

In the beginning.....LAGEOS



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- It was a long, long time ago!
 - Before many of you were born
 - At the right time and place?
- So what was NASA like in those days?
 - Apollo, 1972
 - Viking Landers on Mars, 1975
 - LAGEOS, 1976
 - Larger? Less bureaucratic?
 -there was a sense that things were easier to accomplish
- Projects, and proposals
- Science environment
 - Plate tectonics was the new thing but unproven at that time; and it was a motivation for LAGEOS

- And what was Goddard like in those days?
 - It was larger!
 - Who was in charge back then?
- NASA wanted program in Earth and Ocean Physics that would exploit the tracking capabilities of the agency.
 - Williamstown
 - SLR, LLR, VLBI and radar altimetry
 - earthquakes!
- Early experiments to demonstrate a capability precision geodesy
 - San Andreas Fault Expt (SAFE) by SLR
 - Pacific Plate Motion Experiment (PPME) by VLBI
- Congress wanted to know about NASA and its “earthquake” program (1975)

- But it was not all milk and honey
 - HQ did not want to fund 3 space geodetic techniques
 - there were continuing battles over which technique,
- But the success of the early experiments led to the development of special SLR spacecraft, not just those with reflector arrays, and LAGEOS is the classic example:
 - high altitude, designed for accurate ranging, that would enable the long wavelength gravity field to be studied for its variation with time but also for measuring the motions of the plates and try to make that connection to the occurrence of earthquakes.
- I was privileged to be the Project Scientist for LAGEOS which began, albeit slowly, to demonstrate the capability that many of us had promised several years earlier.

The success of the LAGEOS program of observations naturally led to the concept of LAGEOS 2 and even a LAGEOS 3.

Coupled with major gains also in VLBI the result was a morphing into the Crustal Dynamics Project (CDP) in which I took on the role of Project Scientist from 1980 to 1990 with major international participation (about 70 investigations and about 200 scientists).

But by this time I was already moving to the planets, where I have been ever since, and trying to use the skills and techniques of satellite geodesy on other worlds for the purpose of understanding their origin and what makes them tick!

They were good times but the future is even brighter.

But it is important to remember that doing the kind of science we do is a team effort and often involves people we may never meet but to whom we owe a great deal of gratitude.

To them, and those who helped build the program,
I thank you.