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News of Science

Soviet Satellite Carrier Rocket

On 8 December 1957 the president and the chief scientific secretary of the U.S.S.R. Academy of Sciences addressed a cable to the president of the U.S. National Academy of Sciences regarding the rocket carrier body of the first artificial earth satellite, which was launched on 4 October 1957. A similar cable was addressed on 9 December to Joseph Kaplan, chairman of the U.S. National Committee for the International Geophysical Year, by Academician I. P. Bardin, president of the Soviet IGY Committee. Because the substance of these two cables is identical, only the first is quoted:

DETLEV BRONK, *President*
National Academy of Sciences

According to available data some not entirely burnt remnants of the first earth satellite rocket have been scattered along a line including Alaska and the west coast of North America. A thorough investigation of the not entirely burnt rocket remnants and the knowledge of the exact places of their fall are of great scientific significance as they provide valuable data concerning phenomena occurring when satellites enter the denser atmospheric layers. The USSR Academy of Sciences asks all the USA scientists to communicate the data concerning the fall of the rocket remnants and to send the remnants which were found to the Academy of Sciences Moscow USSR.

President of USSR Academy of Sciences
ACADEMICIAN A. N. NESMEYANOV
Chief Scientific Secretary of USSR Academy of Sciences
ACADEMICIAN TOPCHIEV

Although no evidence had come to light indicating that the rocket body of the first satellite had fallen in North America, a review of all available data and reports was initiated on 6 December when press dispatches from Moscow indicated that the U.S.S.R. believed the carrier body may have fallen on this continent. The results of this review, as of 11 December, were negative, and, on the same day, the president of the National Academy of Sciences accordingly addressed the following reply to the U.S.S.R. Academy:

PRESIDENT A. N. NESMEYANOV
Academy of Sciences of U.S.S.R.
Moscow

Reference your message and message Bardin to Kaplan our review thus far of sightings and trackings of satellite and investigation of reports of objects sighted do not indicate rocket or remnants fell in United States or its territories. We have no reports of finding of any such bodies. Your request being transmitted to trackers and others. It will be helpful if you can provide data you mention as available to guide our further search.

DETLEV W. BRONK, *President*
National Academy of Sciences
U.S.A.

Several observation programs are under way in the United States as part of the IGY effort in the tracking of all satellites. Photographic and visual tracking responsibilities have been assigned to the Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass. Radio tracking responsibilities have been assigned to the Naval Research Laboratory, Washington 25, D.C. Reliable information on satellite sightings would be welcome. Photographic and visual data should be addressed to the Smithsonian Astrophysical Observatory and, similarly, radio data to the Naval Research Laboratory.

HUGH ODISHAW
U.S. National Committee for the International Geophysical Year, National Academy of Sciences, Washington, D.C.

AAAS Theobald Smith Award

Paul Talalay, associate professor, Ben May Laboratory for Cancer Research, University of Chicago, is the winner of the 1957 AAAS Theobald Smith award in the medical sciences. This annual award, which was established by Ely Lilly and Company in 1936, consists of $1000, a bronze medal, travel expenses to the annual AAAS meeting, and expenses at the meeting. This year's award will be made on 29 December during the Association's annual meeting in Indianapolis by William B. Bean, vice president and chairman of the AAAS section on medical sciences.

The award is given for "demonstrated research in the field of the medical sciences, taking into consideration independence of thought and originality." The recipient must be a U.S. citizen less than 35 years old on 1 January of the year in which the award is made.

Talalay's main interest has been in the enzymatic mechanisms controlling steroid metabolism. Realizing the advantages that bacteria would have for such studies, he isolated soil bacteria that could satisfy their organic nutritional requirements from a single steroid such as testosterone or progesterone. Talalay was the first to isolate and purify the water-soluble enzymes responsible for the interconversions of hydroxy- and ketosteroids. He also demonstrated that these enzymes, which he named hydroxysteroid dehydrogenases, functioned in association with the coenzyme, diphosphopyridine nucleotide.

Talalay concentrated especially upon study of the kinetics of the reactions of the hydroxysteroid dehydrogenases with a variety of steroids. He was able to demonstrate the high affinity between the enzymes and certain steroid molecules and to elucidate the molecular features of the steroid molecules that are essential for binding the steroid enzyme complex together.

Recently, Talalay has studied the mechanism of double bond introduction into steroids. These reactions are of interest in connection with the aromatization involved in the biosynthesis of phenolic estrogens, and in the formation of the highly physiologically active *l*-dehydrosteroids. He has succeeded in obtaining soluble enzyme preparations which introduce double bonds into positions 1 and 4 of ring A of steroids and convert 19-nor-testosterone to estrone and estradiol. He has demonstrated that these reactions require certain oxidation-reduction dyes and has obtained insight into the enzymatic mechanisms by which these reactions are carried out.