

# WP5 JRA AETHRA

AETHRA (Advanced European Technologies for Heterodyne Receivers for Astronomy) aims at exploiting new technologies, such as highly integrated microelectronic semi- or superconducting circuits, to significantly improve the next generation receivers of mm and sub-mm wavelength telescopes, reinforcing European technological and scientific leadership by considerably improving the receiver performance and observing speed of the European-owned world- leading facilities ALMA, APEX, NOEMA and PV. The most effective means to boost the observing speed of those instruments at a reasonable cost consist of: a) widening the Intermediate/Radio frequency (IR/FR) receiver bandwidths and b) implementing large focal plane arrays (FPAs) of heterodyne receivers. ([WP5 Description](#)).

**The AETHRA partner:** MPG, IRAM, INAF, OSO, STFC, SRON, OBSPARIS, UOXF, UAH, ESO, Fraunhofer, RUG, UCO, TUD

## The AETHRA tasks:

- WP5.1: Semiconductor LNAs and MMIC receivers [MPG, IRAM, INAF, Fraunhofer]
- WP5.2: Very large Focal Plan Array of SIS mixer receivers [IRAM, OSO, UOXF, UAH]
- WP5.3: FPA of receivers operating around 1 THz [UOXF, SRON, OBSPARIS, RUG, UAH, UCO, TUD]
- WP5.4: Subtasks common to Tasks 5.1-5.3 [IRAM, OSO, STFC, OBSPARIS, UOXF, UAH, RUG, UCO, TUD]

This activity is lead by IRAM - Leader F. Gueth.

## AETHRA Meetings / Teleconferences

- 11-12 April 2017, Grenoble/FR - [AETHRA Kick off](#)

## Deliverables

The following deliverables are scheduled for WP5:

No	Del. Title	Lead beneficairy	Type	Dissemination level	Due date	Submission date	Document
D5.1	SIS junction mixer operating around 1 THz	UOXF	RE	Public	30.6.2019		

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