

VLTI Expertise Centres Network

The background of the slide is a photograph of the Very Large Telescope Interferometer (VLTI) on a clear night sky. Several large, white, cylindrical telescope structures are visible, arranged in a line. The sky is dark blue with some stars visible. The foreground shows a paved area with some orange safety markers.

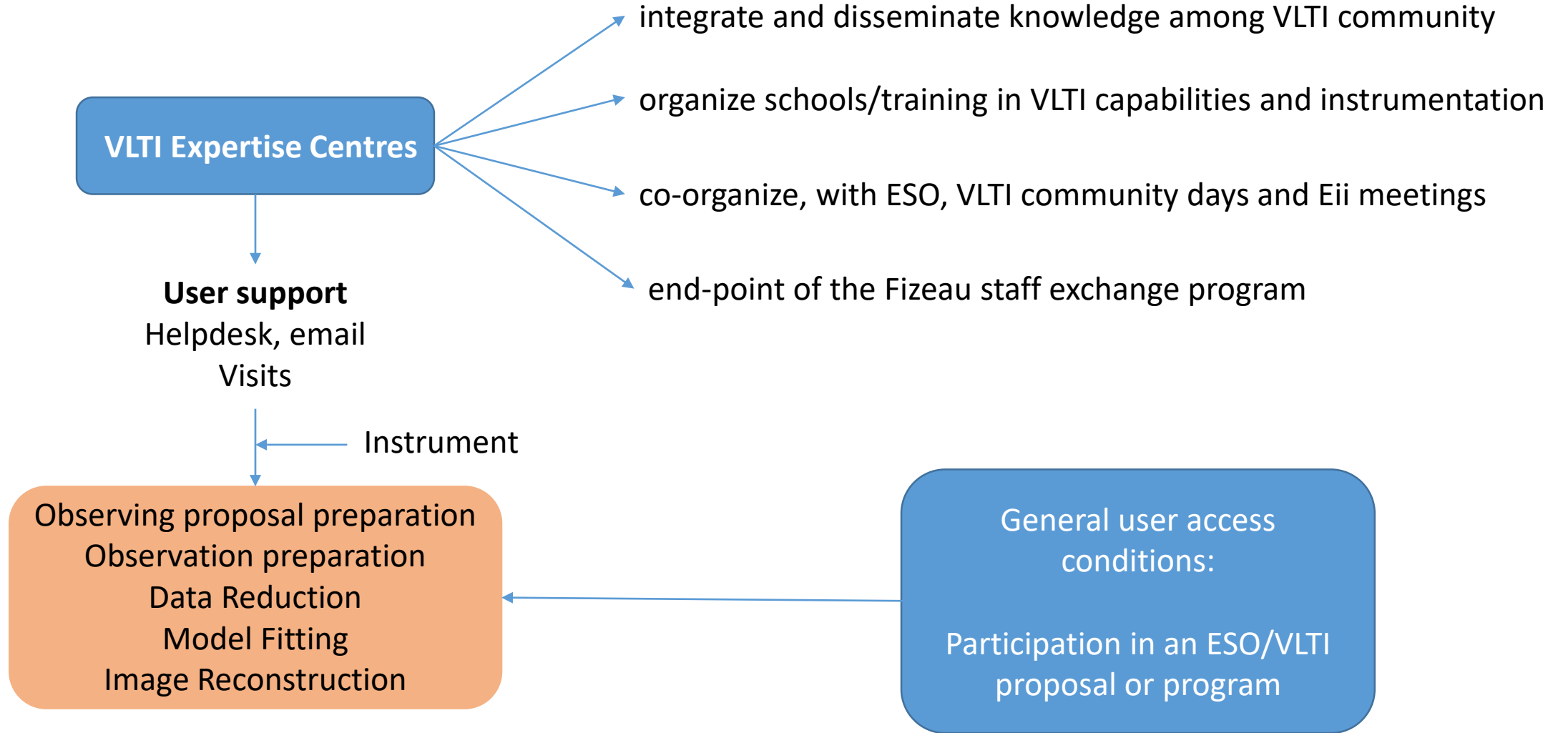
Alexis Matter (OCA)
Denis Defrère (U. Liège)
Alex Kreplin (U. Exeter)
Jörg-Uwe Pott (MPIA)

On behalf of the VLTI
Expertise Centres

Mercedes Filho
Lead Scientist
VLTI Expertise Centre
Portugal

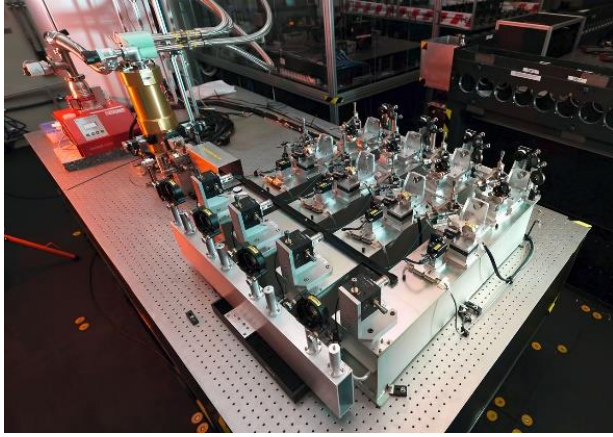
VLTI Expertise Centres Network

Objectives



VLTI Expertise Centres Network

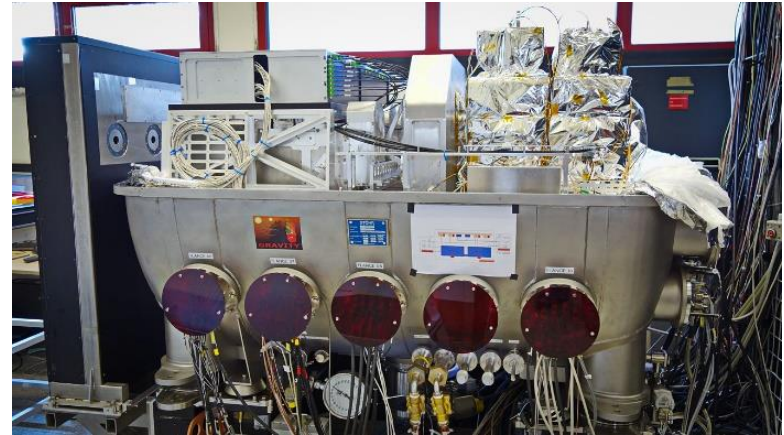
Instrumentation



PIONIER – H-band 4-way beam combiner



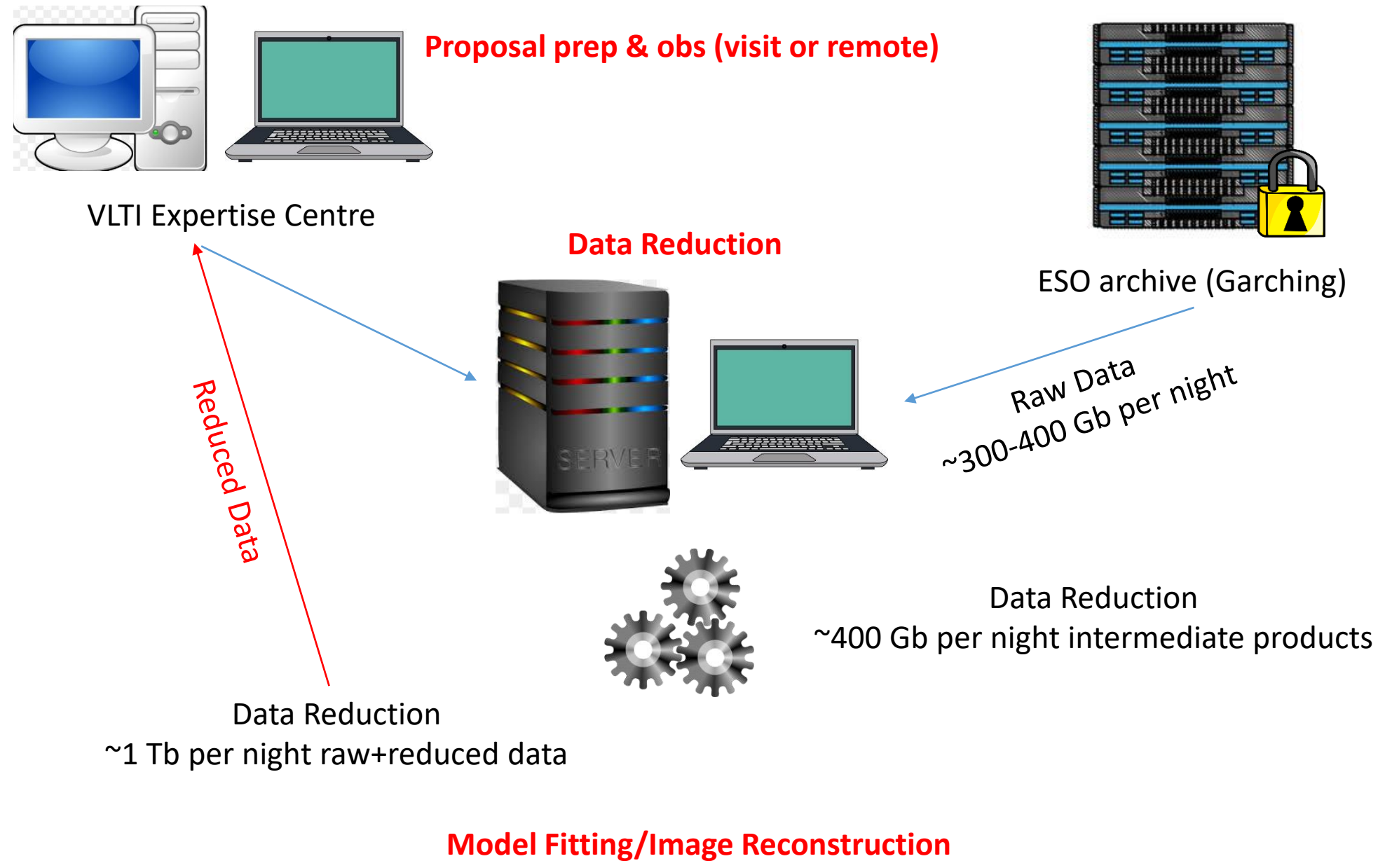
MATISSE - 4-way beam combiner in L, M & N bands



GRAVITY – K-band 4-way beam combiner with spectroscopic, fringe tracking & astrometric capabilities

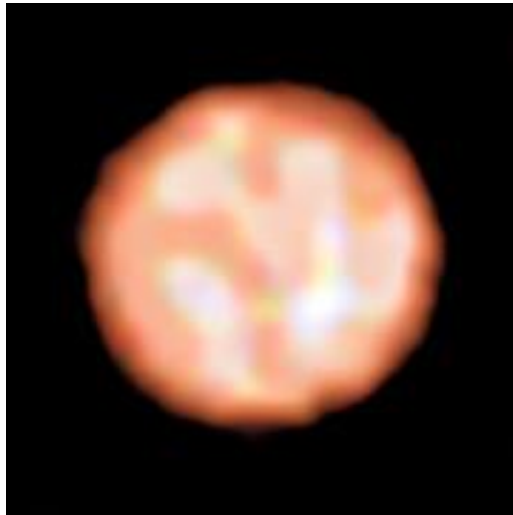
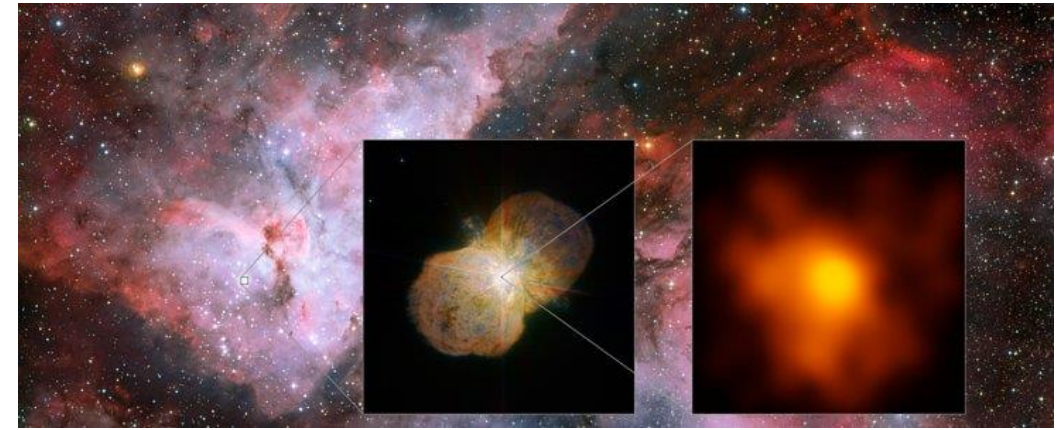
VLTI Expertise Centres Network

Data Handling



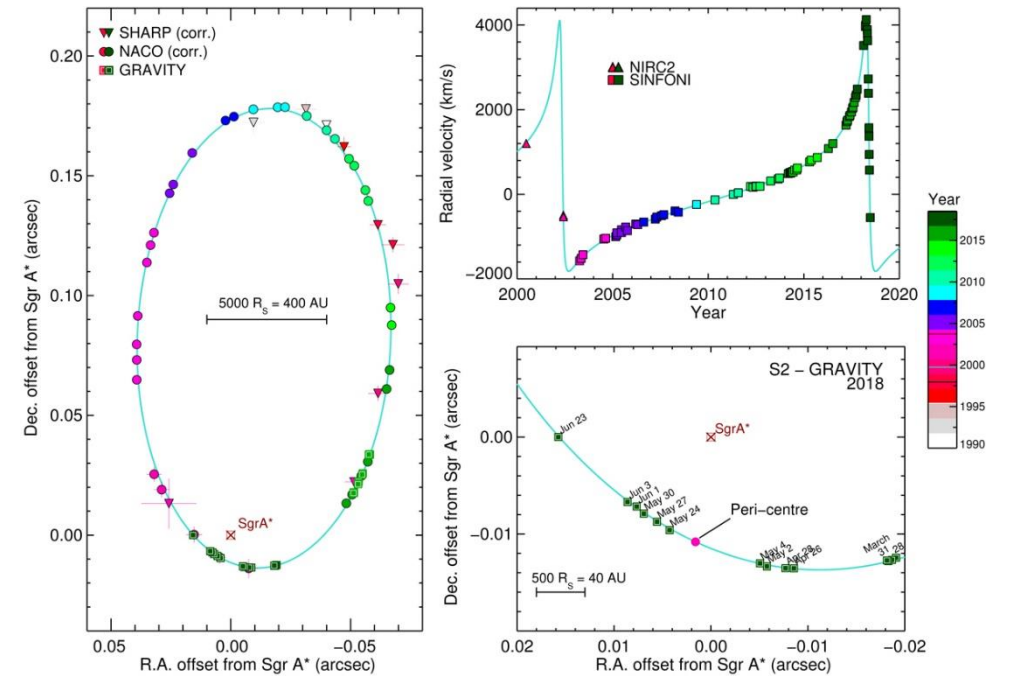
Highlights

- **Highest resolution image of Eta Carinae**
 AMBER Weigelt et al. 2016



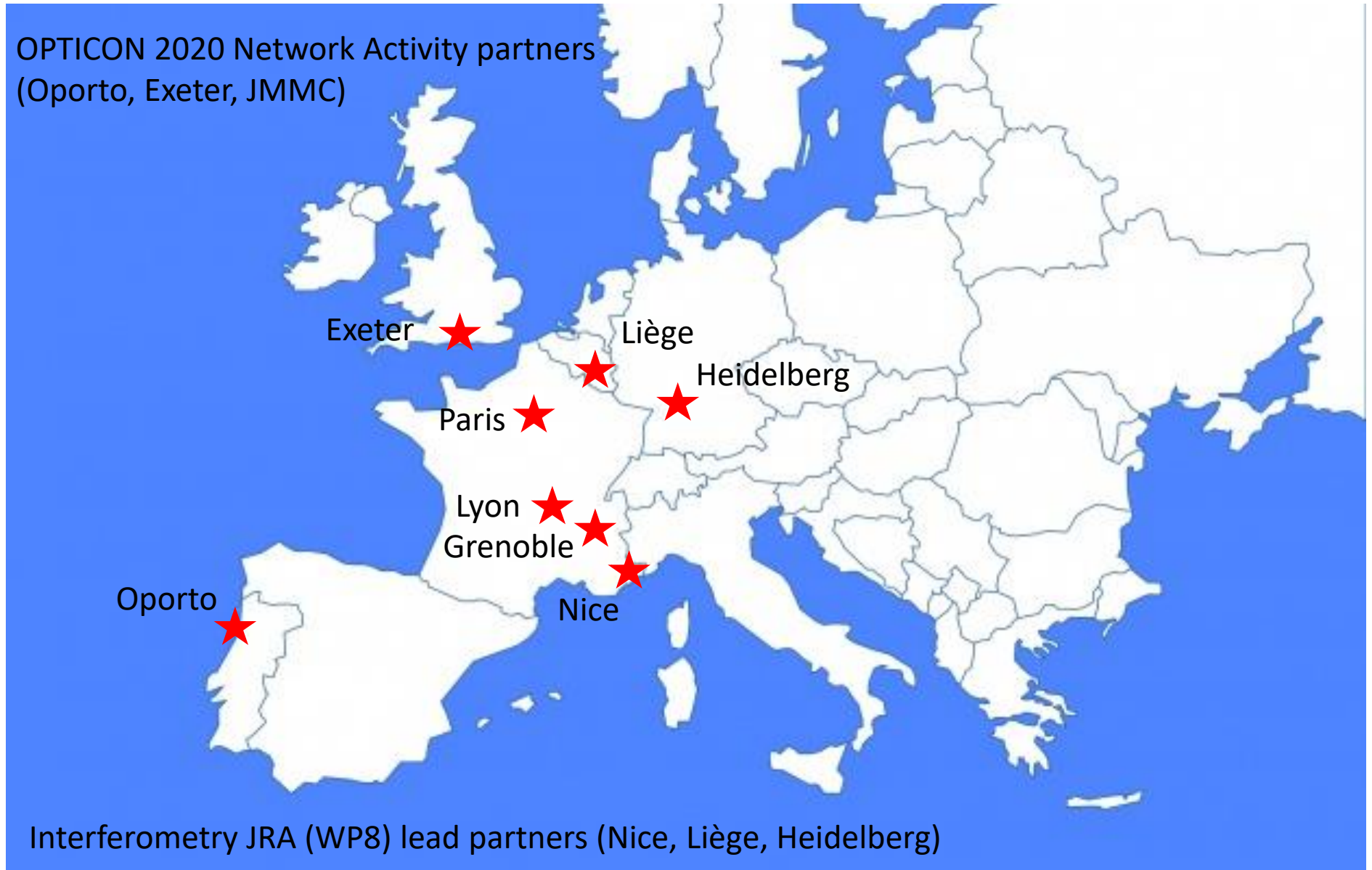
- **First image of granulation patterns in a red giant star**
 PIONIER Paladini et al. 2017

- **First successful test of Einstein's General Relativity**
 GRAVITY GRAVITY collab. et al. 2018



VLT Expertise Centres Network

Europe



VLTI Expertise Centres Network

France



Service du Utilisateurs du VLTI - SUV

Coordinating Node
Observatoire de la Côte d'Azur (OCA)
Alexis Matter

Helpdesk, email
Visits

Observatoire de la Côte d'Azur (OCA)
Alexis Matter

Observatoire de Paris
Vincent Coudé
du Foresto

Grenoble (OSUG)
Jean-Charles Augereau

Observatoire de Lyon (OSUL)
Ferreol Soulez

MATISSE
Proposal prep & obs
Data reduction

GRAVITY
Proposal prep & obs
Data reduction

GRAVITY
Proposal prep & obs
Data reduction

Model fitting
Image Reconstruction

Model fitting
Image Reconstruction

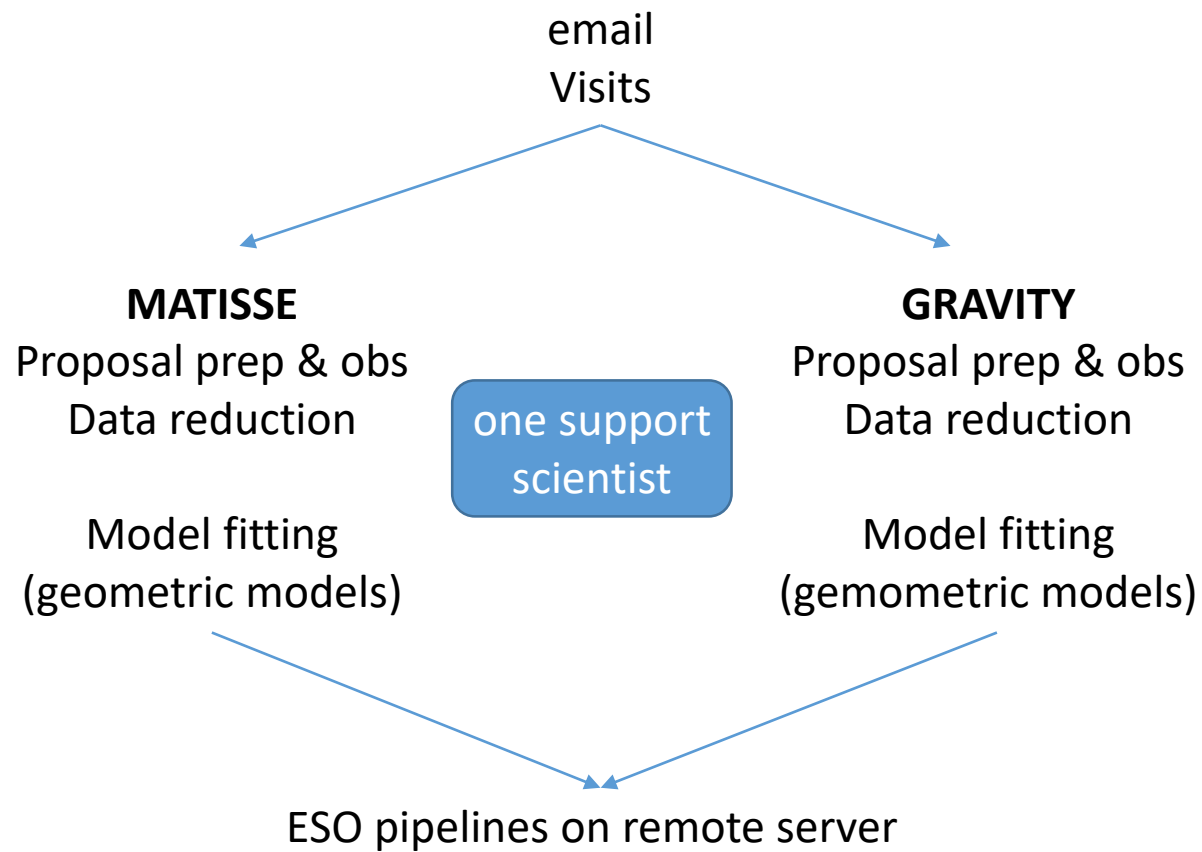
ESO pipelines on remote server (NICE)



VLT Expertise Centres Network Belgium (Liège)



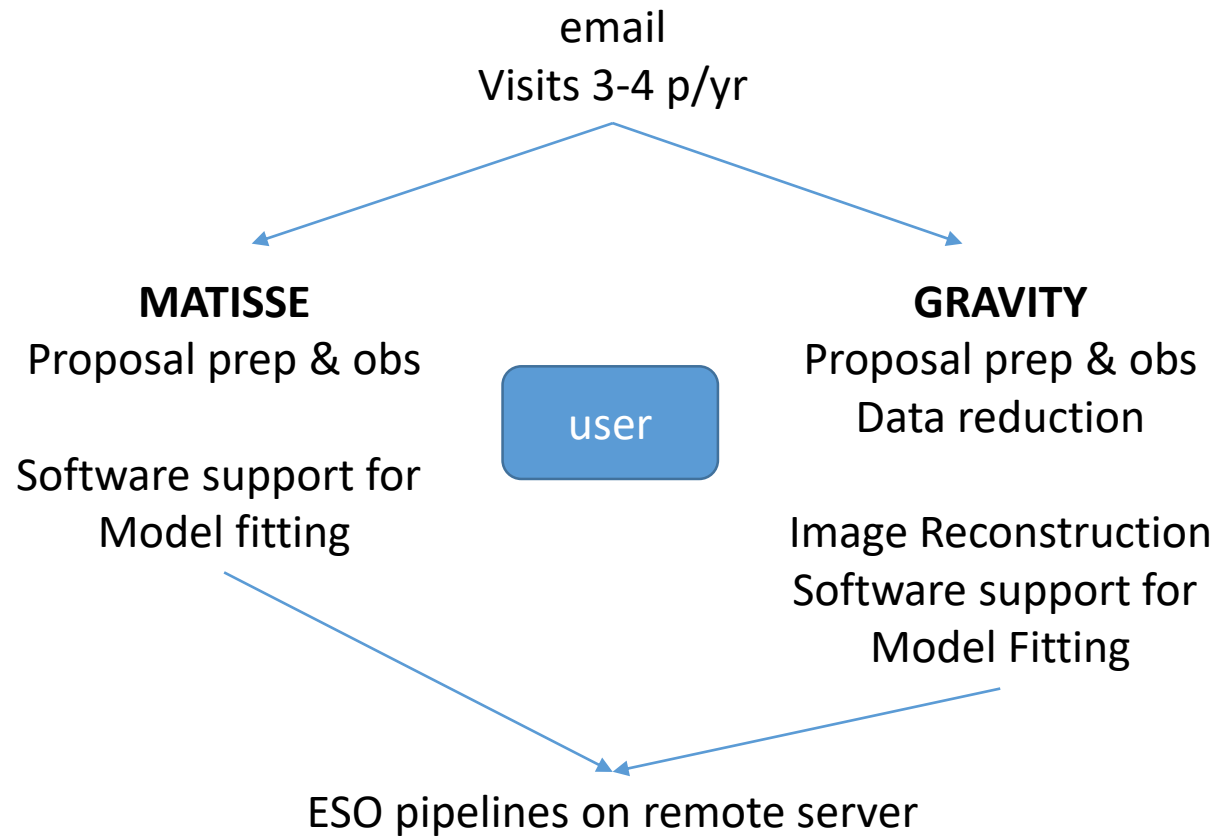
University of Liège
Coordinator: Denis Defrère
Lead Scientists: Olivier Absil & Jean Surdej



VLT Expertise Centres Network
United Kingdom (Exeter)



University of Exeter
Coordinator: Stefan Kraus
Lead Scientist: Alexander Kreplin



VLT Expertise Centres Network Germany (Heidelberg)



Max Planck Institute for Astronomy
Coordinator: Jörg-Uwe Pott

two support
scientists

email
Visits

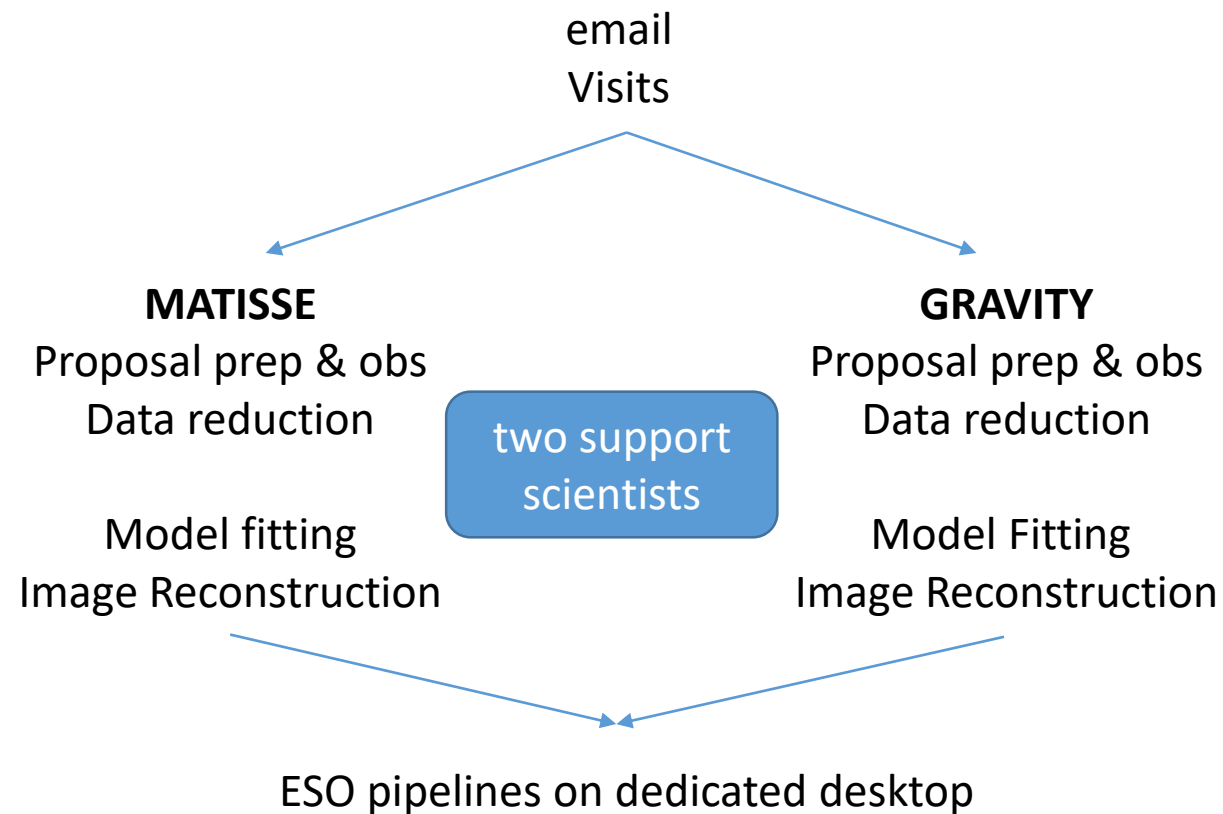
MATISSE
Proposal prep & obs
Data reduction

ESO pipelines run on user computer

VLT Expertise Centres Network
Portugal (Oporto)



CENTRA
Coordinator: Paulo Garcia
Lead Scientist: Mercedes Filho



VLT Expertise Centres Network Contact Information

<http://www.european-interferometry.eu/vlti-expertise-centres-network>



Alexis.Matter@oca.eu - OCA

Vincent.Foresto@obspm.fr - Obs. Paris

Jean-Charles.Augereau@univ-grenoble-alpes.fr - OSUG

Ferreol.soulez@univ-lyon1.fr - OSUL



ddefrere@uliege.be

jsurdej@uliege.be

olivier.absil@uliege.be



skraus@astro.ex.ac.uk

akreplin@astro.ex.ac.uk



jpott@mpia.de



centra

pgarcia@fe.up.pt

mfilho@fe.up.pt