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Enhanced Pedestal Performance in DIII-D Elm-free H-modes with Lithium Injection

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With lithium injection, an enhanced pedestal with ELM-free periods up to 350 ms has been observed, accompanied in the edge region by increased density fluctuations and reduced intrinsic impurity accumulation in the core plasma. The increase in pedestal width is rapid, usually occurring in a few ms and can expand by more than 100% during the ELM-free phases with lithium injection. This is accompanied by an increase of more than 2 times the edge pedestal electron pressure and confinement enhancements, H98y,2, up to 2.1 have been obtained.

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