

# ASTEROID

**AST**ronomy **EuRO**pean **I**nfrared **D**etector

High quality infrared detectors  
manufactured in Europe

EU funded H2020-COMPET project

[asteroidh2020.eu](http://asteroidh2020.eu)

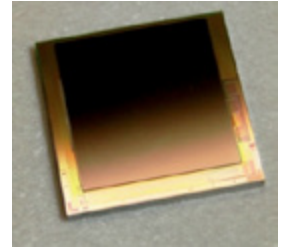


European  
Commission

Horizon 2020  
European Union funding  
for Research & Innovation

# ASTEROID Objectives

The objective of the project is to **extend the dimension of high performance infrared (IR) Focal Plane Arrays (FPA)** that can be manufactured in Europe.



The targeted format is 2k<sup>2</sup> 15µm pitch FPA (2048x2048 pixels).

**ASTEROID will enable Europe to acquire the technology and knowledge necessary to manufacture 2k<sup>2</sup> IR FPA**, define the types of products to design and define the strategy to create an industrial manufacturing line of these detectors.

*Enabling Europe to be independent in the procurement of high quality infrared detectors*

## ASTEROID Partners

The ASTEROID consortium is composed by an interdisciplinary team of 3 European industrials and 2 research organisations.

Industrial Organizations:

- **SOFRADIR**, France
- **EV Group**, Austria
- **ADDL**, France

Research Institutes:

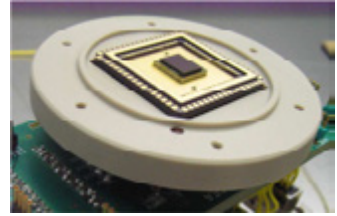
- **CEA-Leti Institute**, France
- **CEA-IRFU Institute**, France
- **IFAE**, Spain



# ASTEROID Technology

ASTEROID will develop the technology to **manufacture 2k<sup>2</sup> IR FPA in Europe** through:

- ROIC development
- MCT development
- Hybridization technology



ASTEROID will also define the **commercial and industrial strategy** definition:

- Different types of 2k<sup>2</sup> products
- Manufacturing line implementation plan and commercial evaluations

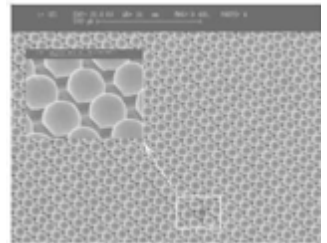


*Detectors for  
ground telescopes  
and space missions,  
for earth observation and  
astronomy applications*

## ASTEROID Innovation

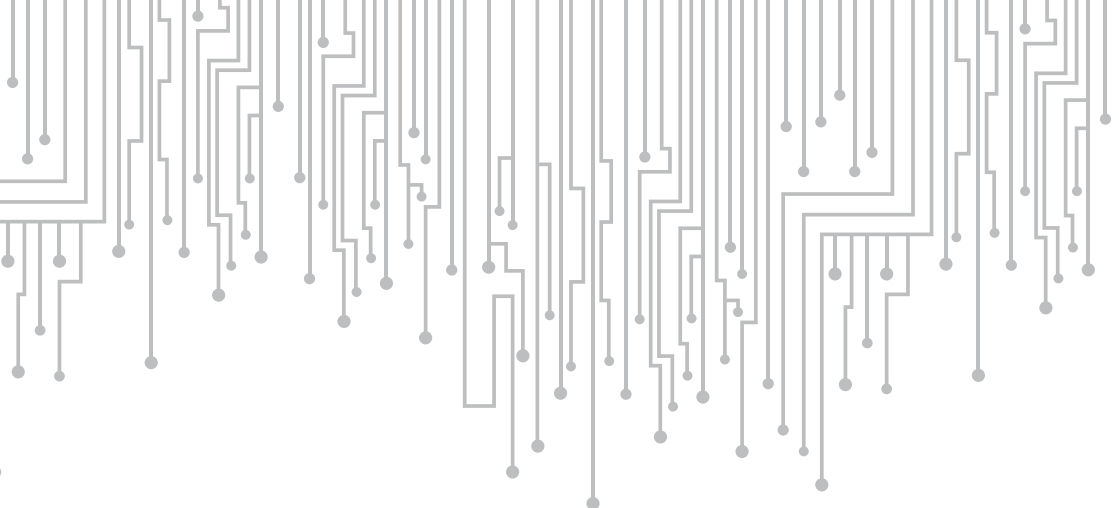
The very large IR detector manufactured thanks to ASTEROID development is designed for scientific and astronomy applications.

Thanks to its performances in SWIR wavelength range, especially its low noise and low dark current, it will be directly useful for astronomy applications in both ground telescopes (ESO) or space telescopes (ESA)



Large focal plane array technologies will also allow other application with derivative of this detector:

- **Earth observation** with high resolution requiring large numbers of pixels
- **Hyper spectral missions** with a high number of channels



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## **ASTronomy EuROpean Infrared Detector**

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