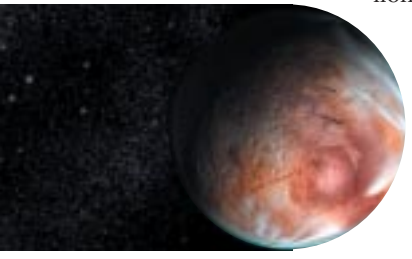
Last Chance for the Last Planet

Scientists joke that it can take longer for a space mission to escape from Washington, D.C., than to cross the solar system: the harshness of outer space is nothing compared with the rigors of securing administrative, presidential and congressional approval. Never has this been truer than for a mission to Pluto. In one form or another, a space probe to the outermost planet—the only major unvisited world in the solar system—has been traveling for more than a decade and still has yet to clear the Beltway. Unless Congress acts this summer, the mission will crash-land about five billion kilometers short of its goal.



PLUTO, the last unexplored planet.

The question before Congress is whether to go along with a Bush administration decision to abort the Pluto project altogether. The president's budget for fiscal year 2003 excludes it. A similar situation arose last year, when the administration left Pluto out of the budget and Congress put it in.

The administration's position is clear and, for the most part, compelling: NASA programs that are well managed get rewarded; those that aren't get rethought. Overall, planetary exploration falls into the first category, and the administration plans to increases its budget by 50 percent between 2002 and 2006. But the outer-planets part of the program, plagued by cost overruns, has fallen into the second category.

To fix it, the administration has relaunched the outer-planets program as New Frontiers, modeled on NASA's lauded Discovery program. New Frontiers will solicit mission proposals, choose among them in a competitive process and impose a strict cost cap ($650 million over four years). Meanwhile NASA will invest in the development of new propulsion technologies. To guide the selection of destinations, a National Research Council panel is now preparing a prioritized list.

The plan is excellent, except for one thing. Where does Pluto fit in? As New Frontiers now stands, Pluto mission planning would have to start from scratch, and a spacecraft couldn't possibly hit the pad before 2007. It would then miss the crucial launch window in January 2006, when Jupiter has the right alignment for a slingshot maneuver that would catapult the spacecraft to Pluto. The next window is not until 2018.

Officials point out that the new propulsion technologies could obviate the need for a slingshot, but those systems wouldn't be available until late this decade, if then. And with every day that passes, Pluto gets colder, darker and harder to study. In a poll by their professional society this past January, planetary scientists ranked Pluto as the top priority for a mission.

Fortunately, there is a straightforward solution. Last year NASA, frustrated by its own difficulties in designing a frugal Pluto mission, solicited proposals from the outside, chose among them in a competitive process and imposed a strict cost cap of $500 million. The winner, known, confusingly, as New Horizons, is thus a New Frontiers mission in all but name [see "Journey to the Farthest Planet," on page 56]. It could simply be rolled into the New Frontiers program, just as older missions were absorbed into the Discovery program.

Congress would only have to reshuffle some funding. NASA has already spent $30 million on New Horizons. Next year it would need about $110 million more than what the president's budget has proposed. But over the three subsequent years, the agency would actually need $300 million *less* (including money set aside for operating expenses). Everyone wins: the taxpayer pays extra now but makes it up (plus some) later on, the Pluto mission can depart on schedule, and policymakers will strike another blow for good management at NASA.

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DON DIXON (*artist's conception*)

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