

Doubling of Off-axis ECCD Achieved on DIII-D via Reactor-relevant 'Top Launch ECCD' Approach

- **Top launch ECCD system installed on DIII-D to allow experimental validation**
 - At fixed-injection, B_t was reduced to push the EC wave to interact with higher $V_{||}$ electrons
 - **Experiments tested main tenets of top launch ECCD**
 - Geometry allows selective wave interaction with high $V_{||}$ electrons having high CD efficiency
 - Long absorption path compensates for inherently weak damping at high $V_{||}$
- Highest ECCD efficiency for optimal absorption on high $V_{||}$ tail electrons

