

Space Probe of Jupiter

THE WORLD'S largest radar antenna soon to be built in Puerto Rico will be used to probe the surface of the planet Jupiter.

If radar signals are reflected by Jupiter, U.S. scientists expect to gather new information about the planet's surface. If no signals are reflected, scientists will know for the first time that this largest of the outer planets is shrouded in a deep atmosphere that absorbs radio waves.

The giant radar, to be the biggest in the world, is being financed by the U.S. Department of Defense and will be used by Cornell University's new Center for Radiophysics and Space Research.

The radar is to have a 1,000-foot receiving dish nestled in a natural bowl of coral limestone. This antenna is four times larger than Britain's powerful Jodrell Bank unit which now

holds the record for contacting Venus.

The Cornell-designed radar unit is to be able to probe at distance of 40,000,000 miles. It will operate on a peak power of 2,500,000 watts and a frequency near 420 megacycles a second. The finger-like radar beam will be able to sweep 20 degrees in each direction, and may shed new knowledge on the earth's own ionosphere. In addition, the radar will be able to bounce signals from the moon, Venus, Mars, Mercury and the sun.

The new Center for Radiophysics and Space Research will be directed by Thomas Gold, 39-year-old professor of astronomy, physics and electrical engineering. Other installations planned for the Center will include a radio astronomy receiving station south of Ithaca and a transmitting station on Cornell's campus.