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students under the supervision of James N. Douglas, instructor in radio astronomy, and Harlan J. Smith, associate professor of astronomy.

The Martin Company has formed a new department to integrate the activities in nuclear chemistry which are carried out at the firm's laboratories in Baltimore, Md., and Quehanna, Pa. The Nuclear Chemistry Department is headed by Charles E. Crompton, who served previously as director of advanced development for the Auxiliary Power Systems Department of Martin's Nuclear Division. Among the facilities available to the new group are an automated laboratory for processing nuclear materials and a series of hot cells for remote handling operations. The department will provide technical support for those groups within the company which produce auxiliary power systems, reactor power plants, and reactor fuel elements.

Research Grants

The American Academy of Arts and Sciences is again offering grants-in-aid for research in any recognized scientific field. The usual range is between \$500 and \$1500 per grant. In general, applications from individual scientists rather than from institutions are favored and projects dealing with explorations of the frontiers of scientific knowledge, whether interdisciplinary or within a single discipline, are preferred. Support is not ordinarily given for work aimed primarily at fulfilling the requirements for an academic degree. Applications for the grants must be received before September 1 by the American Academy of Arts and Sciences, Committee on Research Funds, 280 Newton Street, Brookline Station 46, Boston, Mass. That office will supply the necessary application forms on request.

Nuclear test detection studies are being furthered with a grant of \$110 000 by the Defense Department's Advanced Research Projects Agency to Rensselaer Polytechnic Institute in Troy, N. Y. The grant will support a two-year study under the direction of Samuel Katz, associate professor of geophysics at RPI, and will form part of the Air Force Project Vela-Uniform. The group will investigate a proposed method of differentiating between disturbances in the earth caused by explosions and those arising from earthquakes by observing the behavior of water in deep wells. According to the Rensselaer announcement, this depends upon the fact that an explosion initially produces a compressive wave radiating from the center, while an earthquake, caused by shearing, gives rise to waves which are compressive in one direction and decompressive in the other. They have a syringe-like effect on water in deep wells: the water level rises in wells experiencing compression and falls in those under decompression. If two wells at opposite points on a circle around an observed center of disturbance both register a rise in water level, there is evidence of an explosion, whereas in the case of an earthquake the water level may be expected to rise in one well and to fall in the other.