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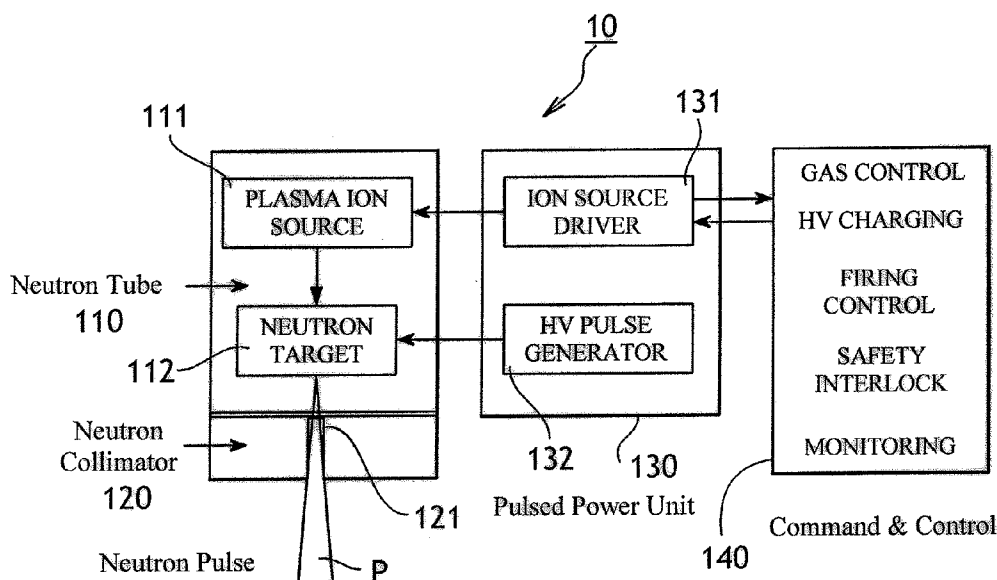
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(54) Title: A METHOD FOR GENERATING A PULSED FLUX OF ENERGETIC PARTICLES, AND A PARTICLE SOURCE OPERATING ACCORDINGLY



(57) Abstract: A method for generating a pulsed flux of energetic particles comprises the following steps: - initiating an ion plasma at a first electrode (111) in a vacuum chamber (110) and allowing said plasma to develop towards a second electrode (112) in said vacuum chamber, - at a time at which said ion plasma is in a transitional state with a space distribution of ions or electrons at a distance from said second electrode, applying between said electrodes a short high voltage pulse so as to accelerate said distributed ions or electrons towards said second electrode, whereby a high-energy flux of charged particles is generated while overcoming the space charge current limit of a conventional vacuum diode, and - generating said energetic particles at said second electrode (112). A particle source is also disclosed. Application in particular to ultra-short pulse neutron generation.

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