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The SKA1-LOW receiver: the Italian experience from SKADS to AADC - 15'

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INAF/IRA has a long and well established tradition with low frequency arrays thanks to the Northern Cross radio telescope, located in Medicina (Italy). Since the beginning of the Italian adventure in the SKA project, with the participation to the SKADS EC-FP6 program, INAF/IRA has been involved, as part of its general effort, to contribute into the design of RF receivers for low frequency (<2GHz) systems. From the first prototype in 2004, called BEST, IRA/INAF has introduced the RFoF technology, which allow to remote antenna arrays transporting all signals into a central facility. After about 15 years of work in this field, this technology is a key component of the Verification System (AAVS1) of the Aperture Array Design Consortium recently deployed in Western Australia and has been selected for the reference design of SKA1-LOW.

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