

LETTER TO THE EDITOR



ADDENDUM TO "REPLY TO 'REMARKS ON THE PLUTONIUM-240 INDUCED PRE-IGNITION PROBLEM IN A NUCLEAR DEVICE' "

In our reply¹ to the remarks of Seifritz² to our paper³ dealing with the ²⁴⁰Pu-induced pre-ignition in a nuclear explosive, we, somehow, have missed commenting whether the Raleigh-Taylor instability would be important for this particular problem.

The nuclear explosives, analyzed in Ref. 3, consist of metallic plutonium and metallic natural uranium in the core and in the reflector, respectively. Therefore, there is practically no difference in the density at the boundary between core and reflector. The Raleigh-Taylor instability would be actual if the density changed by passing from the core to the reflector, which would be the case if the reflector was made of beryllium.

For this reason, our investigations in Ref. 3 would not be affected by the Raleigh-Taylor instability.

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REFERENCES

1. S. ŞAHIN, "Reply to 'Remarks on the Plutonium-240 Induced Pre-Ignition Problem in a Nuclear Device,'" *Nucl. Technol.*, **54**, 431 (1981).
2. W. SEIFRITZ, "Remarks on the Plutonium-240 Induced Pre-Ignition Problem in a Nuclear Device," *Nucl. Technol.*, **54**, 431 (1981).
3. S. ŞAHIN and J. LIGOU, "The Effect of the Spontaneous Fission of Plutonium-240 on the Energy Release in a Nuclear Explosive," *Nucl. Technol.*, **50**, 88 (1980).