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OSI-WS-52/74

30 December 1974



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# Weekly Surveyor

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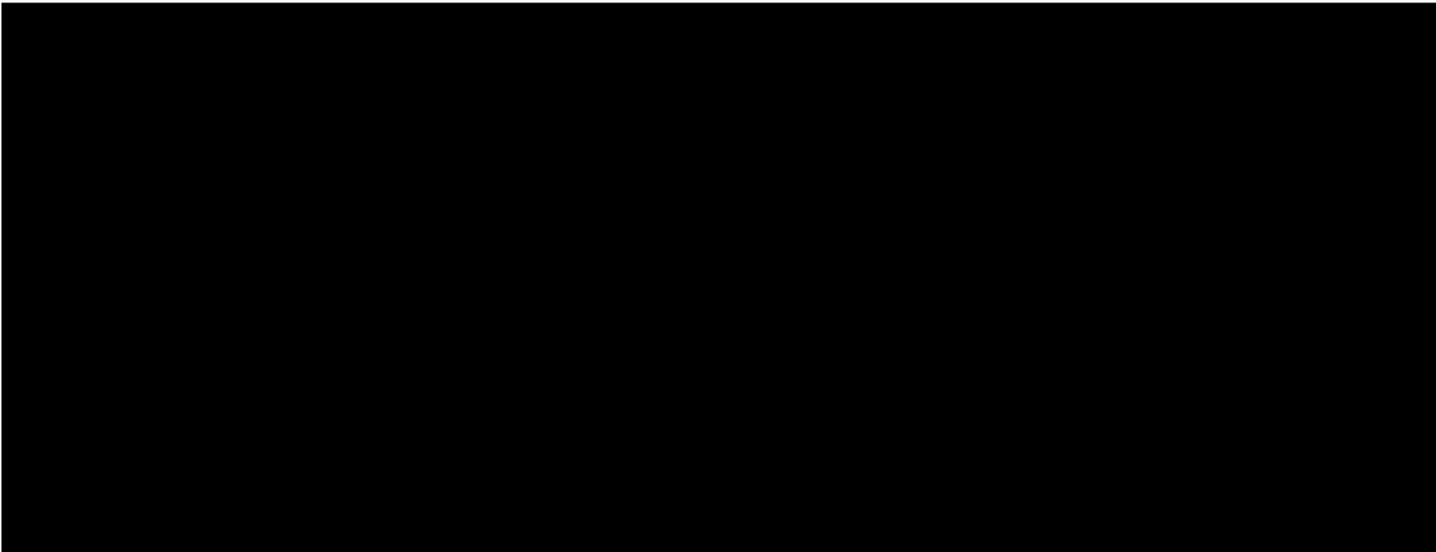
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WEEKLY SURVEYOR

USSR & EASTERN EUROPE

Soviet laser scientist, Orayevskiy, apparently will move his group to Krasnaya Pakhra in close proximity to that of Letokhov who heads the Institute of Spectroscopy. Letokhov is the leading Soviet scientist involved in laser isotope separation probably using photodissociation methods. Orayevskiy probably is interested in photochemical methods. Collaboration between these two would enhance Soviet capabilities in laser research related to isotope separation.

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NUCLEAR ENERGY

Soviets Experience Difficulties In Development of Laser Isotope Separation Method for U-235: On two totally unrelated occasions recently, Soviet scientists asked openly for details on US laser isotope separation (LIS) research and indicated that they were having problems.

A.M. Prokhorov has openly referred to the institute's work aimed at uranium LIS using uranium hexafluoride (UF<sub>6</sub>). Prokhorov asked for US details on relaxation times, indicating that the Soviets are working on the two-step photodissociation process.

Gleb V. Sklizkov, a laser specialist from the Lebedev Physics Institute, brought up the subject of LIS, although he himself is not involved in it. He said that the Krasnaya Pakhra Institute of Spectroscopy is having difficulty developing a viable commercial LIS process, and workers there need information about US efforts. While he would not confirm or deny the existence of a Soviet uranium LIS program, he said that the Soviets had not been very successful in LIS so far. He added that the amounts separated were small and the processes rudimentary.

Comment: This is the first time a Soviet (Prokhorov) has admitted the existence of a specific program to separate uranium isotopes by LIS. Apparently the Soviets have successfully separated small amounts of U-235 by laboratory techniques similar to those in US experiments at Livermore and Avco laboratories using metallic uranium. The Soviets are clearly having difficulties with the chemistry of UF<sub>6</sub> for LIS.

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