 13 May 2019, interestingengineering.com/space-programs-around-the-world.