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Electron beam studies on a beam position monitor based on Cherenkov diffraction radiation

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A beam position monitor based on Cherenkov diffraction radiation (ChDR BPM) is currently under investigation to disentangle the electromagnetic field of an electron bunch from that of a proton bunch travelling together in time and space in the beam-line of the AWAKE plasma acceleration experiment at CERN. The signals from a horizontal pair of ChDR BPM radiators have been studied under a variety of beam conditions at the CLEAR electron beam test facility. This paper summarizes the results using microwave signal processing at different frequency ranges.

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Footnotes

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Yes

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