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Electron Beam Driven Wakefield Generation at the AWA Facility

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Electron beam driven wakefield acceleration has been the main focus of research at AWA for many years, using high charge electron bunches (1 to 100 nC) for both Structure Wakefield Acceleration (SWFA) and Plasma Wakefield Acceleration (PWFA). We will present recent experimental results obtained with several types of X-band structures: metallic, dielectric loaded, photonic band gap (PBG), and metamaterial (MTM). RF pulses of a few hundred MW have been generated.

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