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Moon's Land is Being Studied for Permanent Human Settlement with Artemis-2 Mission

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Abstract

The US designed Artemis II mission is a mission to explore the land of a Moon. A special purpose of this mission is to study the possibilities to establish a permanent base camp on the Moons land and to study of a possibility of human settlement there, then to setup a launch pad for Mars mission in next few years. Artemis is a special name for the moon in Latin literature. Artemis is a special mission Initiated by US government along with special private scientific firms for exploration of possibility of human settlement in t6h future .The mission is also aiming to stress Upon the researches on, what are the practical difficulties in this mission for human Involvement in forming colonies on moon's land in future Environmental challenges, weather Conditions on southern part of the moon especially. What are the water resources, land resources? Air quality for safe breathing on moons land. Researches on Oxygen percentage, nitrogen Percentage, percentages of other useful gases for human being, minerals in the soil for future Agriculture purpose. What would be the age of human being if settled on the Moon's land? Many such issues are going to study within these further Artemis series missions.

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Introduction

Theory and Discussion

Moon mission, Mission Artemis II by NASA is ten days initiated by space researchers and scientists from USA prominently. The lunar mission with four astronauts, including a women, an African scientist, a Canadian scientist on its board. The mission will study, what are the effects of lunar gravitational influence on human metabolism, human physiology and psychology? What are the atmospheric impacts of moon's surroundings on human mind?. The mission is being en-homed using Orion capsule with life support systems, communication system, and navigation system. It will test its functioning, working, utility and efficiency.

Victor glower is a pilot and is a first Afro-American astronaut. He is also having wide experience of many years of space missions. The women scientist Cristina coach is a mission specialist. Reid Weidman is the chief commander of this mission. He is having a extensive experience of many American naval missions. He is well known for taking crucial decision in the time of emergency she has a record of

spending 328 days continuously in space. She will be the first women to actual land on Moon. She is considered to be the symbol of velour, high spirit, complete devotion, great endeavor, strength, energy, sheer dedication and performance. Jeremy Hansen (mission specialist) is from Canada a close neighbor to U.S. Recently they were having tense relations between them even that scientific world welcomed him with great enthusiasm. These are the brief introduction of four astronaut who will en-home Orion capsule to the moon's land as a special mission.

Permanent resident on Moon is to be studied with Artemis II mission. Permanent base camp along with the use of robotics rovers. After a gap of 54 years once again man mission is all set in the space towards moon's land. A space craft is all set to move seven thousand kilometers from untouched (remote) side of moon. The space mission Artemis II began its journey from Florida, USA. Fifty four years ago from same place it had started the journey towards moon's land. In his hearty wishes the mission director Charlie Blackwell-Thomson expressed that "it's not only historic mission which proves faith, hope, aspirations, daring to take greater responsibilities

but also human desire to achieve higher success, I express my personal good wishes". People in large numbers had gathered near Florida launching pad to witness the historic event. It had reminded the great Apollo mission of 1972 after 17th Apollo mission, 54 years ago. The first moon mission was commenced on 20th July 1969 with Neil Armstrong, Edwin Adrian, Michael Collins, went in space on moon's land first time. This time its SLS rocket which will take Orion capsule boarded with four astronauts to the moon's land. The voyage towards moon difficult. There are dangers and hazardous radiations present in space around. The sharp variation in temperature is also considerable. The human nature is inquisitive, i.e. to have second thought /second opinion towards or to search another opportunity to get settled on the moon. From Moon's surface the earth looks beautiful and blue which will arouse the desire for human race to become united for such missions and for serving the humanity.

It is expected that the velocity of Orion capsule while returning to the Earth will be 40 thousand Km per hour. In Orion capsule there are facility of food, diet, entertainment, library, recreation activities and toilet. The astronauts are carrying a lovely mascot which is gifted by an 8 years old Lukas hailed from California.

A Rejuvenation to Indian Moon Mission

Recently India has signed the accord i.e. "Artemis Accord", India will work hand in hand with NASA in future for such missions as India has collaborated the accord for Artemis next or future missions. The exchange of technology will also take place between two countries. India's Chandrayaan mission and NASA's Artemis mission will work together for future moon's mission and for future research work.

For this great mission US agency NASA has developed a special Space Launch System.

It's a strongest rocket in the world so far. It is slightly taller than 32 storied buildings. When it takes Orion capsule as its payload on panel it exhausts great energy. It has capability to sustain great temperature and thermal energy while entering or at the time of exit from moon's atmosphere. Building the Lunar gate way/lunch pad for space station on moon's land is the next target of this mission. The astronauts will stay in this gateway from that place through small human landing system space crafts which will land on the moon.

The immediate mission will be Artemis 3 which will search the possibility of permanent residence of human being on moon land. To study possibilities of other resources, difficulties, problems that may occur while building the residence on moon. Indian scientists are also analyzing the possibilities of next moon missions as one of our moon mission had failed earlier to come into being. India is searching all such possibilities in the near future. India is searching for establishing a fuel station on the moon's surface. Artemis II is all set to land on South Pole of the moon where man rarely had landed prior to this. To make a launch pad and to make a base camp is another aim of this moon missions.

Artemis is a moon's god and a step sister of Apollo a Greek god named for moon.

Search for water sources on moon surface is also an objective of moon's mission. The water source would in the form of frozen ice form. Whether an oxygen can be explored/collected from such a sites will be searched further.

On tenth of April 2026 the Orion spacecraft had landed near San-Diego shore in USA, in Pacific Ocean.

Space-X, Blue origin are other private agencies which are collaborating along with NASA. Even China is also preparing its moon mission after NASA's mission but there is no direct rivalry over moon mission among these nations, on the contrary, these countries are testing the possibilities of human settlement on moon's land. Since July 1969 to December 1972 America had sent 12 persons on Moon's land and with no other country, comparing/competing with America, the missions were bundled thereafter.

India has permitted its private sector multinational companies for many startups which are upcoming and private firms are pouring money in it. India is looking for further partnership, sharing, investment, collaboration by foreign companies in further space missions

Result and Discussion

Indian moon mission is getting useful inputs through Artemis II moon mission. The confident stride of mankind on the moon's land has opened a new avenue and new possibility of newness and innovative researches for permanent human settlement, effect of Moon's gravitational influence on human behavior, human intellect, human physiology, human thinking and human psychology.

References

1. Artemis-2 Mission: Orion capsule developed blockage again, news agency Huston, daily Divya Marathi, A Hindi daily Bhaskar group. Nation-International news, 2026, 7.
2. Artemis-2 mission: returns voyage begins, expected to return on 10th April 2026. News agency Huston, daily Divya Marathi, A Hindi daily Bhaskar group, 8th April. Head news, 2026, 1.
3. Artemis-2 mission, a story telling article for kids. Amravati Edition, page 2,
4. News agency, daily Divya Marathi, A Hindi daily Bhaskar group, 7th April regional news, 2026, 2.
5. Artemis shows it's no time to be Moony, Chethan kumar, Chethan.Kumar@timesofindia.com, Editorial, Times of India, 2026, 12.
6. Over halfway to moon, Artemis II crew set to break Appolo13 record, AP, AFP, a news from Washington, Times of India, Times global, April 5, 2026, 9.
7. Why to oppose night glowing Sun by Manisha Devane, special analysis, daily Loksatta, a Marathi daily, an Indian Express group newspaper, Saturday 11 April, 2026, 5.
8. Artemis 2: lifted with 4 astronauts, Cape Canaveral, news agency, daily Divya Marathi, A Hindi daily Bhaskar group, 4th April, Head news, 2026, 1.
9. Artemis II is all set to complete NASA's mission, AP Cape Canaveral, daily Loksatta, 3 April, An Indian Express newspaper, 2026, 7.
10. The first step towards global voyage, by Atharva Pathak, AYUCAA, Pune knowledge cluster expert, daily Loksatta, 8 April, An Indian Express group newspaper, 2026, 7.
11. Chanda Re Chanda Re, an editorial of Marathi daily Loksatta, 7 April, An Indian Express group newspaper, 2026, 7.
12. A moon mission after 50 years what are the objectives? What are the significant facts? By Siddhanta Khandekar, an analytical article, 3rd April, An Indian Express newspaper, 2026, 7.

13. Successful return of astronauts from Moon's land, Artemis II mission,
14. News agency, Huston, USA, daily Divya Marathi, A Hindi daily Bhaskar group, 12th April, Front, 2026, 1.
15. For the first time a man reaches 7thousand far behind a Moon's land.
16. News agency, daily Divya Marathi, A Hindi daily Bhaskar group, 9th April, International news, 2026, 9.
17. Google Labs: AI is your teacher and tour guide, AI that is my passion Bhaskar research, Technology and Gadgets, daily Divya Marathi, A Hindi daily Bhaskar group, Saturday, 21st March, 2026. Page 6, Technology news.