

When the MSL mission will be launched next fall, a new episode of Martian exploration will start. MSL is the most sophisticated vehicle ever sent to the red planet, with both analytical and movement capabilities ever achieved before. The quality and quantity of data that will be sent to the Earth, will be far away from those sent by Mariner 4 in the middle of the 20th century.

Thank to all the missions which have observed Mars, from orbit or at its surface, the knowledge that we have about the topography, minerals at its surface, characteristics of the atmosphere or even its subsurface, is much higher than from any other planetary object, except the Earth.

That knowledge urge us to think that Mars could have been habitable in the past, or even today in some specific areas. There are many evidences compatible with the presence today of underground water and signs in the surface from past liquid water activity. Besides, there are nutrients and energy sources similar to those that are used by the microorganisms in Earth.

During the school time, a revision of the knowledge about Mars at present day will be done: what the past missions have shown, what is expected for the future, and how these information can result in the analysis of the potential habitability of Mars.

INFORMACIÓN GENERAL

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Horario:
de 9,00 a 14,00 h.
de 16,00 a 18,00 h.
(excepto viernes)

Plazo de solicitud de becas

Del 25 de abril al
27 de mayo de 2011

Apertura de matrícula

Desde el 25 de abril de 2011
hasta completar plazas
(Plazas limitadas)

A partir del 13 de junio de 2011

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Horario:
de 9,00 h. a 14,00 h.
de 15,30 a 18,00 h.
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2011

Escuela

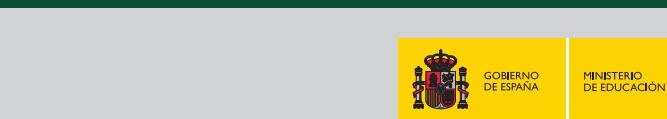
***INTERNATIONAL SCHOOL
OF ASTROBIOLOGY
«JOSEP COMAS I SOLÀ».
Mars Exploration: Unveiling
an Habitable Planet**

Javier Gómez-Elvira
Carl Pilcher

* Curso acreditado por el Ministerio
de Educación para profesores
de enseñanzas no universitarias

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**Santander
June 27- July 1, 2011**

INTERNATIONAL SCHOOL OF ASTROBIOLOGY
«JOSEP COMAS I SOLÀ». Mars
Exploration: Unveiling an
Habitable Planet

Directors

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Olga Prieto Ballesteros

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June 27- July 1, 2011

Monday 27

10:00 h. Opening

Javier Gómez-Elvira

Carl Pilcher

10:30 h. Planetary surface: formation and evolution

Francois Poulet

Institut d'Astrophysique Spatiale, France

12:15 h. An overview of the history of climate on Mars:

A geological perspective **James Head**

Brown University, USA

15:00 h. Earth's early biosphere informs the search for life on Mars

David J. Des Marais

NASA Ames Research Center, USA

16:15 h. Chemical environments and the nature of Mars' first billion years revealed from orbital mineral mapping

Bethany Ehlmann

Division of Geological and Planetary Sciences. Caltech, USA

17:15 h. PROJECT DEVELOPMENT AND ASSIGNMENT

Olga Prieto Ballesteros

Tuesday 28

10:00 h. Mars past climates

Francois Forget

Llaboratoire de Meteorologie Dynamique, CNRS, France

12:00 h. The Martian surface: a planetary surface with very high astrobiological interests

Francois Poulet

15:00 h. Water on Mars: When, where, how much, and in what state?

James Head

16:15 h. Impact craters: cradles of life, frustators of life, or revealors of a wet subsurface?

Bethany Ehlmann

22:30 h. SKY OBSERVATION

Astrocantabria

Wednesday 29

10:00 h. The present day Mars climate system

Francois Forget

12:00 h. The Mars Exploration Rover mission: observations and implications

David J. Des Marais

15:00 h. The Antarctic Dry Valleys: Insights into microclimates and Mars

James Head

16:15 h. ROUND TABLE

19:00 h. PUBLIC LECTURE

Biomarcadores en la exploración planetaria

Victor Parro

Centro de Astrobiología CSIC-INTA, Spain

Thursday 30

10:00 h. Water, Rocks, and Life in Iceland and Oman: lessons for Mars from terrestrial alteration of mafic and ultramafic rocks

Bethany Ehlmann

12:00 h. Future Mars exploration for habitable environments and life

David J. Des Marais

14:00 h. FIELD TRIP

Olga Prieto Ballesteros

Friday 1

10:00 h. Future Mars exploration a programmatic perspective

Álvaro Giménez Cañete

European Space Agency

12:00 h. STUDENTS PROJECTS EXPOSITION

13:00 h. SYNTHESIS, DIPLOMAS AND FAIRWELL

Javier Gómez-Elvira

Carl Pilcher