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First Results Of Plasma Diagnostics For The Prototype Plasma Lens For Optical Matching At The ILC e+ Source

In recent years, high-gradient, symmetric focusing with active plasma lenses has regained significant interest due to its potential advantages in compactness and beam dynamics compared to conventional focusing elements. A promising application could be optical matching of highly divergent positrons from the undulatorbased ILC positron source into the downstream accelerating structures to increase the positron yield. In a collaboration between University Hamburg and DESY Hamburg a downscaled prototype for this application has been developed and constructed. Here, we present the current status of the prototype development and first results of plasma diagnostics.

Collaboration / Activity

Uni Hamburg/DESY

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