



The Abdus Salam
International Centre for Theoretical Physics



United Nations
Educational, Scientific
and Cultural Organization

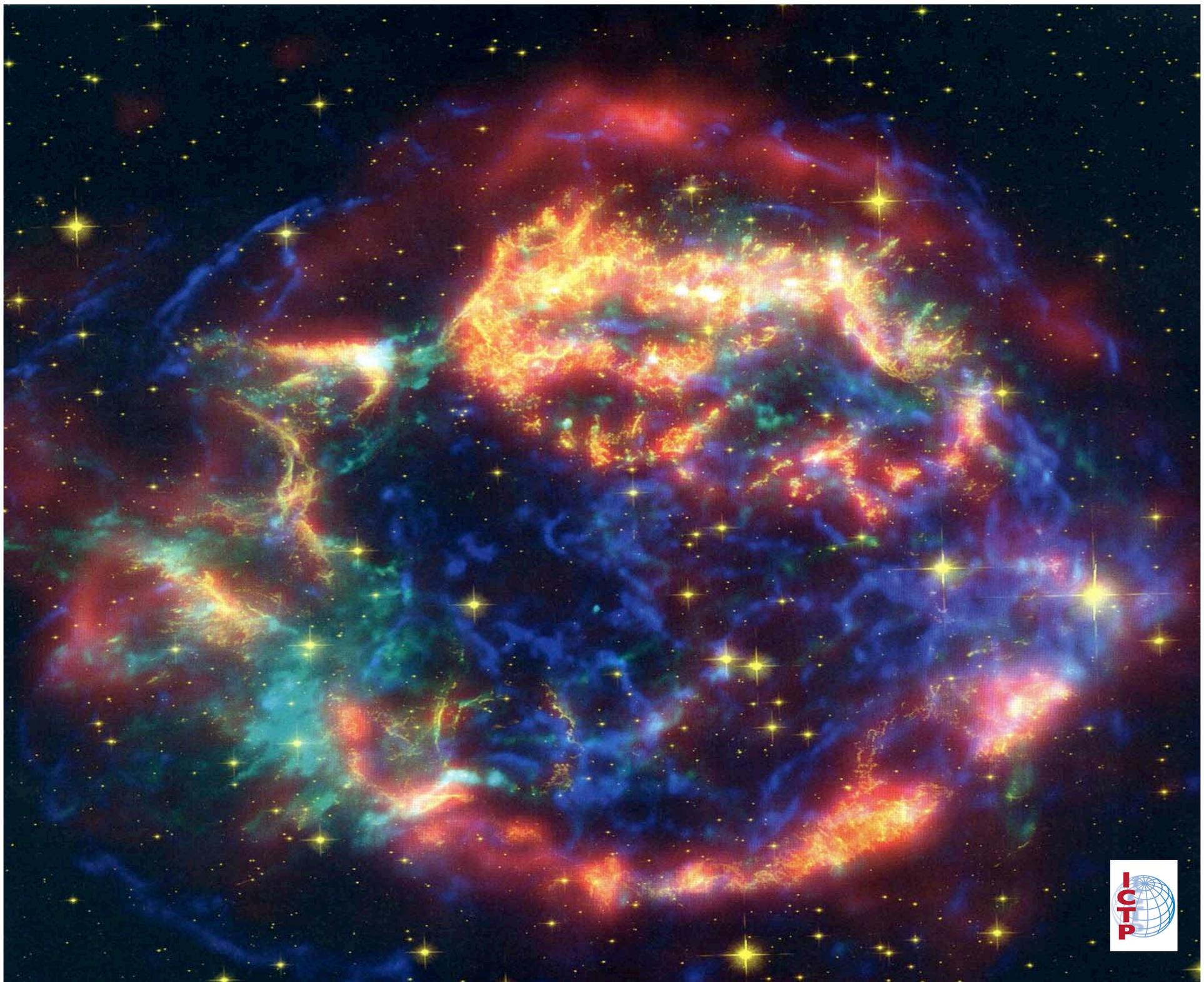


International Atomic
Energy Agency

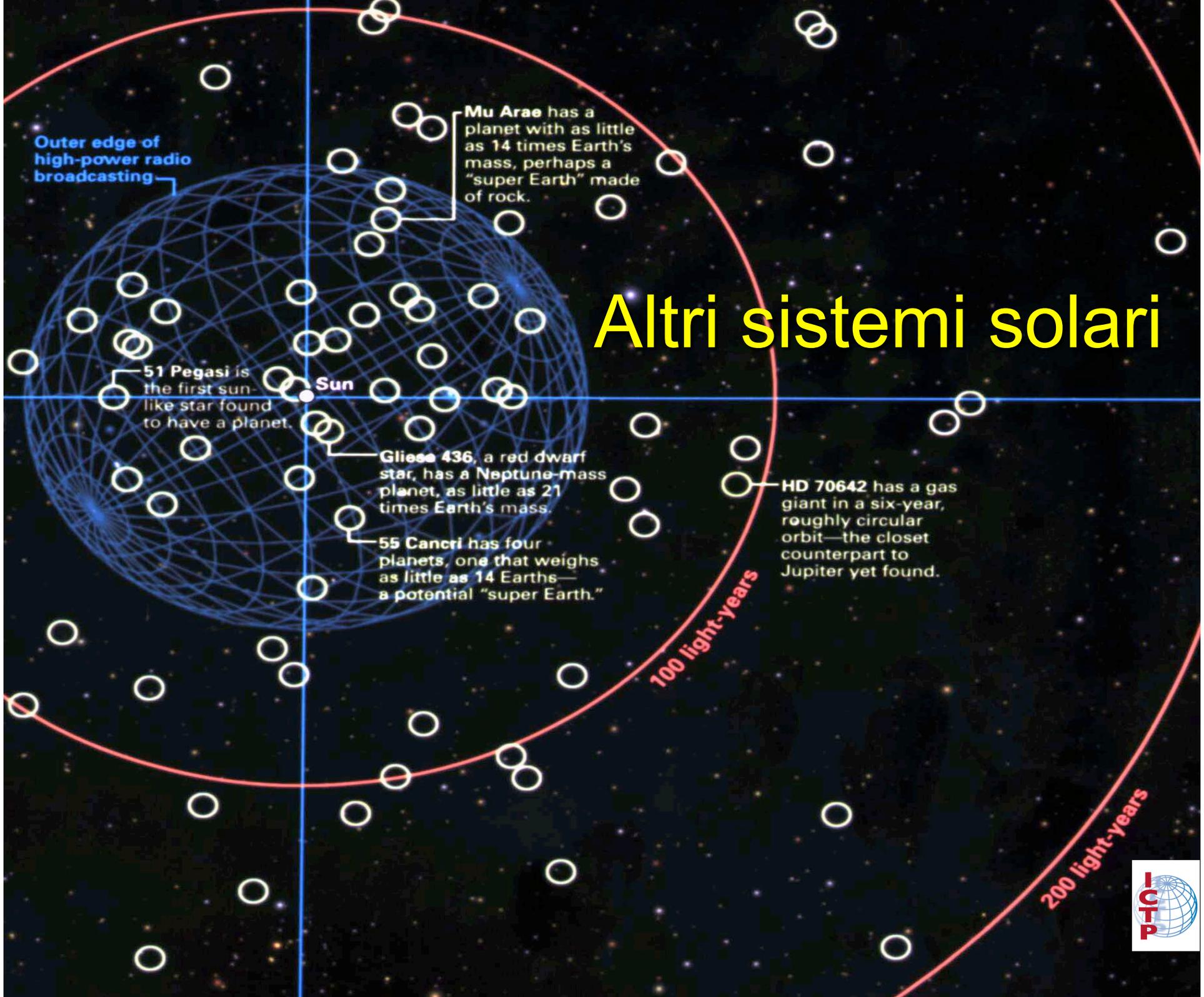
ICTP Open Day 2008

Origine ed evoluzione della vita sulla Terra e nell'Universo

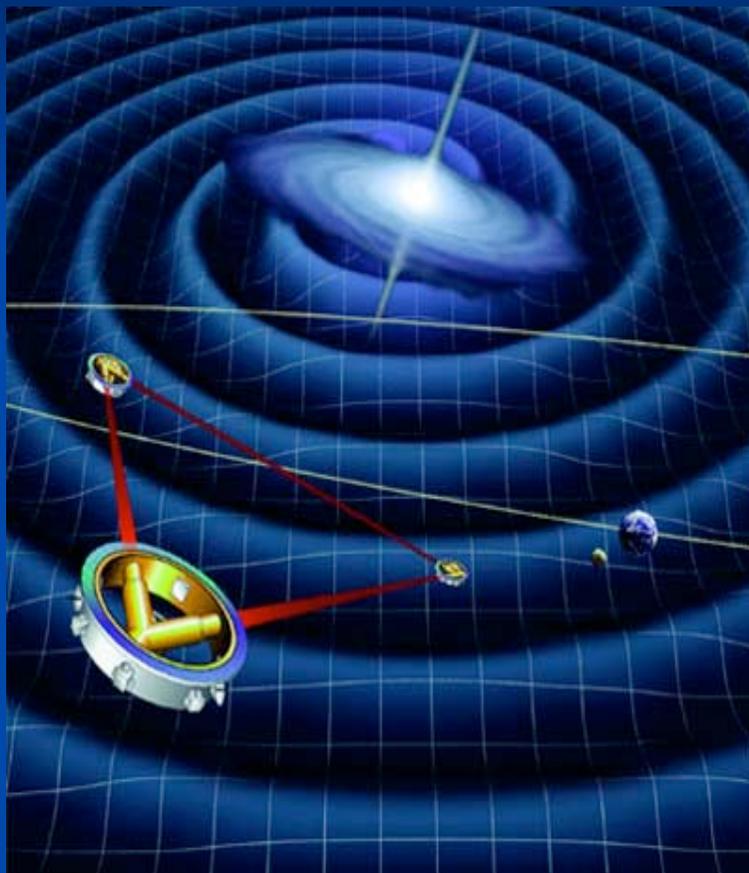
Julian Chela-Flores



Altri sistemi solari



Lo spazio per gli origini



LISA per capire l'universo

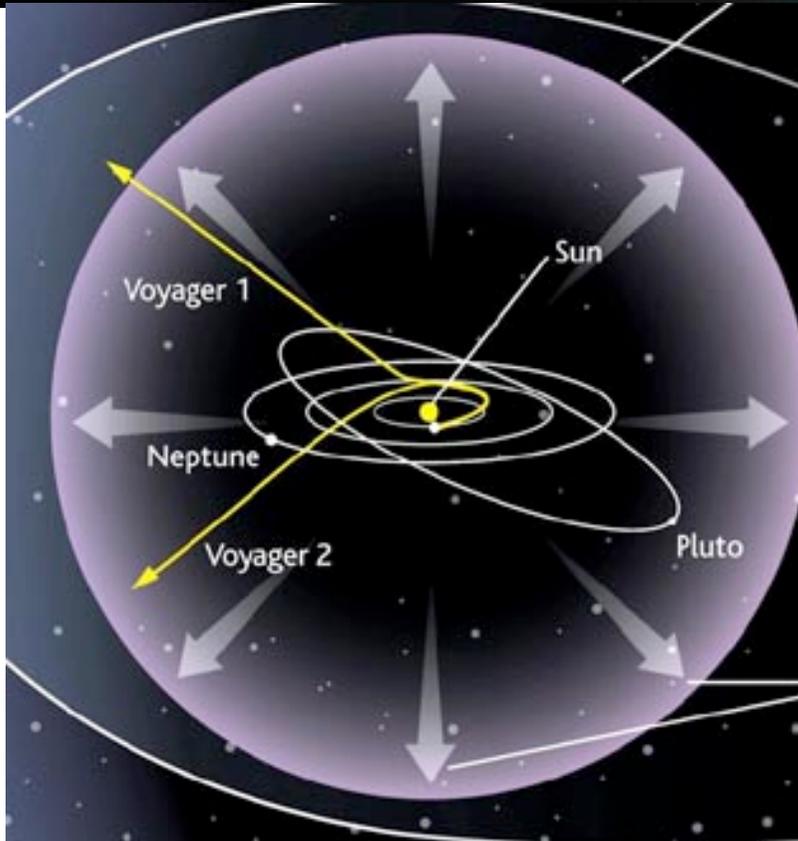
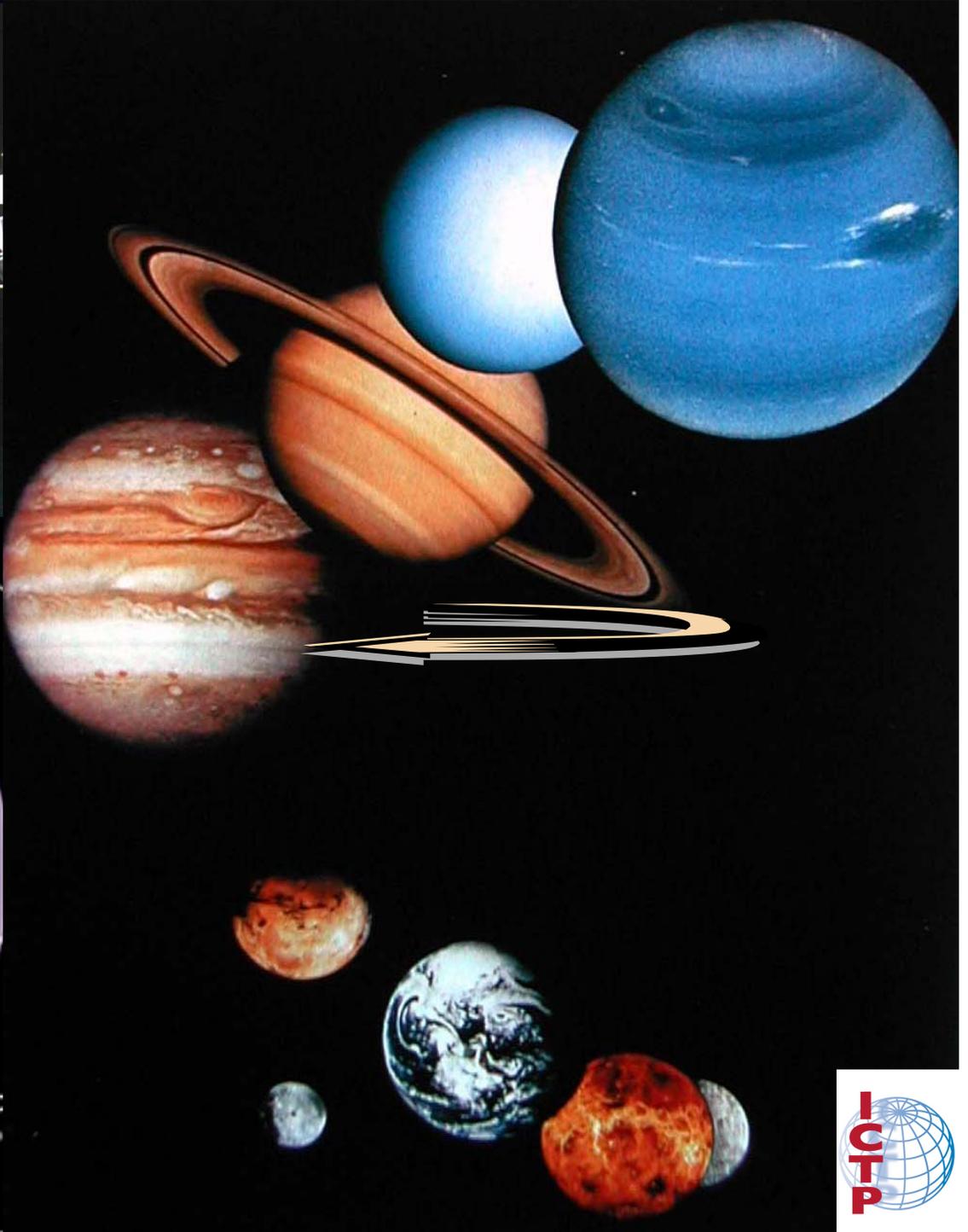
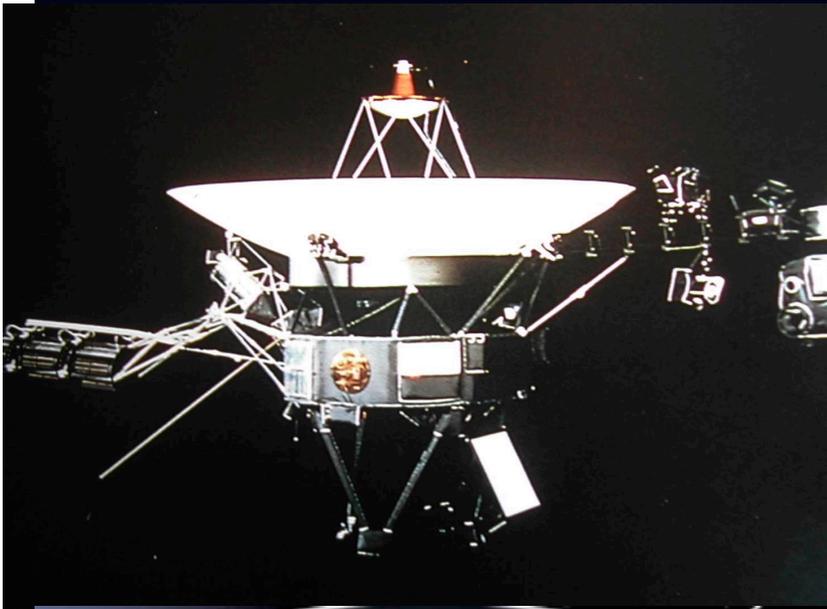


DARWIN
per capire la vita



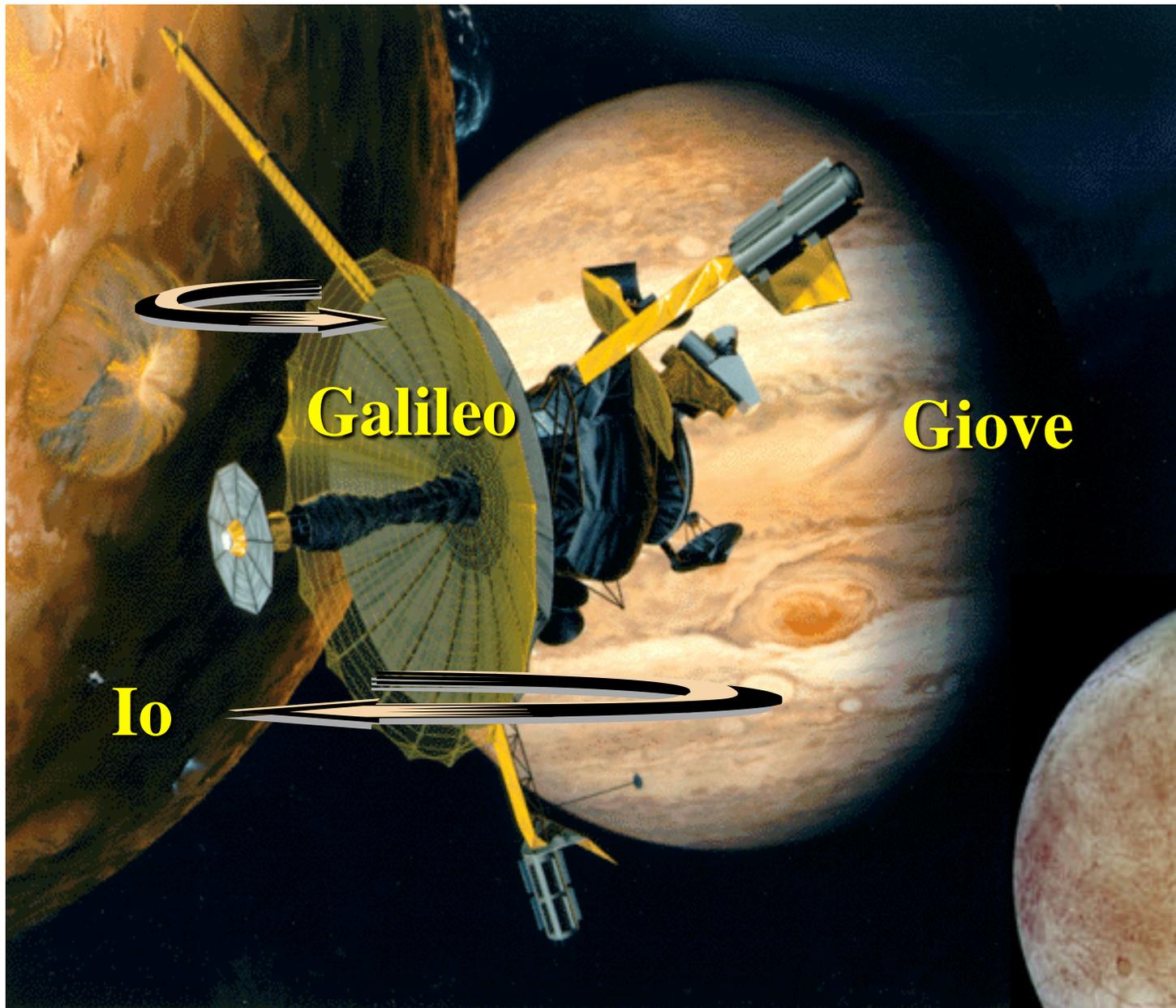
I Voyager

(NASA, 1977-presente)



The background is a composite image. On the left is a large blue planet with a white ring system, resembling Saturn. On the right is a glowing red nebula with a bright white star at its center. The entire scene is set against a dark space background filled with stars.

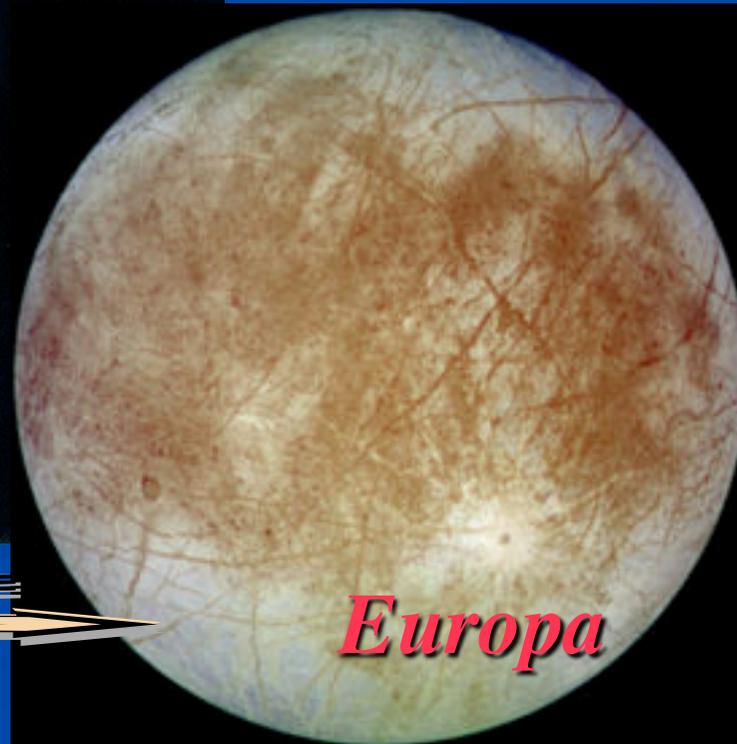
Missione Galileo (NASA 1995-2003)



Galileo

Giove

Io



Europa

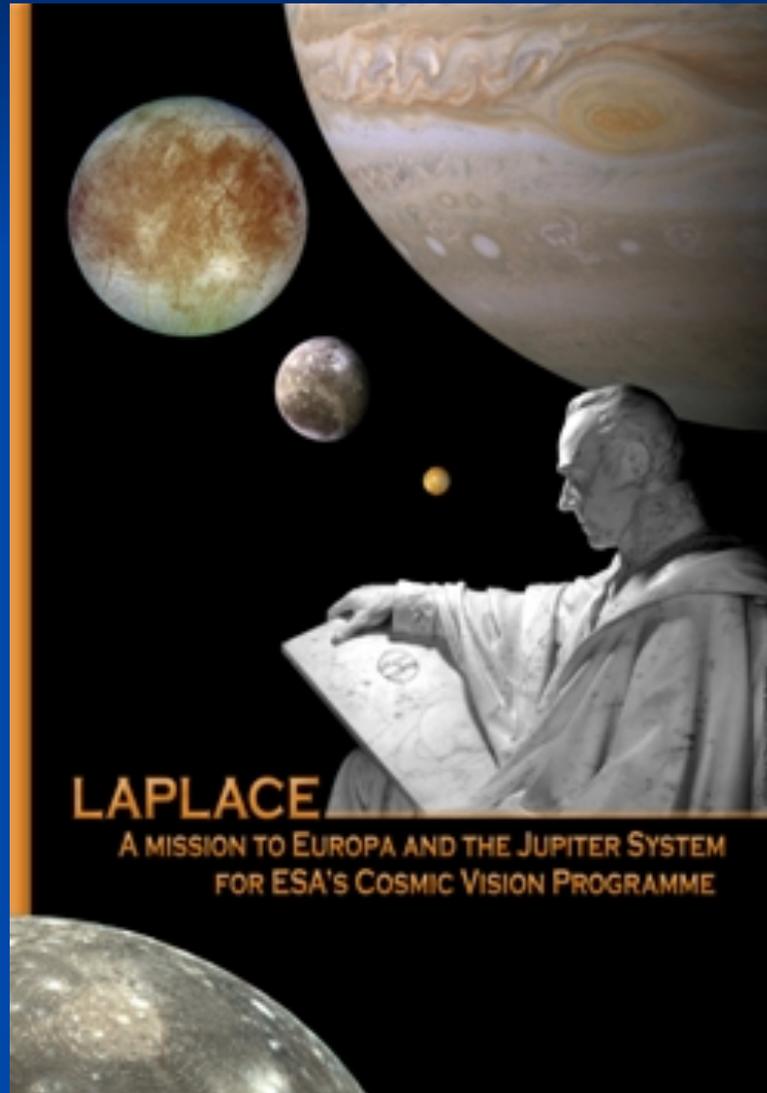


La missione LAPLACE

**(proposta mondiale all'ESA, compreso
il Centro di Fisica)**

LAPLACE

15 Paesi compresa l'Italia, 359 scienziati



LAPLACE

15 paesi

EUROPA /

Austria

Belgio

Danimarca

Francia

Germania

Italia

Portogallo

Spagna

Svezia

Svizzera

Olanda

UK

Giappone

Russia

Stati Uniti

Nel mondo 359 scienziati

In Italia (24 scienziati):

L'Istituto Nazionale di Astrofisica, INAF

Istituto di Fisica dello Spazio Interplanetario (Torino), IFSI

Istituto di Astrofisica Spaziale e Fisica Cosmica (Roma), IASF

Osservatorio Astronomico Arcetri

Osservatorio Astronomico Capodimonte

Osservatorio Astronomico Catania

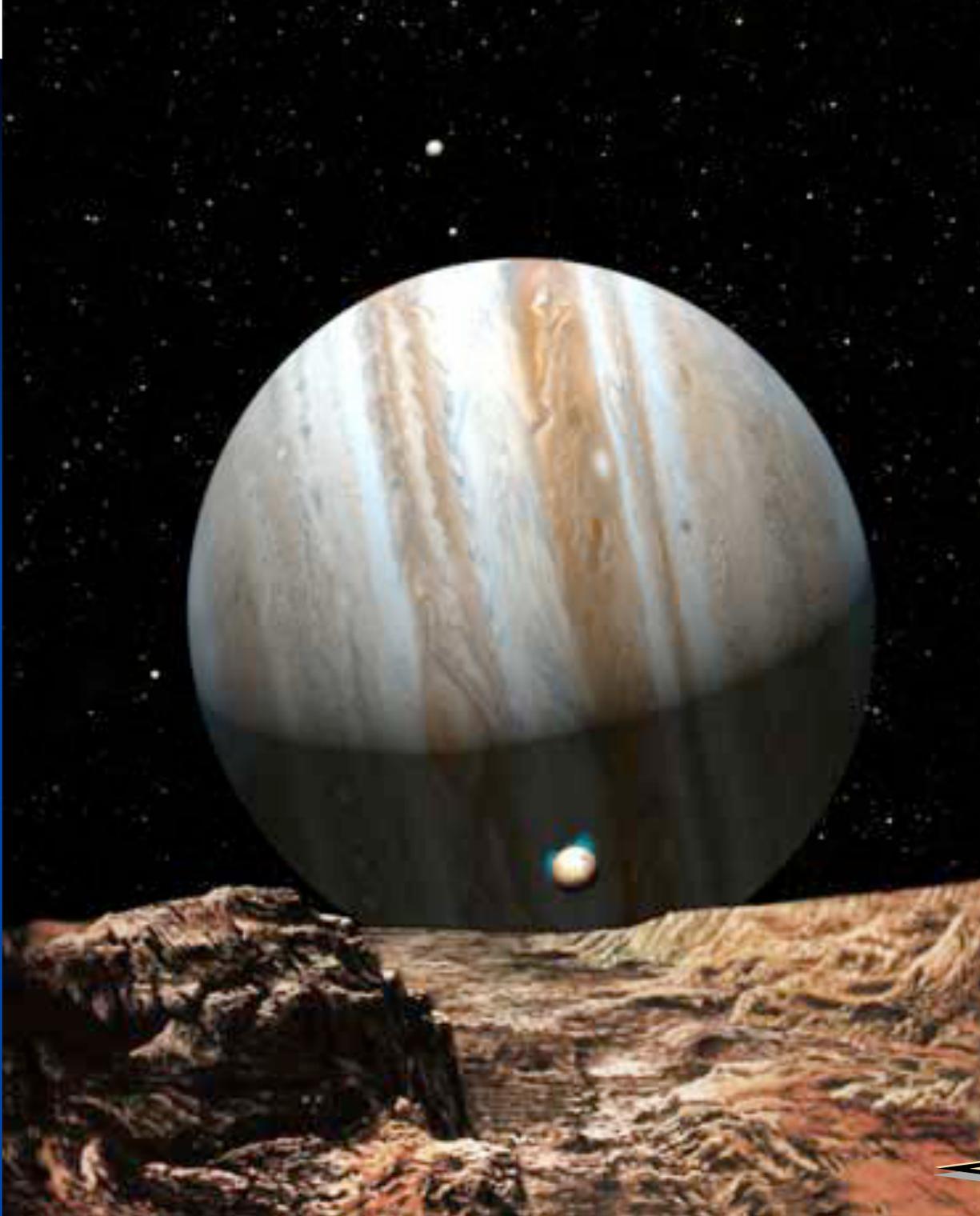
Osservatorio Astronomico Padova

The Abdus Salam ICTP

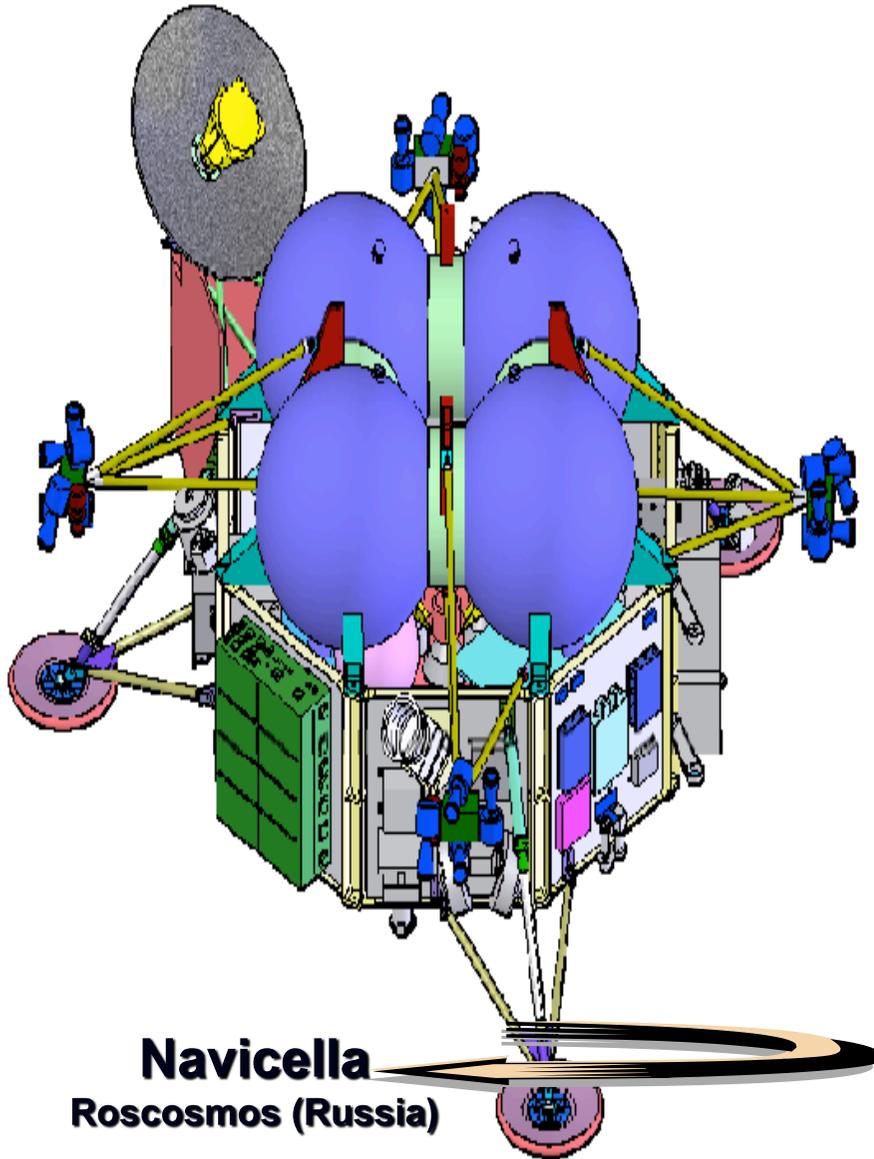
Universita' di Padova

Universita' di Parthenope





Come possiamo arrivare sulla superficie?



LunarEX (penetrators)

21 istituti da 8 paesi Europei

***Mullard Space Science
Laboratory, University
College London, UK***



Birkbeck College, University of London, UK.

PSSRI, Open University, Milton Keynes, UK.

*QinetiQ Ltd., Cody Technology Park,
Farnborough, UK.*

Surrey Space Centre, Guildford, UK.

*SSTL, Tycho House, 20 Stephenson Road,
Guildford, UK.*

Imperial College, London, UK.

QinetiQ Ltd., Fort Halsted, Sevenoaks, UK.

University of Leicester, Leicester, UK

DLR, Cologne, Germany

***The Abdus Salam ICTP, Trieste,
Italia***



*Space Research Centre, Polish Academy of Sciences, Warsaw,
Poland*

ORC, University of Southampton, UK.

*Institute of Maths and Phys, University of Wales Aberystwyth,
UK*

*Space Research Institute, Austrian Academy of Sciences, Graz,
Austria*

United Institute of Physics of the Earth, RAS, Moscow, Russia

*Institute for Inorganic and Analytical Chemistry, Johannes
Gutenberg-University, Mainz, Germany*

Institute of Planetary Research, DLR, Berlin, Germany

*Dep. of Experimental Physics, National University of Ireland,
Maynooth, Ireland*

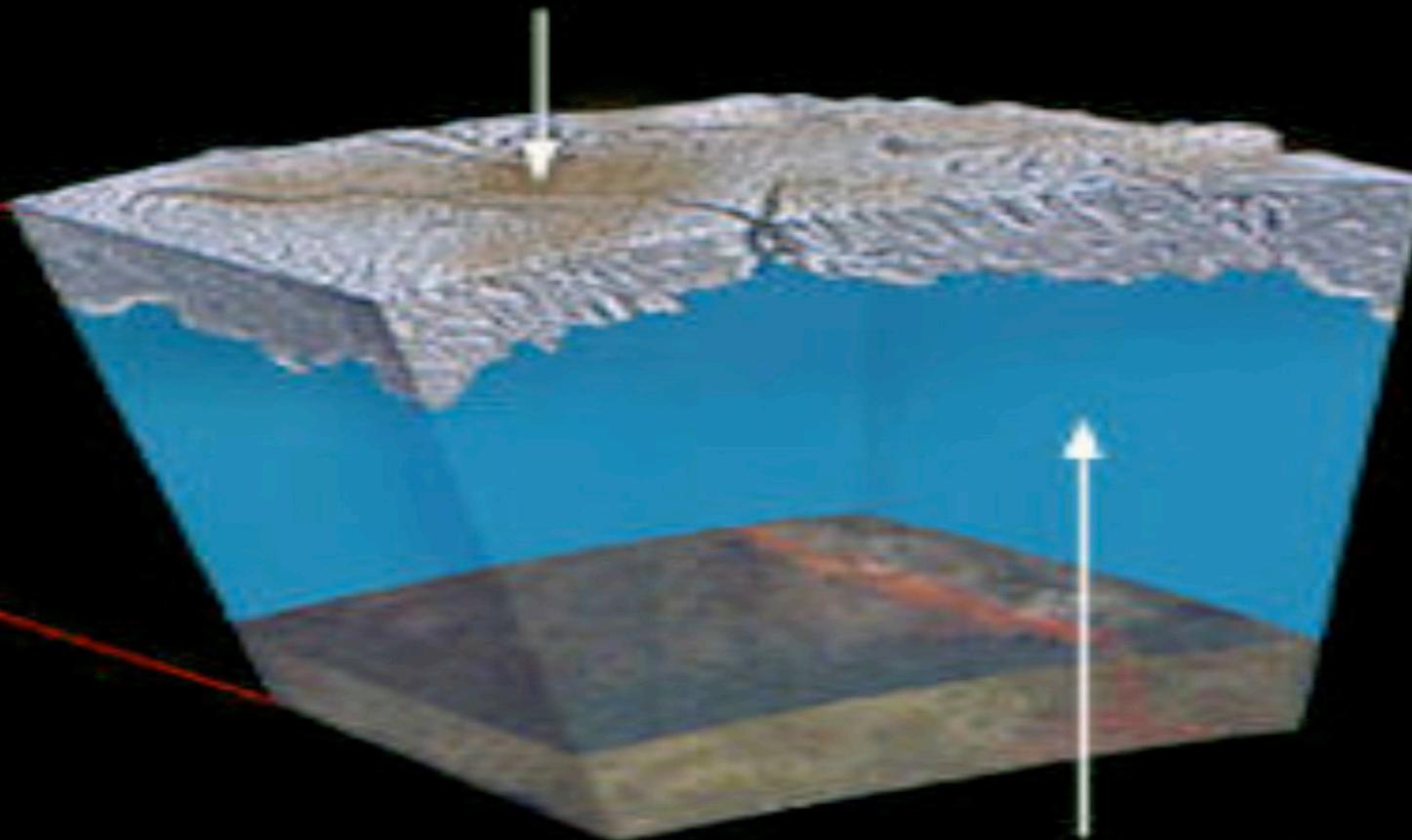
DLR, Bremen, Germany

Institut de Physique du Globe de Paris, France



Dopo LAPLACE

copertura di ghiaccio



oceano liquido sotto il ghiaccio

porta

Criobot

Sommergibile
(Idrobot)

fumarola



ENDURANCE, NASA 2008



Criobot-Idrobot, NASA-JPL, 1997

**Jet Propulsion Laboratory, California Institute of Technology, Pasadena
California**

Byrd Polar Research Center, Ohio State University, Columbus Ohio

The Abdus Salam ICTP, Trieste, Italy



Abbott Diagnostics Division, Abbott Laboratories, Abbott Park, Illinois

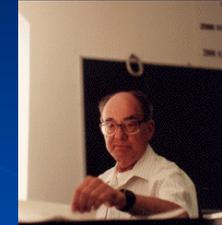
Woods Hole Oceanographic Institution, Woods Hole, Massachusetts

The background is a composite image. On the left, a blue planet with a white ring system is shown. On the right, a red nebula with a bright white star at its center is visible. In the foreground, a microscopic view of a cell with various organelles is shown. The text is overlaid on the planet.

**L'astrobiologia
per comprendere
la vita sulla Terra**

Cos'è l'astrobiologia?

L'origine della vita nell'universo



L'evoluzione della vita nell'universo

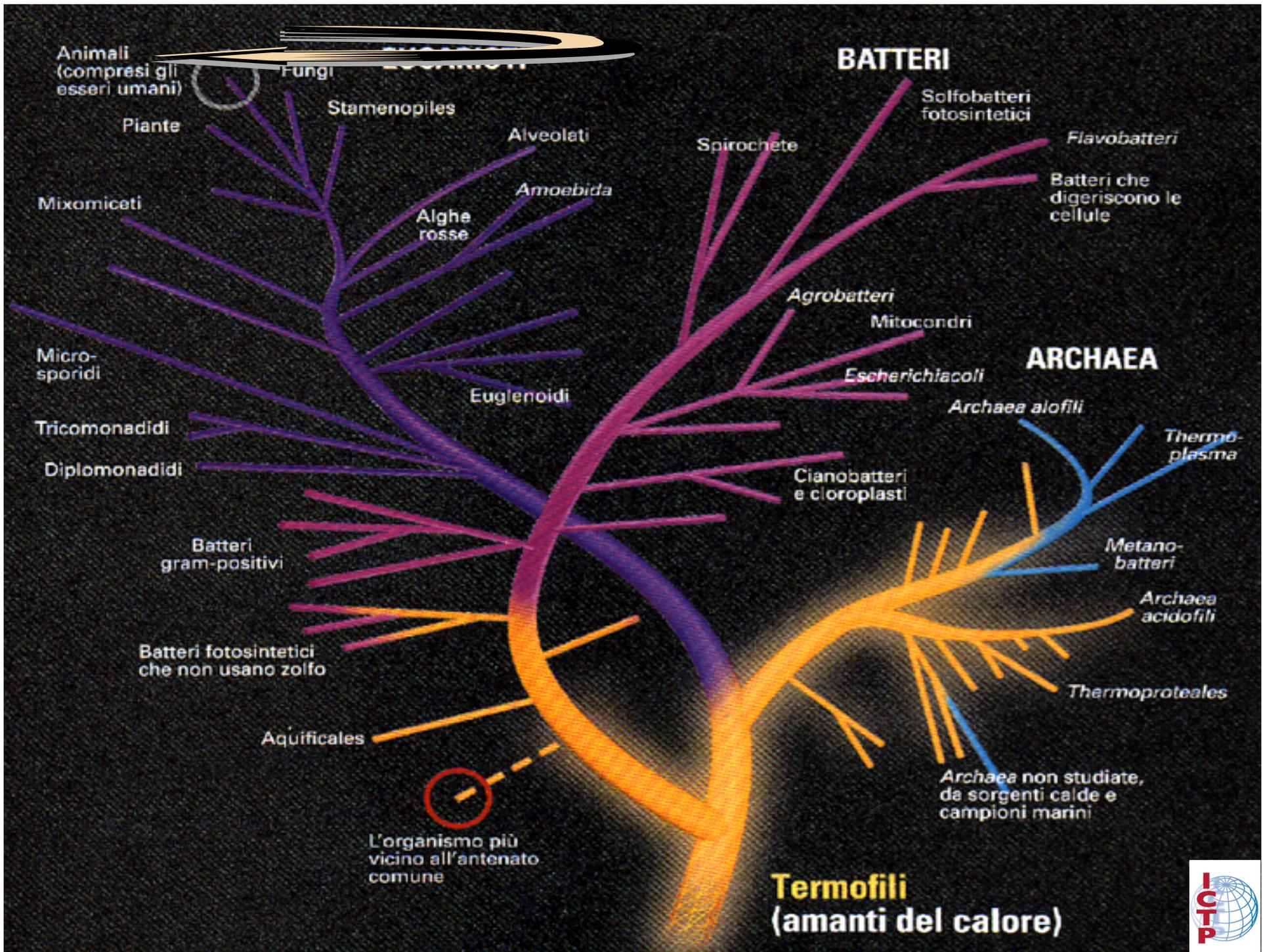


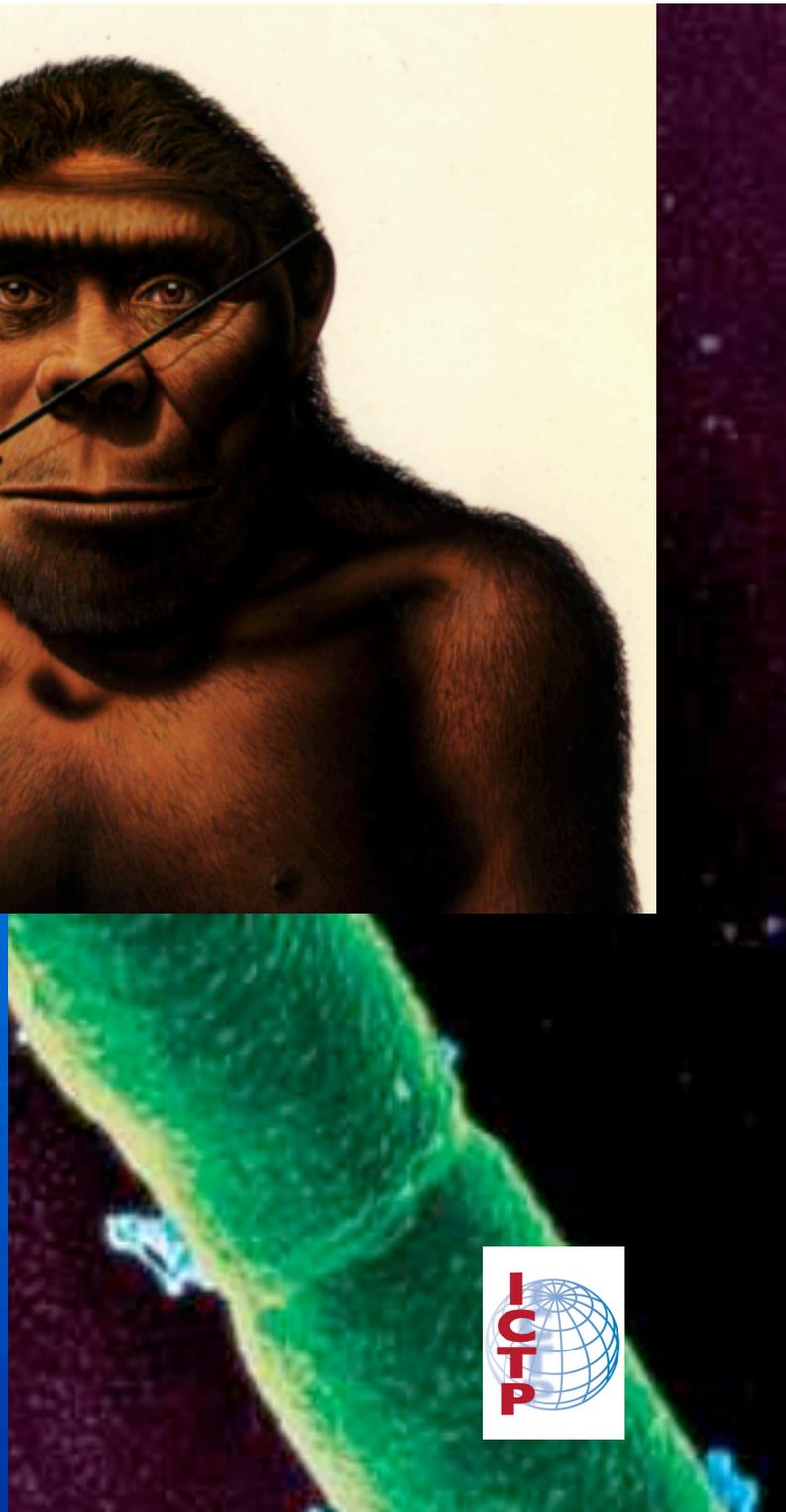
La distribuzione della vita nell'universo

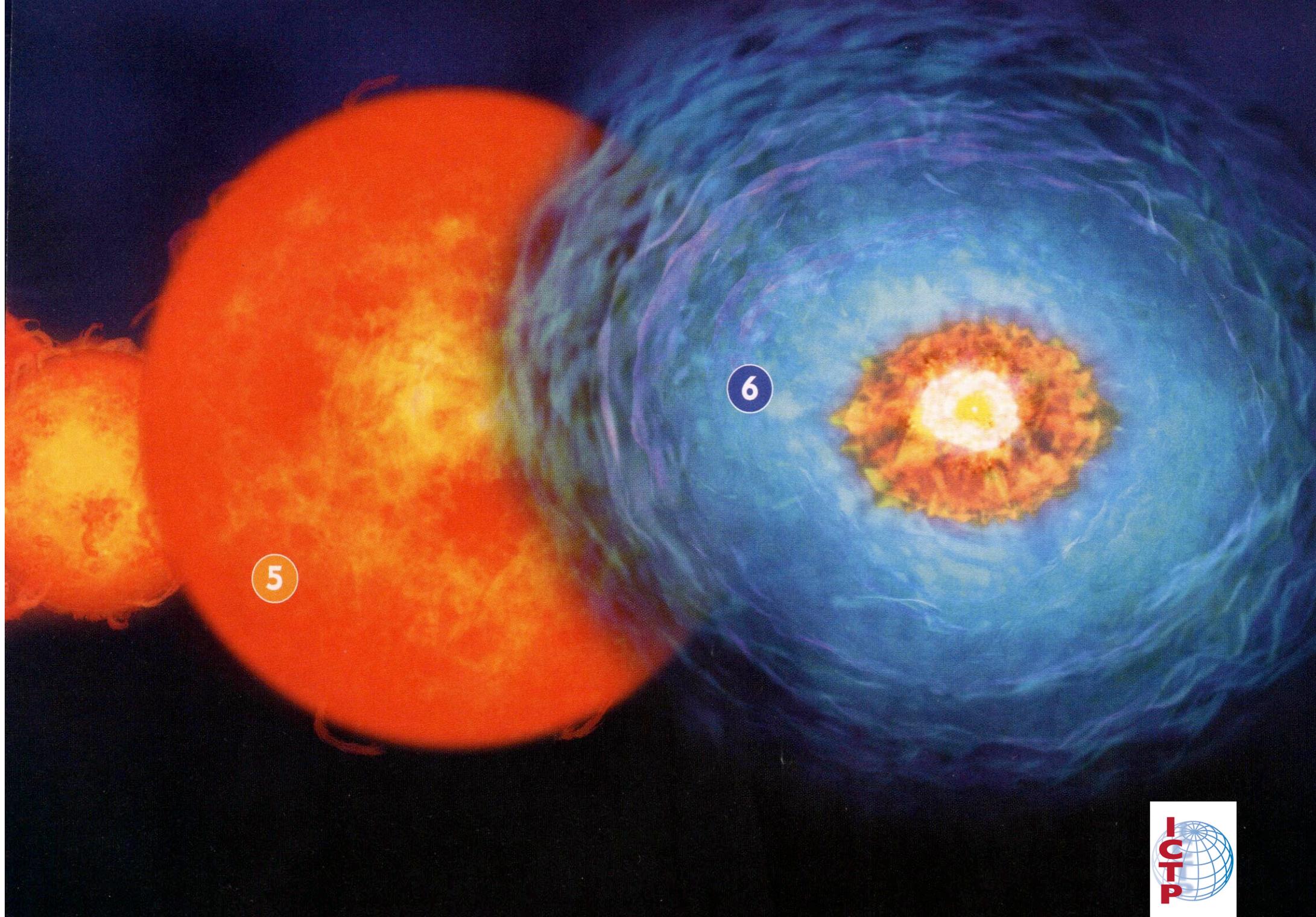


Il destino della vita nell'universo











**Siamo soli
nell'universo?**

Antenna parabolica, Medicina, Bologna

Porte Aperte all'



Origini dell'universo e della vita:
Incontro con gli scienziati

