



Suppression of $m=1/1$ fishbone and destabilization of $m=2/1$ fishbone activities during NBI on HL-2A

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In this talk the recent progress of ion fishbone activities will be present on HL-2A. Firstly, it will be reported the stabilization of $m/n=1/1$ fishbone by ECRH. The stabilization of $m/n=1/1$ fishbone depends not only on the injected power but also on the radial deposition location of ECRH, and the instability can be completely suppressed when the injected ECRH power exceeds certain threshold. Analysis by the fishbone dispersion relation, including the resistive effect, suggests that the magnetic Reynolds number plays a key role in the mode stabilization. Secondly, it will be introduced the destabilization of $m/n=2/1$ fishbone. The evolution of $m/n=2/1$ fishbone is related to mode rotation reverse and giant temperature oscillation. The excitation mechanism of $m/n=2/1$ fishbone will also be discussed, namely what's the result of the kink or tearing mode interacting with circulating or trapped EPs.