

JUL. 6 1962

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Picture Story No. 716

PEACEFUL SPACE EXPLORATION -- U.S. PROGRESS AND PLANS

Part III - "Research and Development"

During its short lifetime, the United States space program has accelerated rapidly to keep pace with man's desire to investigate and travel far beyond his planet. Since the National Aeronautics and Space Administration was established in 1958, the nation's resources in science and technology have been marshalled for the tremendous task of research and development that has led to progress in exploration. Today, the program -- diversified, complex and costly -- is nationwide in scope. Men and women in every-known field of science and the work force in thousands of factories are participating in a vast effort to acquire knowledge of space and to use space for beneficial purposes. A few of the scientific and technological details of this effort are shown in this group of photographs.

15-16 A technician attaches electrical leads to a group of the smallest known cooling devices, designed for use in the electronic systems of rockets. The thermoelectric units are rugged, simple and require no maintenance. The units contain semiconductor materials, which achieve refrigeration when an electric current is passed through them. Since the thermoelectric devices require no compressor, refrigerant or apparatus with moving parts, they are highly desirable for cooling purposes in space vehicles. (62-2632)

62-2632 Science: Astronautics (Research)

Un técnico añade unos conductores eléctricos a un grupo de los más pequeños instrumentos conocidos de enfriamiento, creados para ser utilizados en los sistemas electrónicos de los cohetes. Las unidades termoeléctricas son resistentes, sencillas, y no requieren cuidados de mantenimiento. Las unidades contienen materiales semiconductores, que logran la refrigeración cuando pasa a través de ellos una corriente eléctrica. Puesto que los instrumentos termoeléctricos no requieren compresor, refrigerante o aparato con órganos en movimiento, son grandemente recomendables para usos de enfriamiento en los vehículos espaciales.

