

Resonance and Rotation for Plasma Isotope Separation

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Plasma isotope separation schemes are based on the use of: (i) the ponderomotive force, (ii) the cyclotron resonance or (iii) magnetized plasma rotation with crossed static fields. We briefly analyze and review these processes. Then, we identify and describe a fourth method where the plasma rotation is induced by a rotating field rather than a static field. As opposed to the classical rotation displaying a mass threshold associated with the two roots of the slow and fast modes, this later scheme presents a wider access to a mass threshold for separation.