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**Fast Particle driven Alfven Quasimodes in Tokamaks**[1] IAN ABEL, Imperial College London, UK, BORIS BREIZMAN, University of Texas, Austin, SERGEI SHARAPOV, UKAEA Fusion, Culham, UK — Upward sweeping Alfvén cascade eigenmodes have long been observed in tokamak reverse shear discharges. These upward sweeping modes have been explained as eigenmodes, localized around $q_{\min}$ driven by fast ion inhomogeneities in the plasma [Physics of Plasmas 10 3649]. However in flat $q$-profile discharges an accompanying downward sweeping mode, not provided for by the previous work, are occaisionally observed[Physics of Plasmas 12 112506]. We explain these modes as quasimodes supported by energetic particle drive against their weak radiative decay. The computation of the fast particle drive is simplified using an action/angle variable drift kinetic formalism to treat the trapped fast particle population.

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