

NEXT-TIME QUESTION

CONCEPTUAL Physics

WHEN A NEUTRON INTERACTS WITH A U-235 NUCLEUS, IT CAN FISSION MANY POSSIBLE WAYS. WHAT ELEMENT RESULTS IF IT FISSIONS INTO TWO IDENTICAL NUCLEI?

CAN YOU ANSWER THIS ONE? HOW MANY NEUTRONS ARE PRODUCED WHEN A U-235 NUCLEUS FISSIONS INTO Sr-90 AND Xe-138?



ARBOR SCIENTIFIC
TOOLS THAT TEACH.

Hewitt
Drewitt!

NEXT-TIME QUESTION

WHEN A NEUTRON INTERACTS WITH A U-235 NUCLEUS, IT CAN FISSION MANY POSSIBLE WAYS. WHAT ELEMENT RESULTS IF IT FISSIONS INTO TWO IDENTICAL NUCLEI?

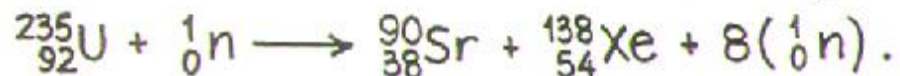
CAN YOU ANSWER THIS ONE? HOW MANY NEUTRONS ARE PRODUCED WHEN A U-235 NUCLEUS FISSIONS INTO Sr-90 AND Xe-138?



Answers: 8

If uranium fissions into 2 identical elements, their atomic number is half 92, or 46. That's palladium.

If U-235 fissions into strontium-90 and xenon-138, 8 neutrons are released, according to the reaction



(The number of neutrons released per fission reaction for most reactions is considerably less than 8.)

