



*RN3 — WP 11 JRA **DIVA***

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*RadioNet3 — **DIVA** overview*

- Task 1: Low-noise wide-band integrated amplifiers for VLBI antennas
 - 1 - 4 GHz wide-band feed with wide-band LNA
- Task 2: Development of a 32 Gbit digital backend (DBBC3)
 - 3rd generation digital backend for VLBI
 - Initially 4 GHz bandwidth

*RN3 **DIVA** — Task 1 upgrade plan*

- in addition to delivering 1 - 4 GHz will study 1.2 – 10 GHz feed + LNA
 - very promising for SKA
- extra funding from partners needed but seems secured
 - Costs for wafer under negotiation
- additional development on feeds happening already

Wide Bandwidth Integrated 1-4 GHz Feed Development for VLBI and SKA

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*RN3 **DIVA** — Task 2 upgrade plan*

- DOW: 4 GHz BW wide VLBI backend
 - 2x 16 Gbps if used for dual pol
- Plan: Reuse some components with brandnew sampler for 14 GHz BW
 - Can replace mixers between 0 and 14 GHz
 - Digital receiver up to 14 GHz possible
 - Data sampled in receiver, transferred to backend via fibre

DBBC3: VLBI at 32 Gbits per second

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DBBC3-L architecture (EVN version)

