

Talk at Splinter Meeting

Splinter B

PHASED-ARRAY-FEEDS FOR EFFELBERG, BEAMFORMING AND RFI  
MITIGATION

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The Effelsberg Telescope will soon be equipped with a Phased Array Feed (PAF) that operates in the frequency range  $\sim 800\text{--}1800$  MHz. This advanced receiver samples the electric field over some area in the focal plane, from which virtual beams can be formed within a field of almost  $2^\circ$  diameter, turning the 100 m into a multi-pixel wide-field camera. I will describe the general principles and our plans with the PAF in Effelsberg and the commissioning period at the Parkes telescope. An important bonus of such a system is the possibility to actively mitigate the influence of artificial interference even in badly affected bands. Such methods are becoming essential in those frequency ranges that are quickly being filled by new communication services and may soon be the only option for radio astronomy in wide unprotected bands.