

Title (en)

ELECTROSTATIC ACCELERATED-RECIRCULATING FUSION NEUTRON/PROTON SOURCE

Title (de)

ELEKTROSTATISCHE RINGBESCHLEUNIGUNG VON AUS EINER FUSIONSQUELLE ERHALTENEN NEUTRONEN/PROTONEN

Title (fr)

SOURCE ELECTROSTATIQUE DE NEUTRONS/PROTONS OBTENUS PAR FUSION ET SOUMIS A UNE ACCELERATION/CIRCULATION

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Application

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Priority

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Abstract (en)

[origin: WO9700519A2] An electrostatic accelerated-recirculating fusion neutron/proton source is disclosed. The energetic neutron/proton source comprises an axially elongated hollow vacuum chamber having an inner and outer wall. Reflectors are located at opposite ends of the vacuum chamber so that their centers lie on the axis of the vacuum chamber. A cathode that is 100 % transparent to oscillating particles is located within the vacuum chamber between the reflectors, defining a central volume and having the same axis as the vacuum chamber. Anodes that are 100 % transparent to oscillating particles are located near opposite ends of the vacuum chamber between the reflectors dishes and the cathode, having axes coincident with the axis of the vacuum chamber. A means is also provided for introducing controlled amounts of reactive gas into the vacuum chamber, and its central volume. Further, a means is provided for applying an electric potential between said anodes and said cathode and said reflectors to produce from the reactive gas ions within the central volume and to cause the recirculation of ions and electrons within the vacuum chamber, thus reducing the loss of particles. In an alternative embodiment, a means for generating a magnetic field in the axial direction is attached to the circumference of the vacuum chamber.

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