

"Che fai tu, luna, in ciel?
Dimmi, che fai, silenziosa luna?
[...] Forse s'avess'io l'ale
da volar sopra le nubi
e noverar le stelle ad una ad una,
[...] più felice sarei candida luna."
G. Leopardi

The prospect of a return on the Moon, "this time to stay", has been launched in January 2004 by the President of the United States G.W. Bush Jr., and confirmed right in the last days. We welcomed this vision, feeling that the human presence outside the Earth is a crucial passage for all of the Humanity. On these premises, the **International Conference - Moon Base: a Challenge for Humanity** project was conceived, consisting in two events:

The **Venice Workshop**, named *Science, Technology, System & Economics. OUTLOOK-ASSESSMENT-SCENARIO*, has been a success, receiving appreciations, at the highest levels, by Italian and American institutions.

The **Washington Workshop** is the natural next step in the Moon Base project and has the aim to define the guidelines of a common US and Italian vision, in particular by **proposing** methods of solutions to the critical points of the program; **defining** the possible users of the resources for scientific and technological ends; **identifying** the possible technological advantages; **discussing** the legal and diplomatic aspects which could guarantee the involvement of the international community.

We have chosen to name it Jamestown on The Moon, like the former permanent English settlement in America, to give a sign of our dream of exploration. We hope that our European partners and Russian friends will join USA and Italy, promoters of this initiative, in the realization of this dream.

"It is good to renew
one's wonder,
said the philosopher
Space travel has again
made children of us all"
R. Bradbury

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International Conference MOON BASE a Challenge for Humanity

WASHINGTON WORKSHOP
Oct 11th-12th 2005



High Frontier



Washington Academy of Sciences

1200 New York Avenue (AAAS Building)
Washington, DC 20005

"JAMESTOWN ON THE MOON"

www.moonbase-usa.org

INTERNATIONAL CONFERENCE MOON BASE: A CHALLENGE FOR HUMANITY

Washington Workshop

“JAMESTOWN ON THE MOON”

OCTOBER 11 – DAY 1

08:30 **WELCOME ADDRESS**
F. Douglas WITHERSPOON – President, Washington Academy of Sciences

08:45 **WHY THE MOON? FROM VENICE TO WASHINGTON**
Francesco MAZZUCA – President, Solidarietà e Sviluppo
Getting There: innovation, development and discovery - the benefits of testing the unknown
Klaus HEISS – Director, High Frontier
Humans on the Moon: Jamestown 2018 Moon Base Architecture Village - Igloos, mountain huts and trullis on the Moon

09:45 **ENABLING LONG DURATION HUMAN SPACE EXPLORATION**
chair **William GARDNER** – President, Int. Registry of Pathology
co-chair **Franco ROSSITTO** – former Head of European Astronauts Center, ESA
David ROBERTSON – Vanderbilt University
Lunar horizons and biomedical research
Jay SAUNDERS – The Global Telemedicine Group
Biomedical support for extended long duration habitation.
Valfredo ZOLESI – Kayser Italia
Medical research opportunities and needs justify the Lunar Base over many decades
Anatoly I. GRIGORIEV and **Dmitri C. MALASHENKOV** – IMBP Russian Academy of Science
Keystone problems of Moon Base Project
Cesare LOBASCIO – Alcatel Alenia Space - Italia
Armour for lunar exploration knights
Fred SINGER – SEPP
Monitoring and overcoming radiation hazard

12:30 LUNCHEON SPEAKER: **Katharine B. GEBBIE** – NIST
Topic: *Non conventional use of the Moon*

14:00 **HARNESSING THE MOON'S RESOURCES**
chair Ambassador **Hank COOPER** – Chairman, High Frontier
co-chair **Carlo Alberto PENAZZI** – CEO, Alcatel Alenia Space - Italia
Bill GERSTENMAIER – NASA
How we meet technical challenges to provide the infrastructure - NASA approach
Nikolai SEBASTIANOV – Energia NPO;
Wladimir SYROMIATNIKOV – Space Regatta Consortium
Earth-Moon-Earth transportation
Ettore PEROZZI and **Sergio PONZI** – Telespazio;
Paolo TEOFILATTO – University of Rome “La Sapienza”;
Fabio GIOVANGROSSI – Aerosekur
Highways to Moon Base
Edward Mc CULLOUGH – Boeing Phantom Works
Lunar surface transportation
Maria A. PERINO – Alcatel Alenia Space - Italia
Supporting life on the Moon
Penelope BOSTON – New Mexico Inst. of Mining and Technology;
Ratus FISCHER – TrueLeaf Technologies
Life support and greenhouses
Piergiorgio MAGNANI and **Beatrice MIDOLLINI** – Galileo Avionica; **Bruno PAPALIA** – ENEA
Robotic aid to Moon Base
Bred BLAIR – Colorado School of Mines
Robotics aided work
Luciano BATTOCCHIO – Solidarietà e Sviluppo;
John P. SKRATT – The Aerospace Corporation
Mission support to the Moon exploration - Logistics

18:30 **RECEPTION AND DINNER AT SPACE AND AIR MUSEUM**
Looking at Earth from the Moon
Social Time
IMAX Theater: “Magnificent Desolation”; IMAX Tom Hanks Narrator
Keynote Speaker: **Mike GRIFFIN** – Administrator, NASA

October 12 – DAY 2

08:30 **WELCOME ADDRESS**
Alan I. LESHNER – CEO, AAAS

08:45 **OBJECTIVES/TARGETS/OUTCOMES OF THE MOON BASE**
chair **Peter GLASER** (via teleconference link) – Inductee, Space Technology Hall of Fame
co-chair **Jim MADEWELL** (on site) – President, ASRC Aerospace
Giuseppe VEREDICE – CEO, Telespazio
Piero SPILLANTINI – University and INFN, Florence
Moon Base: scientific opportunities in astroparticle physics
Frank DIBELLO – Florida Aerospace Finance Corporation
Science Condominiums: sharing risk and reward
David CRISWELL – University of Houston; **Alex IGNATIEV** – TcSAM
Lunar solar energy production
Cosimo LA ROCCA – Galileo SpA; **Franco DI STADIO** and **Stefano LAGRASTA** – Telespazio; **Marco FERMI** – Galileian Plus
Lunar Galileo: positioning and navigation on the Moon
Hugh ARIF – CISCO Corporation
Moon as a node to robust cis-lunar space communications
Silvio ROSSIGNOLI – Aerosekur
From Alaska to the Moon Base: fine Italian food
Dave E. LYNCH – ASRC Aerospace
Prospecting for lunar resources

10:30 **ROUND TABLE**
WHY WE COULD AFFORD THE MOON BASE PROGRAM? CONDITIONS AND REQUIREMENTS FROM THE STAKEHOLDERS
chair **Giovanni CASTELLANETA** – Italian Ambassador to the United States
co-chair The Hon. **Ted STEVENS** – United States Senate

Bill GERSTENMAIER – Associated Adm. for Space Operations, NASA
Pier Francesco GUARGUAGLINI – President and CEO, Finmeccanica
Sergio VETRELLA – President, Italian Space Agency
Stan ROSEN – Chairman, California Space Association
Alexander I. MEDVEDTCHIKOV – Deputy Head, Federal Space Agency - Russia (tbc)

12:30 LUNCHEON SPEAKERS: **Roger ANGEL** and **Simon Pete WORDEN** – Steward Observatory, University of Arizona
Topic: *Sunblock, climate change, solar sails and Dyson spheres*

14:00 **PREPARING FOR THE MOON BASE**
chair The Hon. **James SYMINGTON** – O'Connor & Hannan, LLC
co-chair **Enrico SAGGESE** – Senior Vice President, Finmeccanica
Piero BENVENUTI – INAF;
Simon Pete WORDEN – University of Arizona State;
Piergiorgio PICOZZA – University and INFN Rome “Tor Vergata”
A Scientific Consortium for Moon Base

Reno MANDOLESI – INAF; **Fabio PICCOLO** – Aerosekur
Science Condominium Infrastructures: Earth Test Bed
James F. MADEWELL – ASRC Aerospace
Analog testbeds of lunar condominiums in Alaska
Richard DISSLEY – Bell Aerospace and Technology Corp.
In Situ resources utilization (ISRU) test beds

Hu DAVIS – StarBoosters
Lunar Robotic Lander start-up
Gabriele PERALDO BERTINET – Geoknowledge Foundation
A Moon Base Knowledge Portal
Hank COOPER – High Frontier
Human Resources and the Moon Base: an opportunity

15:30 **MANAGING THE LUNAR FRONTIER**
chair **Giorgio EINAUDI** – Scientific Attachè - Embassy of Italy in the United States

co-chair **Christopher VIZAS** – Director, Global and Entrepreneurial Finance Institute, George Washington University
Luigi PAGANETTO and **Lucio SCANDIZZO** – University of Rome “Tor Vergata” (tbc)
Long term investments vs short time results
Stephen WEIL – TI Partners
Assessing risk and risk mitigation in financing space projects
Martino LO CASCIO – University of Rome “Tor Vergata”;
Emilio FONTELA – University of Geneva
Public and Private Investment: PPP

Raymond PRINCE – former Senior Economist, White House Council of Economic Advisor
Structure of large public/private projects and their macro-economic impact
Giordano GIANNANTONI – OCl
The role of PMI and technological third part in the Moon Base Program

Christopher VIZAS – George Washington University
Achieving returns for humanity: legal/financial structures

20:00 **RECEPTION AT THE ITALIAN EMBASSY**
Remembering Columbus