

J.4 The Equivalence of Pre and Post Correlation Adaptive RFI Cancellation.

D. A. Mitchell^{1,2} (dmitchel@atnf.csiro.au), R. J. Sault², and M. J. Kesteven²

¹**School of Physics, The University of Sydney, Australia.**

²**Australia Telescope National Facility, CSIRO, Australia.**

Adaptive interference cancellation has been used in numerous fields for many years. The techniques utilise an additional receiver to collect a copy of the interfering environment. This reference signal is adaptively modified to best approximate the environment observed at the primary receivers. The modified signals are then subtracted from the voltage streams of the primary receivers.

Radio astronomers are usually only interested in the auto and cross correlations of the signals; not the voltages. Over the past few years it has been demonstrated that, under certain conditions, the interference cancellation can be applied after the primary signals have been correlated.

This poster displays the results of several experiments conducted on baseband data collected with the Australia Telescope Compact Array. These experiments demonstrate the essential equivalence of the pre and post correlation approaches.