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FOR IMMEDIATE RELEASE

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Science teams on the Ulysses mission to the poles of the sun are preparing to begin interplanetary physics investigations during the forthcoming encounter with Jupiter, European Space Agency (ESA) and NASA project officials reported Tuesday.

Ulysses' science objectives at Jupiter were reviewed by Drs. Edward J. Smith of JPL and Klaus-Peter Wenzel of the European Space Research and Technology Centre (ESTEC) at the 1991 Spring Meeting of the American Geophysical Union in Baltimore, Md. Smith and Wenzel are the NASA and European project scientists, respectively, for the joint NASA-ESA mission.

The Ulysses spacecraft is presently cruising through the ecliptic plane -- the plane in which the planets of the solar system orbit -- on a trajectory that will use the gravity of Jupiter to deflect Ulysses out of the ecliptic plane and onward to the polar regions of the sun.

The 809-pound spacecraft is expected to reach the Jovian giant and its system of satellites around Feb. 8, 1992.

Once there, Ulysses will take measurements of the Jovian magnetosphere during a two-week sweep past the planet, said Dr. Edgar Page of the ESA Space Science Department. Science teams will conduct experiments to detect cosmic gamma-ray bursts, X-ray emissions and search for gravitational waves.

Some experiments, such as the Solar Flare X-Ray and Cosmic Gamma Ray Burst Experiment (HUS), will yield new information on

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the composition of energetic particles and positively charged atoms (ions) in the region influenced by the planet.

The spacecraft will fly past Jupiter at about 30 degrees north Jovian latitude, said JPL Ulysses Project Manager Willis Meeks. At nearest approach, Ulysses will pass the planet at approximately 6.3 Jupiter radii -- 450,480 kilometers or about 279,300 miles -- from the center.

Immediately after encounter, the spacecraft will be in "solar opposition," so that Earth is directly between the sun and the spacecraft. Scientists operating the spacecraft's radio transmitters will use the solar opposition to calibrate instruments and intensify the search for gravitational waves.

From there, Ulysses will use the extra acceleration gained from the gravitational pull of Jupiter to swing itself out of the ecliptic plane and onward to the southern solar pole. In May 1994, Ulysses will reach 70 degrees south solar latitude and begin its primary mission of exploring the polar regions of the sun and space beyond the poles.

At closest approach, Ulysses will travel within 1.3 astronomical units, or about 120 million miles, of the sun.

Ulysses is a five-year mission managed jointly by NASA and the European Space Agency. ESA provided the spacecraft and ground control computer system. NASA provided the launch vehicle and half of the onboard science instruments. Tracking and data

collection during the mission are being provided by NASA's Deep Space Network, which is managed by the Jet Propulsion Laboratory.

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