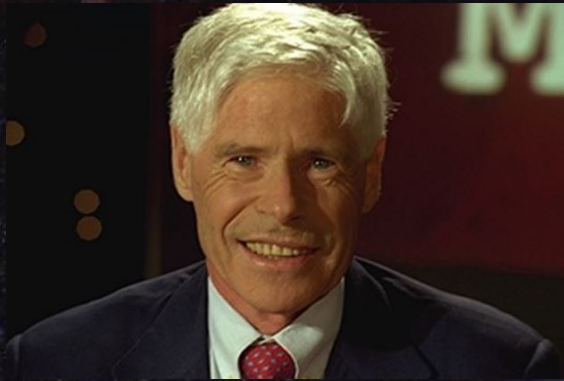


# Roger Bonnet: a man with a mission!

## The Horizon 2000 Initiative



Johan Bleeker

ESTeC February 8 2018

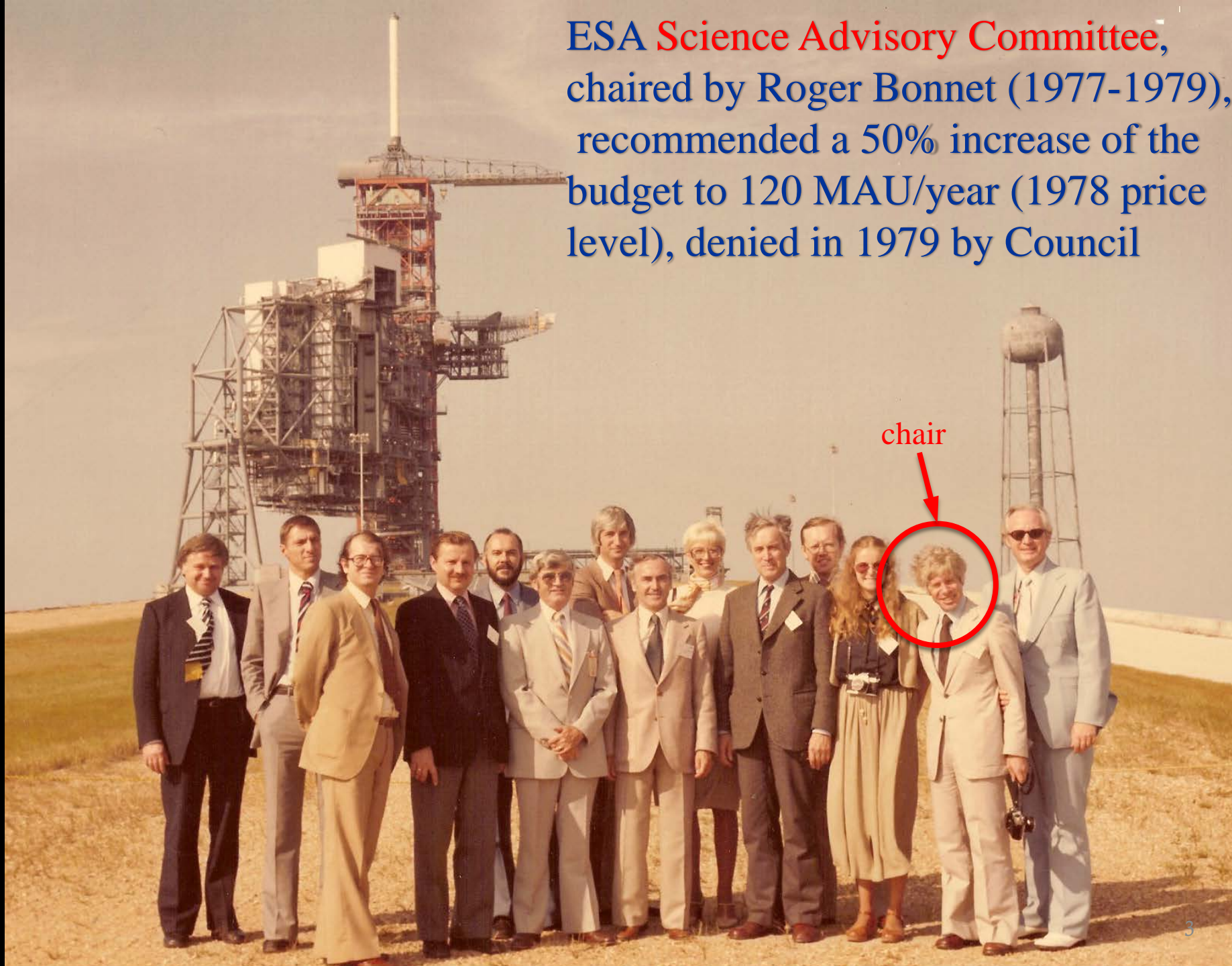
# Characteristics of ESA Science Programme in 1975



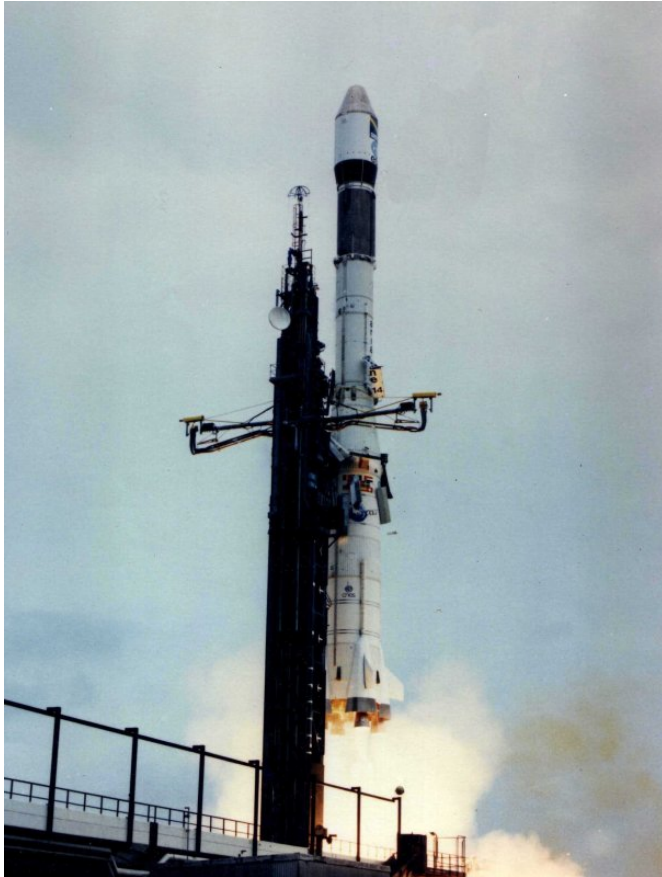
- ❧ **A modest science programme** (excluding Earth sciences and microgravity) made of medium-class missions;
- ❧ **A rapidly growing dependence upon NASA;**
- ❧ **An increasing set of substantial national programmes** (some of them in cooperation with NASA and USSR), especially in the fields of Solar Physics (OSO), Heliospheric physics (HELIOS), Plasma and magnetospheric physics (AMPTE), infrared and high-energy astronomy.
- ❧ **A budget capped at 76 MAU in 1978 price levels**



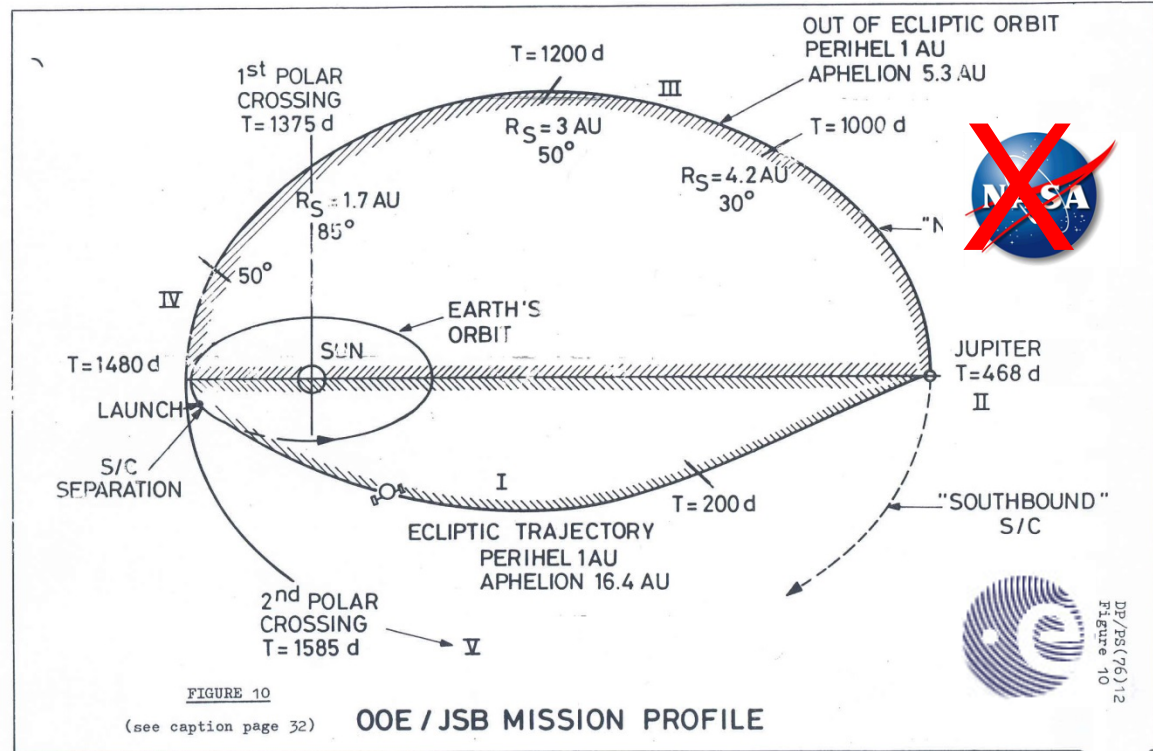
ESA Science Advisory Committee,  
chaired by Roger Bonnet (1977-1979),  
recommended a 50% increase of the  
budget to 120 MAU/year (1978 price  
level), denied in 1979 by Council



# 1979-1981: Two major events



Ariane-1 successful launch  
24/12/1979



In 1981 NASA cancels its participation in OOE-SPM !!

New York Times 9 May 1981:

*"US Dismays Allies by Slashing Funds for Joint Science Projects"*



# Key Issues in the early 1980's

- After 25 years, space science had progressed from the pioneering and exploratory stage to an established branch of 'big' science, involving more than 2000 scientists in Europe: need for **strategic planning** to create **coherence and programmatic balance**
- Need to assess the desirability and potential of technology developments: in **enabling instrument technologies** as well as **in-orbit infrastructure**

# Approach from the onset of Roger's initiative

- No academic masterpiece conceived in splendid isolation by a group of senior scientists:

Involvement of the user community in the definition to the largest possible extent.

- Avoid yet another 'pie in the sky' proposal with an excessive shopping list of projects:

Prioritize to arrive at an affordable programme within realistic and *quantified* budgetary limits. Adopt a strict 'design to cost' approach.



# The 'making of ' Horizon 2000: Oct 1983 – May 1984

Vittorio Manno, secretary



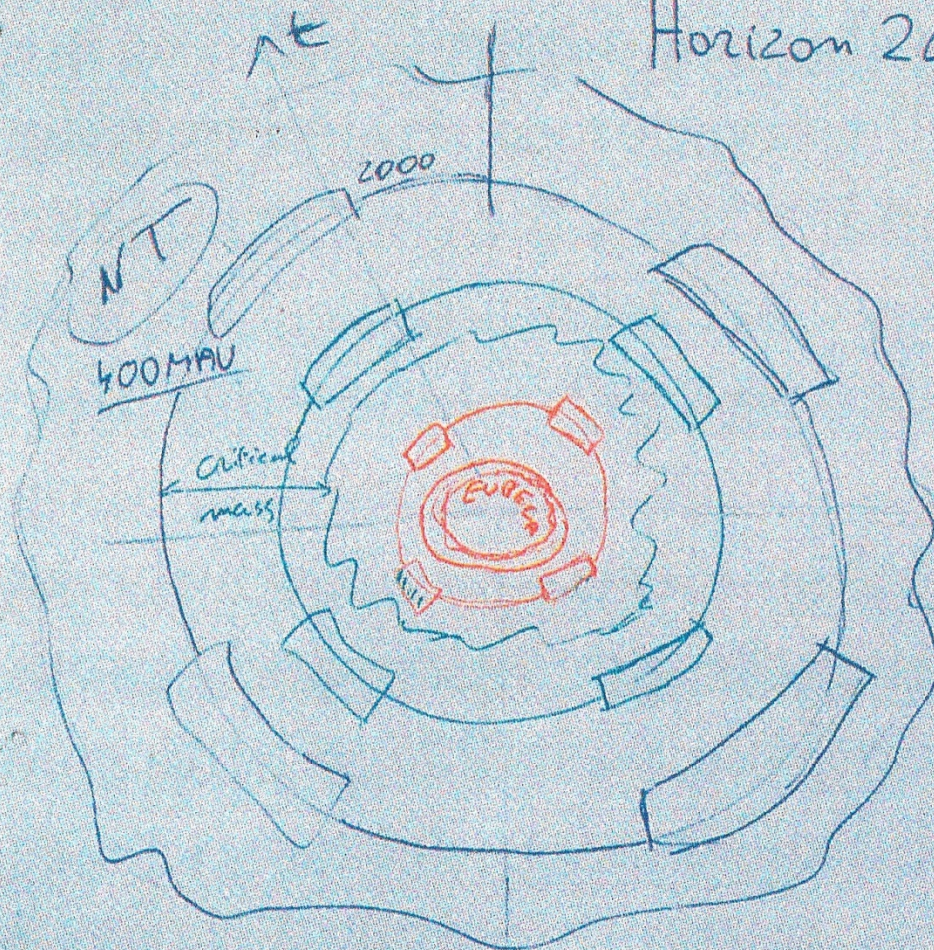
Call for mission concepts to the international science community  
→ 77 responses

Set up of a Survey committee with the aid of 5 topical teams and panels, involving  $\approx 50$  scientists, tasked with assessing requirements and science priorities and identifying key enabling technologies

Identification of a template for a programme structure that would be both 'scientifically top notch' and yet still affordable.



Horizon 2000 (1983)



12

$$8 \times 4 = 3.2 \text{ BAU}$$

$$\sim 200 \pi \text{ AU}_{1/2}$$

Salut!  
Salut!

bon anniversaire Papa!

Salut  
Rope.





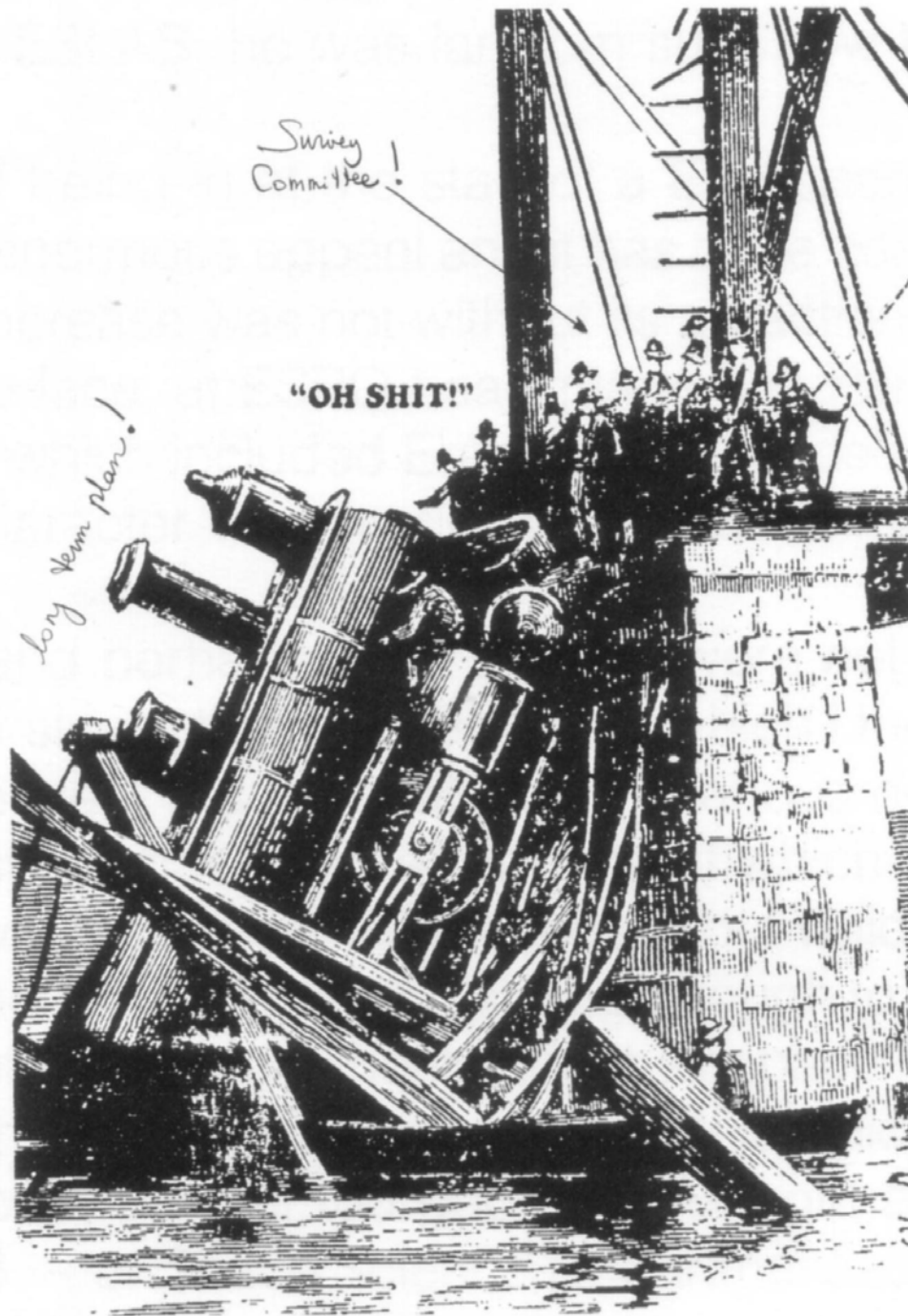


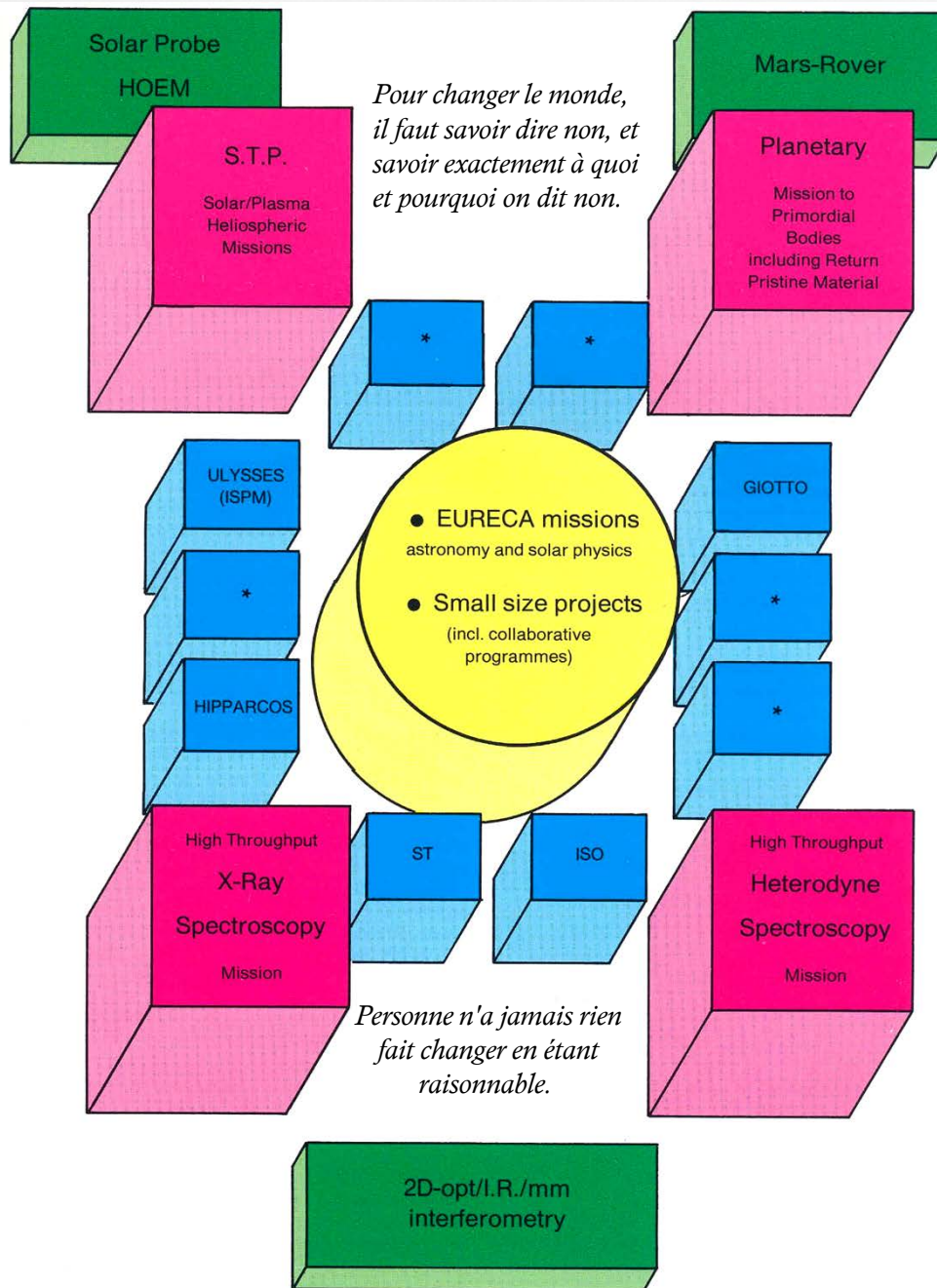
# Venezia: Isola di San Giorgio Maggiore



Fondazione Giorgio Cini



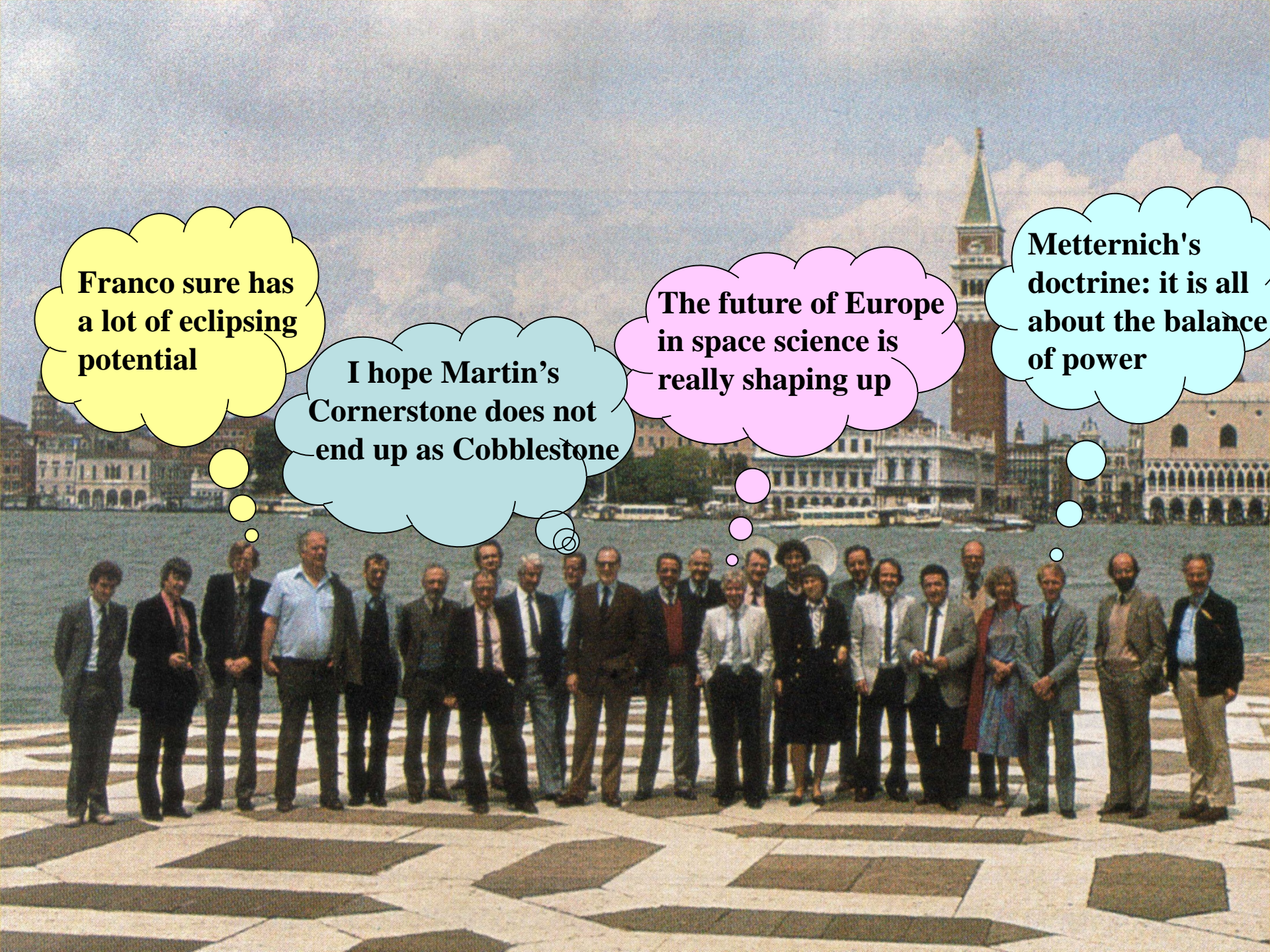




# The outcome

- Spanned 20 years, not 10 since it needed to encompass all major space science disciplines and **its balance** had to satisfy the whole space science community → Programme name: **Horizon 2000**
- Contained 14 opportunities for medium and small size missions, supplemented by 4 Cornerstones, all representing flagship areas of science, involving and unifying more than **2000 scientists**, i.e. most of the European space science community.





**Franco sure has  
a lot of eclipsing  
potential**

**I hope Martin's  
Cornerstone does not  
end up as Cobblestone**

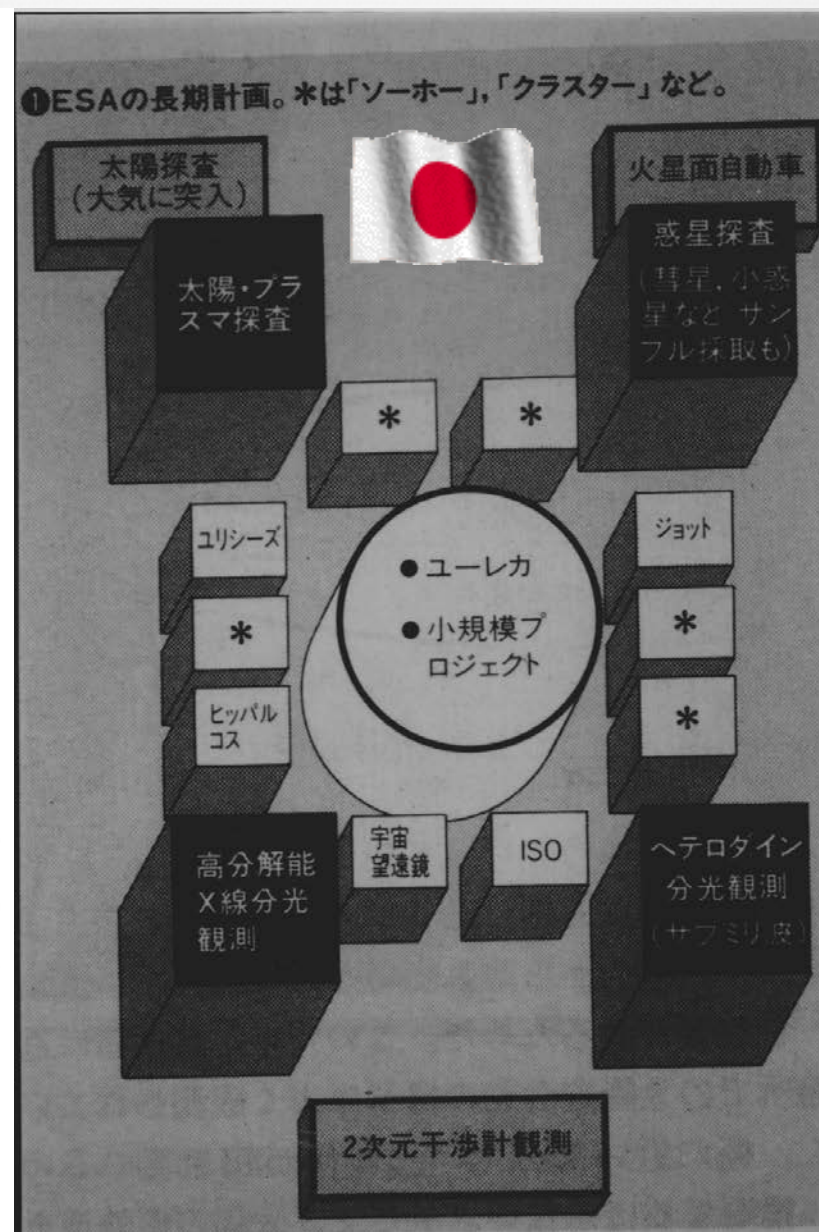
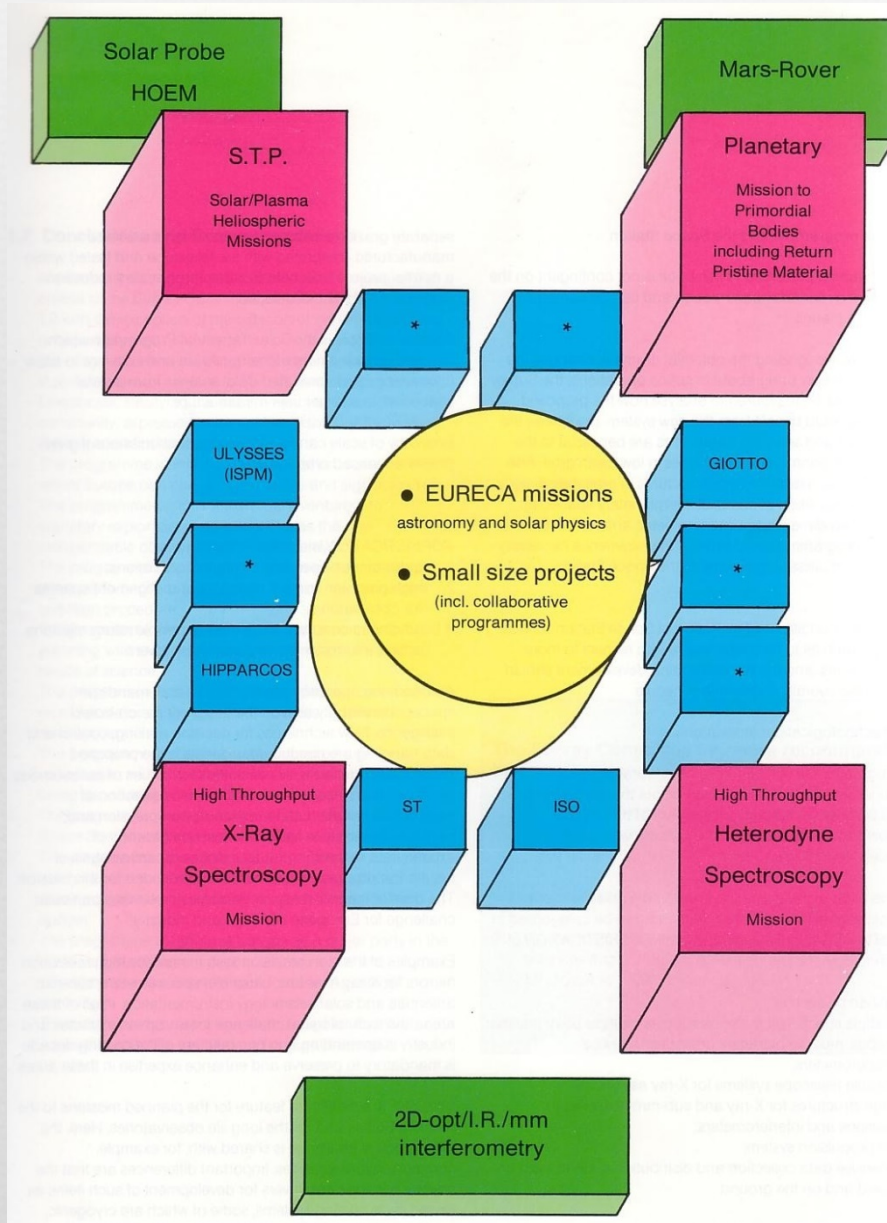
**The future of Europe  
in space science is  
really shaping up**

**Metternich's  
doctrine: it is all  
about the balance  
of power**

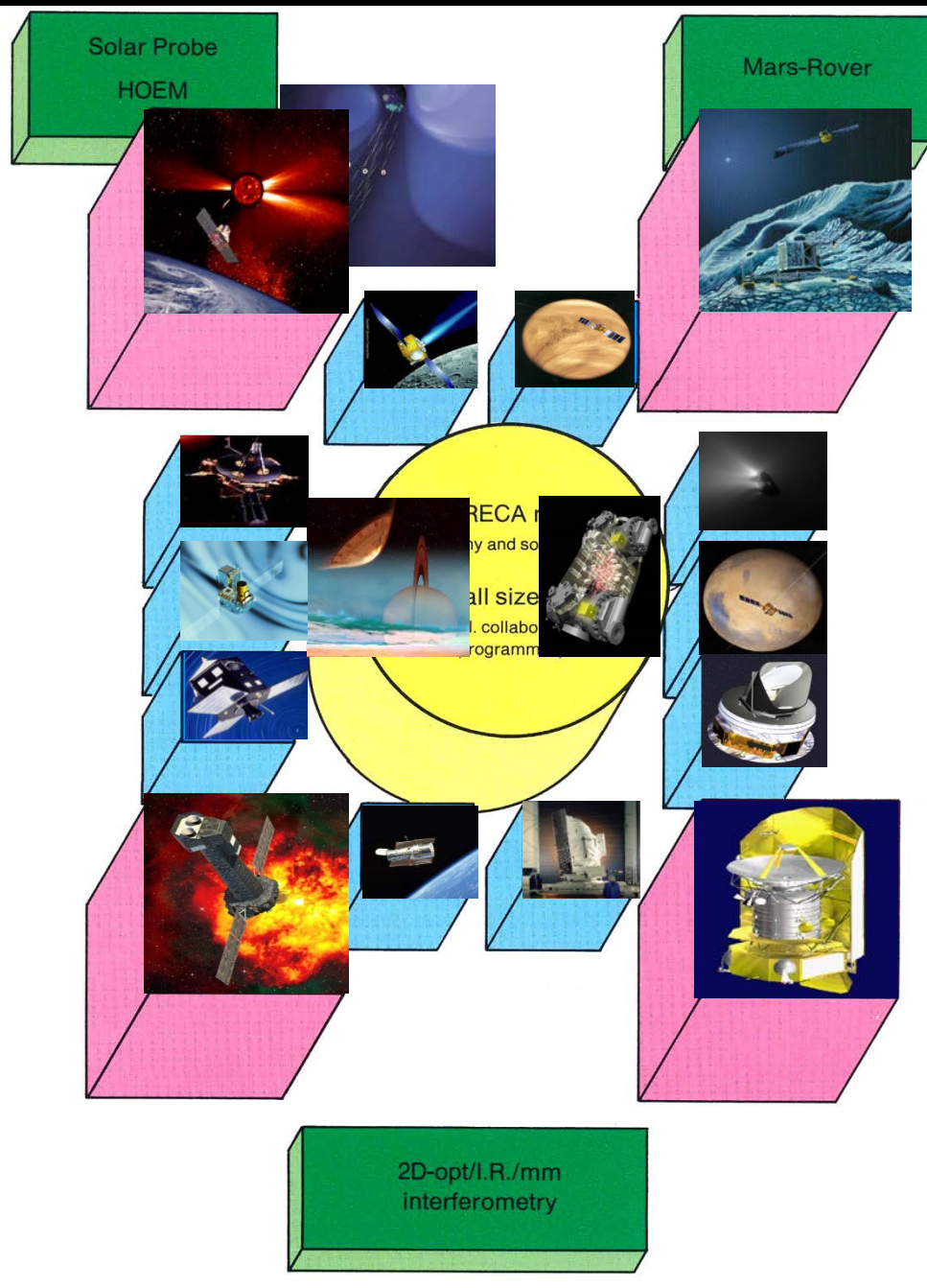




# Global Acknowledgement







# What was promised has been delivered!

- All four Cornerstones launched (1995/2000, 1999, 2004, 2009) within budget, 2 (STP/XMM) still operational.
- Twelve medium size missions and one small mission (Smart-1) successfully operational.
- The story continues thanks to H2000+ and Cosmic Vision.



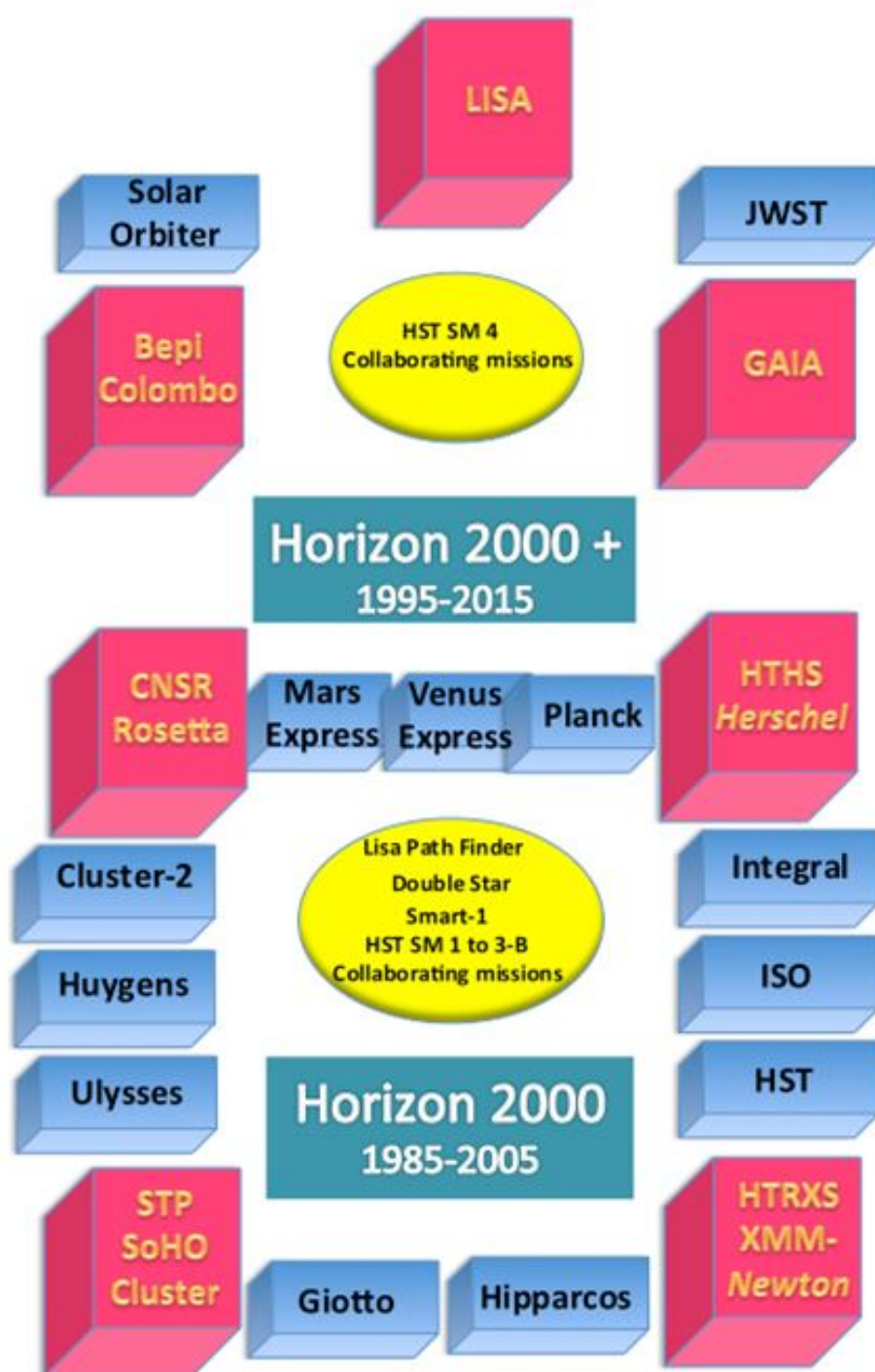
# Shaping the **Horizon roll-forward**: 1995 - 2015



Lodewijk Woltjer  
Chair H2000+ Survey Committee

Giacomo Cavallo  
Secretary





Roll-forward planning  
cycle of 10 years

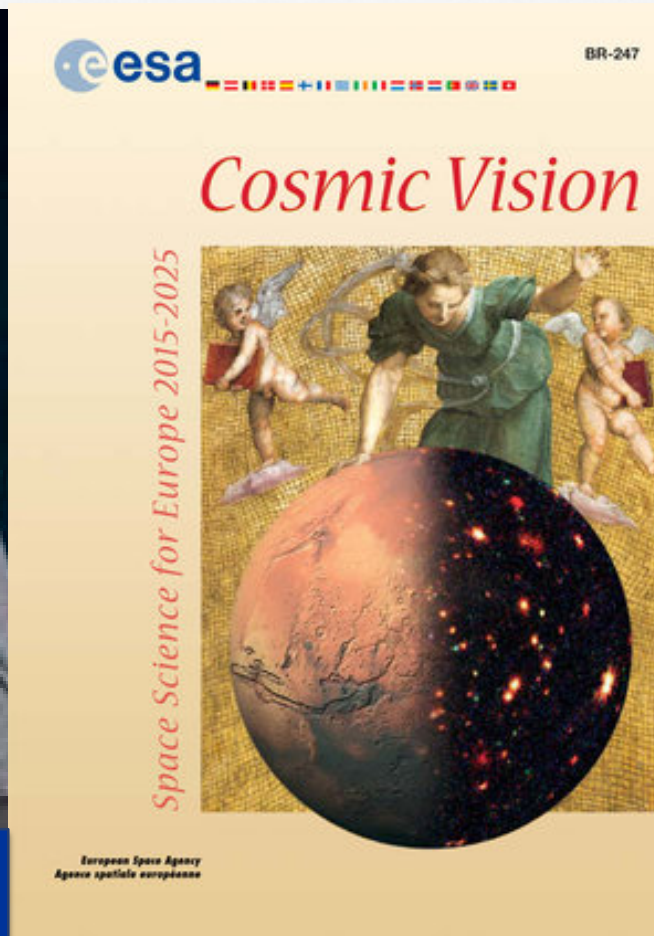




.....creating a **Vision** for 2015 - 2025



Giovanni Bignami  
Chair



Giacomo Cavallo  
Secretary

# Roger, we owe you!

Many thanks for your

- Vision
- Leadership,
- Perseverance

in shaping European Space Science

