

~~Top Secret~~



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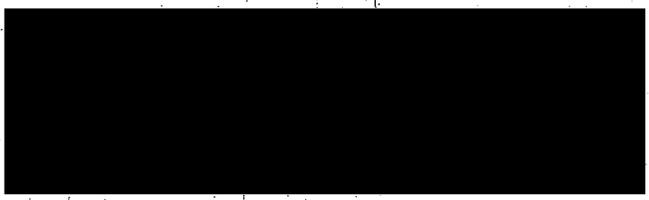


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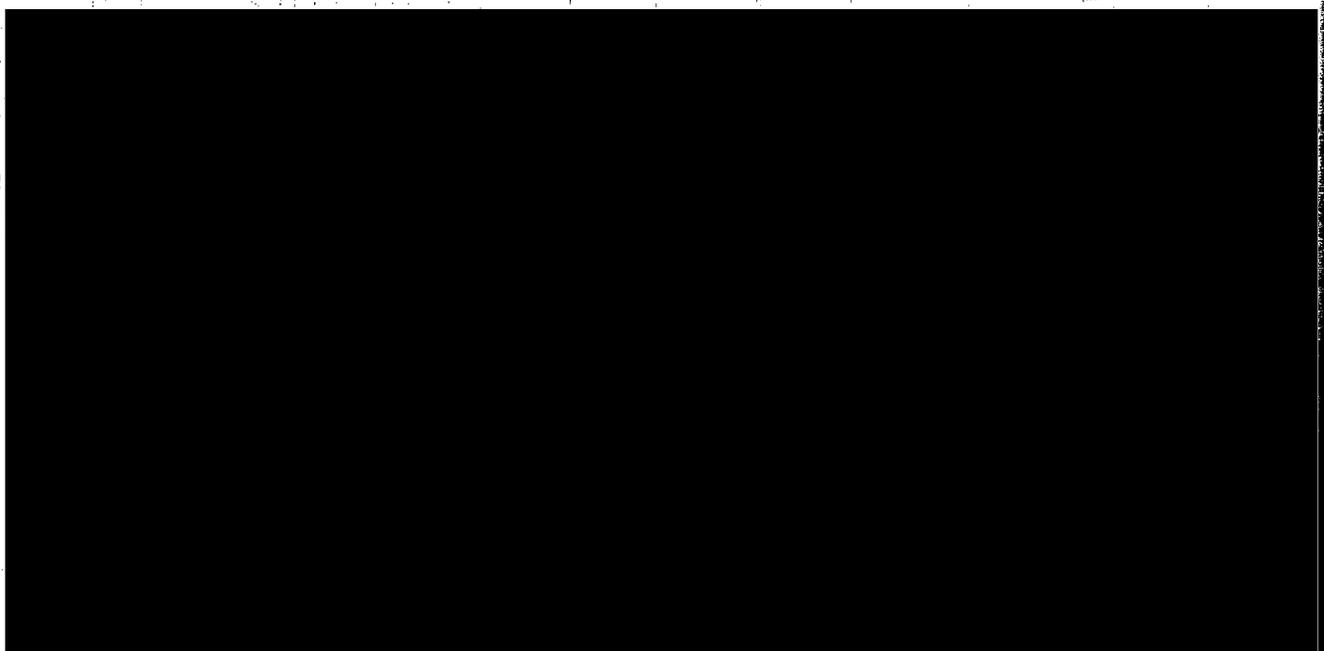
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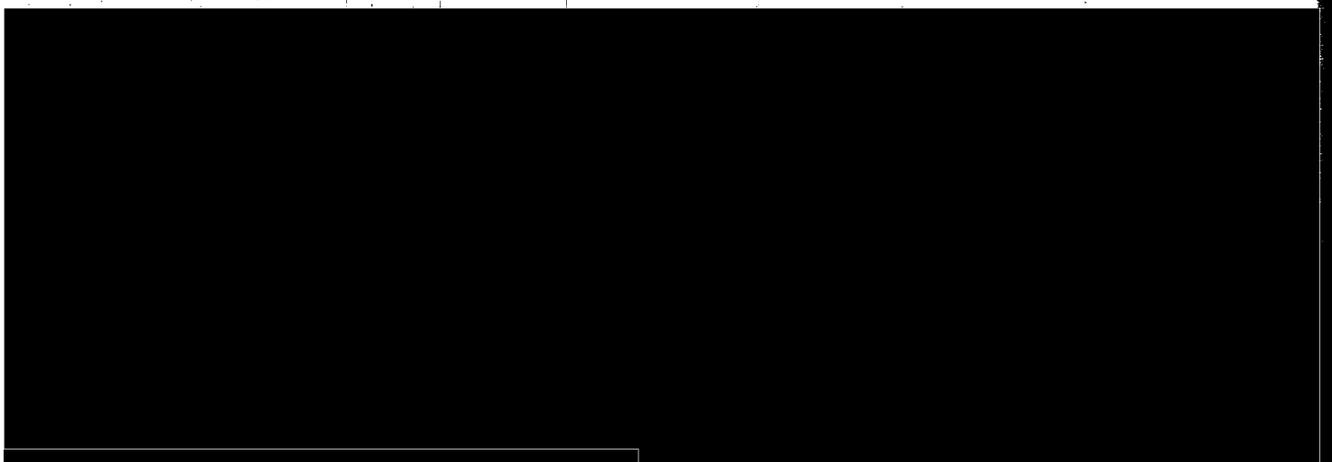
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USSR: Research being conducted that could lead to economic production of enriched uranium. (Page 11)



~~TOP SECRET~~ [REDACTED]

USSR: Soviet scientists are conducting research on isotope separation by lasers that could lead in time to a new, economical method of producing enriched uranium for fueling nuclear power reactors and for making nuclear weapons. Soviet scientists have already successfully separated isotopes of nitrogen by a laser method and may have also separated uranium isotopes by this method.

If current projections can be realized, a laser system would almost certainly be cheaper and less complex than separating isotopes by gaseous diffusion. It probably would also be cheaper and simpler than gas centrifuge methods. Such a method might provide a means for small countries to produce fuel for power reactors as well as to make nuclear materials for weapons.

[REDACTED]

In addition, at least two major institutes of the USSR Academy of Sciences are involved in programs on isotope separation by lasers. [REDACTED]

[REDACTED] these institutes are specifically engaged in uranium separation research, an impressive number of scientists at these institutes is working in areas related to laser isotope separation. The separation of fissionable material such as uranium would be the most profitable application of this work.

It is likely that these institutes will be able to demonstrate the laboratory feasibility of separating uranium isotopes by lasers within the next year or two, given the backgrounds of the scientists involved and the resources available to them. At least five more years, based on current technical projections, would probably be required to develop an economically significant system in pilot plant form.

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