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Status of plasma diagnostics on the prototype plasma lens for optical matching at the ILC e+ source

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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 undulator-based 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.

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Footnotes

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