

26th SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)
International Space Exploration Policies and Programmes (2)

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FIRST MISSION TO PLUTO: POLICY, POLITICS, SCIENCE AND TECHNOLOGY IN THE
ORIGINS OF NEW HORIZONS, 1989-2003

Abstract

On 19 January 2006, NASA launched New Horizons, the first and so-far-only mission to Pluto. It is set to fly by on 14 July 2015. Behind that launch stood nearly two decades of mission proposals and development, a cancellation, a revival and a dramatic shift in the developing organization: from the Jet Propulsion Laboratory (JPL) of Caltech and NASA to the Applied Physics Laboratory (APL) of Johns Hopkins University.

This paper examines the complex and twisting historical path by which New Horizons came about. At least three strands of NASA policy played a role 1) the shifting and sometimes controversial priority placed on a Pluto mission in the planetary program of the Office of Space Science; 2) the priority for “smaller-faster-cheaper” or “better-faster-cheaper” spacecraft in the Administrator Goldin years (1992-2001), which favored a small spacecraft initiative at JPL; and 3) the emphasis placed on international cooperation with Russia, which was enlisted in the Pluto program from 1994-1997, only to slowly drop out for a lack of money and the higher priority NASA placed on the International Space Station.

Ultimately the JPL project, which had the names Pluto Fast Flyby, Pluto Express, Pluto-Kuiper Express, came into conflict with NASA Headquarters due to rising costs. It was cancelled in September 2000. That produced a public outcry and a campaign by the Planetary Society, a space advocacy membership organization, that played some role in NASA’s leadership reversing course and opening a competition on the model of the Discovery Program. The entry of APL into the planetary exploration business in the 1990s, and its success with the NEAR Shoemaker mission to the asteroid Eros in 2000-2001 had much to do with APL’s credibility at NASA Headquarters in the period of selection. JPL’s failures at Mars in 1999 contributed to temporary but important decline in credibility and influence at Headquarters at that time. At the end of 2001, NASA announced the selection of APL as the contractor, only to see the President George W. Bush’s Administration eliminate it from the budget. Ultimately it was politics that saved New Horizons. Sen. Barbara Mikulski of Maryland, the home state of APL, used her considerable clout in Congress to insert the mission into the budget whether the Administration wanted it or not.