

trons of the inner shells tend to cancel each other, and only those particles in outer shell have to be taken into account in computing the magnetic force of the whole nucleus.

In view of new discrepancy, it may be necessary to alter theory to take into account magnetic effects of interior rings, or to theorize different arrangements of the particles in the outer rings, said Garrett.

Ocean Center Site

Location of the Environmental Science Services Administration's East Oceanographic Research Facility near Miami will make that semi-tropical port one of the major world centers for ocean research.

The new laboratory and its ship facility will be built on Virginia Key and Dodge Island respectively.

The decision ended a year-long search during which practically every seaport on the East Coast did its best to lure the ESSA lab. Site selection teams inspected 115 proposed locations, a great many of which offered extremely tempting deals such as free land and tax breaks.

Treaty Ratified

The United States Senate last week joined the bridgebuilders, voting unanimously to ratify the space treaty that prohibits military exploitation of the high ground above the atmosphere.

Under it, when approved by the Soviet Union, Great Britain, and two other nations, atomic bombs will stay on earth and no nation will claim dominion of the moon. Spy satellites, however, will continue to fly. (SN 12/24/66).

Surveyor Reports

Beneath its loose surface layer, the moon appears firm enough to support a spacecraft more than twice as heavy as the Apollo, according to Surveyor 3 and its robot claw. Scientists at the University of California's Jet Propulsion Laboratory instructed Surveyor last week to dig with its claw, a five-foot extendable scoop that cuts two-inch-wide trenches in the lunar soil.

About six inches down, the shovel came to a layer of what seem to be pebbles. "They aren't large pebbles, but they don't appear to be just lumps of sod, either," one scientist said.

The deeper the claw went, the more trouble it had dragging itself back toward the spacecraft, a clear indication that the subsurface soil was stronger than that on top.

Besides photographing its own diggings, Surveyor took pictures of the surrounding terrain for scientists hunting Apollo landing sites. In addition, it sent back photos of the earth, of Venus, and even, when the earth got between the spacecraft and the sun, of a solar eclipse. During the eclipse, Surveyor photographed the moon through red, blue and green filters over the



Eclipse of the sun by the earth.

camera lens, in order to see what color the lunar surface might be in that kind of lighting. Scientists also hoped to get accurate measurements of the moon's surface temperatures during the eclipse.



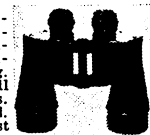
Moon dirt: strong enough for two.

The spacecraft excited observers early in the week by showing signs of the same stubborn resistance to the moon's extremes of heat and cold that made such a success of Surveyor 1, which took more than 11,000 pictures.

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