## 3rd European Advanced Accelerator Concepts Workshop



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## Plasma lens experiments at the CLEAR Test Facility, CERN

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Future plasma-based accelerators will need strong and compact focusing elements to complement the high gradient acceleration, in particular for beam transport between plasma stages. Using discharge capillary (active) plasma lenses is a promising technology, providing axially symmetric (focusing only) large magnetic field gradients at cm-scale. This is achieved by passing a strong discharge current through a long, thin capillary to set up a focusing magnetic field. The newly commissioned CLEAR Test Facility at CERN (previously the CALIFES injector at CTF3) provides an ideal beam to characterize such a discharge capillary plasma lens. We present early experimental results from the 2017 run.

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