

# U.S. may follow up Voyager with study of Jupiter's satellites

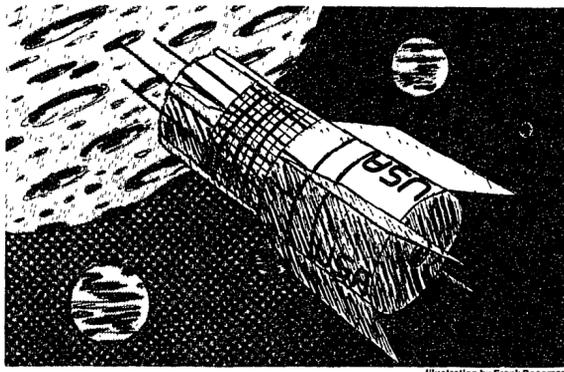


Illustration by Frank Baseman

PASADENA, Calif. (UPI) — The United States plans to follow up Project Voyager's spectacular exploration of Jupiter by launching an even more advanced spacecraft in 1982 to make 11 close encounters with the planet's four largest moons.

The spacecraft, named Galileo after the Italian astronomer who discovered the four big satellites, also will send an instrumented probe into Jupiter's turbulent atmosphere and swing into orbit around the planet for the first time.

"Galileo is an attempt to achieve an enormously diversified follow-up exploration and analysis of Jupiter," said Bruce A. Murray, director of the Jet Propulsion Laboratory which is controlling Voyagers 1 and 2 and building Galileo.

Murray said Galileo's orbit around Jupiter is being designed so each time it swings close by the moons Io, Europa, Callisto and Ganymede it will receive an assist from their gravity, whipping it on to the next satellite. It will do this 11 times.

It also will swing way out and then back in to study Jupiter's radiation and magnetic forces.

"It is intended, if all this works, for the price of one spacecraft to get definitive chemical information on Jupiter's atmosphere, a complete mapping of the satellites and a thorough mapping and understanding of these mysterious radiation belts and magnetic fields," Murray said in an interview.

Galileo is the only new space agency planetary mission now in the works. But Murray hopes President Carter's budget office and Congress will give the National Aeronautics and Space Administration authority next year to begin work on a return mission to Venus.

The proposal is to launch in 1984 a spacecraft that will carry into Venusian orbit an advanced radar system that will peer through the planet's cloud blanket and produce a detailed topographic map of the planet's entire surface.

"That to me is a benchmark mission that's got to happen," Murray said. "It's hard for me to believe that this will be turned down as either being uninteresting or unworthy."

Murray said another worthwhile mission up for ap-

proval next year will be a project to send a robot spacecraft to shoot a probe into Haley's comet in 1986 and fly on to rendezvous with the comet Tempel 2.

There are no plans, however, to follow up exploration of the two most closely examined extraterrestrial bodies in the solar system — Earth's moon and Mars.

NASA tried unsuccessfully for two years to get White House approval to start a modest project to place an unmanned reconnaissance satellite into orbit around the moon's poles to study regions not explored by the Apollo manned landing missions.

And there does not appear to be much interest among the government's budget officials for a program to follow the Viking robot landings on Mars.

"With the strangeness of the place that Mars is, and with its variety of land forms that really are fascinating, and with pretty strong evidence of climatic history cycling, I can't believe it's going to be permitted to remain dormant for too long," Murray said. "But right now it is."

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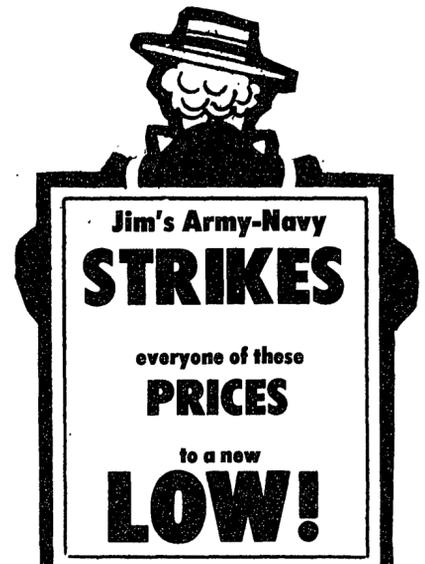
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