

Abstract Submitted  
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**Internal wave penetration into an evanescent layer via parametric subharmonic instability** SASAN GHAEMSAIDI, MIT, THIERRY DAUXOIS, SYLVAIN JOUBAUD, PHILIPPE ODIER, ENS Lyon, THOMAS PEACOCK, MIT — The effect of parametric subharmonic instability (PSI) on the transmission properties of a boundary forced, two-layer density stratification is experimentally studied. In regimes where linear theory simply predicts evanescent decay in the lower layer, PSI creates two daughter waves that are capable of penetrating deep into the stratification in opposing horizontal directions. PSI is shown to be a reasonable mechanism for the injection of energy flux and momentum into an otherwise forbidden lower layer by means of the creation of “burrowing” daughter waves of the primary, forced mother wave.

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