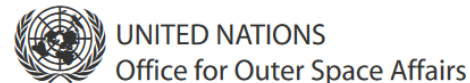

The impacts Colombia will face with the upraise of their first astronaut

— Secretary General - Asociación
Astronáutica Colombiana —



The importance of having a human in space



Image source: Artist's concept – human space exploration – via the 15th [IAA Humans in Space Symposium](#).

A human from a developing country like Colombia



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Image source: Wikipedia

Colombia in the Aerospace Sector



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Latinamericans in Space



- ▶ In October 2017 the IAF GRULAC in partnership with the Ecuadorian space Agency – EXA launched the LATCOSMOS Space Development plan, one of the programs within the plan is the LATCOSMOS–C Human space Flight Program.
- ▶ The **goal** of this program is to allow Latinamerican professionals to be trained as payload specialists and fly a suborbital space mission as crew members with the objective of operate an experiment of science or an engineering test and expose it to up to 5 minutes of microgravity in order to inspire the whole region by demonstrating the actual capabilities of its people in manned space missions fully crewed only by Latinamericans.
- ▶ The **means** of this program is to train a crew of 4 payload specialist and 1 mission commander using a shorter version of the Advanced Suborbital Astronaut Training Program (ASA/T) developed by EXA/GCTC (Gagarin Cosmonaut Training Center) and then fly a technical research mission in suborbital space reaching more than 100 km above Earth's surface, onboard the Blue Origin's New Shepard (NS) launch vehicle, which, as of today, has performed 6 successful unmanned missions.
- ▶ Later in 2018, the Colombian Space Agency – AEC signed an agreement to join the program and help finance it.



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BLUE ORIGIN'S NEW SHEPARD

A test flight launches using the propulsion module's single hydrogen-fueled rocket engine.



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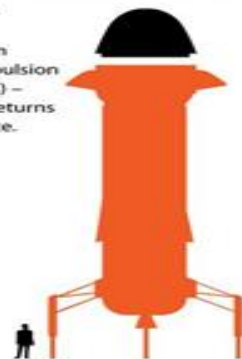
SINGLE-STAGE SUBORBITAL ROCKET

New Shepard, named after Mercury astronaut and Apollo moonwalker Alan Shepard, is Jeff Bezos' scheme for high-altitude, near-space tourism. A propulsion module (rocket) lobs the crew to an altitude of 307,000 feet (93,573 meters) – well above the height required to earn NASA astronaut wings. The rocket returns to its launch site and lands, while the crew capsule descends on a parachute.

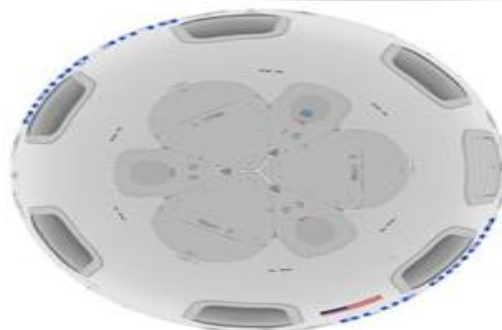
SIX-PERSON CREW CAPSULE

Interior volume: 530 cubic feet
(15 cubic meters)

Six large windows for a great view



Above: The propulsion module in landed configuration, with a human figure and crew capsule to scale.



SOURCE: BLUE ORIGIN



KARL TATE / © Space.com

Benefits of Human Space Flights



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- Quality of Life - Health of people
- National power and security including economic, political and military
- Achievement and stimulation
- Role model - Inspirational
- Opens your mind to things that seems impossible can be possible
- **Education!**

The importance of education

- More interest in STEM education from government
 - More resources for investigation in science
- Educated people make educated choices in their country
- Encourage youngs to stay in school, graduate and possible go into higher education
- Development of aerospace technologies

Some Examples

Costa Rica



Franklin Ramón Chang Díaz - former [NASA astronaut](#).

Mexico



José Moreno Hernández - former [NASA astronaut](#).



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Image Source: NASA

Human Exploration: The Importance

- Planets Do Not Grow, Populations Grow.
- In 1968 The World Population Was 3.5 Billion People, In 2018 The Population Is 7.6 Billion People, in just 50 years the population has more than doubled. ($3.5 \times 2 = 7 < 7.6$).



- As population grows, governments are more demanded by their own populations due the delay in aging for each generation, leaving less resources for research and development and programs like HSF.
- The population growth estimation for the next 50 years varies between 9 to 14 billion people.

Thank you!



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