



Contribution ID: 242

Type: poster

## Tapering of plasma density ramp profiles for adiabatic lens experiments

*Wednesday, September 27, 2017 7:30 PM (1 hour)*

One of the key elements of the PWFA blowout regime is the strong, linear focusing provided by the ion density. One advantage of this focusing is its extraordinary strength whose gradient is proportional to the local background plasma density, permitting adiabatic focusing schemes in future compact linear colliders. Plasma density variations can be locally obtained in gas-filled capillaries by varying the capillary diameter in order to modify its local value. We present here a study of hydrogen discharges that explores the density profiles obtained for different tapering angles, and discuss their utility for adiabatic lens experiments.

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**Session Classification:** Wine and Poster Session 2 (WG4-WG5-WG6-WG7)

**Track Classification:** WG5 - High-Gradient Plasma Structures/Advanced Beam Diagnostics