function of the system will be to monitor solar emissions and to correlate them with the Jovian data to determine how the sun affects Jupiter's radio activity. At times when neither Jupiter nor the sun is in range of observation, the antennas will be pointed at the meridian to make measurements of relative ionospheric opacity.

Maintenance and operation of the monitoring stations will be the responsibility of the Goddard Space Flight Center. Robert Stone and Joseph K. Alexander, both of Goddard's Planetary Ionospheres Branch, share technical direction of the network with James N. Douglas, the principal investigator for the Yale Observatory.

Lunar and Planetary Data Center

At the request of the International Astronomical Union, the Lowell Observatory in Flagstaff, Ariz., is planning a facility for lunar and planetary scientific research which will establish for the Western Hemisphere a repository of research material, especially photographs, in this field. Its counterpart for the Eastern Hemisphere is at the Observatoire de Meudon in France.

A grant of $236 520 from the National Aeronautics and Space Administration, which will use the material as design information for future space probes, will provide the Observatory with a building for photographic processing, storage, and research. According to Homer E. Newell, NASA's Director of Space Sciences, the facility will be able to provide, for the first time, comparative studies from world-wide observatories of photographic plates taken of the moon and the planets.

Sacramento Peak Solar Telescope

A new solar telescope and an associated laboratory will be built by the Sacramento Peak Solar Observatory on its grounds in the Sacramento Mountains of New Mexico. Construction is expected to be completed by 1970—in time for the next period of maximum sunspot activity.

Research functions of the laboratory will include study of high-energy proton showers associated with sunspot activity and of solar phenomena associated with weather and with communication and detection systems.

Based on a design by Richard Dunn of the Air Force Cambridge Research Laboratory, the telescope will be 328 feet long, of which 200 feet will be below ground. The exposed part will consist of a truncated conical tower and laboratory buildings. A rotating turret for tracking the sun in elevation and azimuth will top the tower. A quartz window with a 30-inch aperture will allow light from the sun to pass through onto flat mirrors in the turret which in turn will direct the light down a 320-foot tube to a spherical mirror at the bottom. The light can then be redirected up to the five observation ports in the above-ground laboratories.

The tube and its complementary instrumentation weighing about 150 to 200 tons will rotate as the sun is tracked, and the entire optical system will be placed in a vacuum to eliminate air turbulence and dust.

Low-Temperature Lab

Low-temperature physicists at the University of Chicago will be concerned with temperature ranges approaching absolute zero in a new $88 000 Ultra-low Temperature Laboratory now under construction as part of the University's Institute for the Study of Metals.

The laboratory, expected to be completed early this spring, will be attached to the Institute's existing Low Temperature Laboratory. It is financed by a $44 000 grant from the National Science Foundation and by the University's Louis Block Fund for Basic Research and Advanced Study.

Twelve of the twenty faculty members of the Institute, ten postdoctoral research associates, and thirty-five graduate students from Chicago's Departments of Physics and Chemistry will work in the new laboratory. Research areas will include investigations of the electronic properties of metals and crystals and the study of Fermi surfaces of metals to determine luster, ductility, and conduction of electricity and heat at extremely low temperatures and under very high magnetic fields. Other studies will be concerned