- ✓ Tetra-ARmed Super-Ifu Spectrograph (A. Gil de Paz et al.)
- ✓ Institutional contributions to TARSIS (J. Gallego et al.)
- ✓ TARSIS management plan (M. García Vargas et al.)
- ✓ CAB contribution to ELT-HARMONI (J. Piqueras López et al.)
- ✓ GNIRS image slicers for GEMINI: Design and Manufacturing (A. Calcines et al.)

IFUs

- ✓ The Calar Alto Schmidt-Lemaitre Telescope (CASTLE): An innovative concept for wide field astronomy (S. Lombardo et al.)
- ✓ The 4-m new robotic telescope (NRT): status of the optomechanial system (A. Oria et al.)

Optical/NIR Telescopes

- ✓ First application of a Kinetic Inductance Detector (KID): Camera to Pulsar Science in the Millimetre Regime (P. Torne et al.)
- ✓ Yebes RT40m: a radiotelescope in a village of La Mancha (or almost) (M. Santander-García el at.)

Radio telescopes/instr

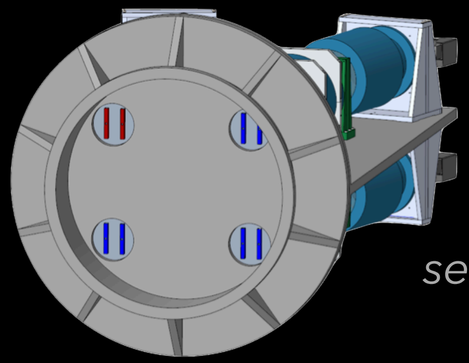
- ✓ IAA-CSIC activities to develop a SKA Regional Centre Prototype (S. Sánchez Expósito el at.)
- ✓ VLBI20-30: A scientific roadmap for the next decade (F. Colomer)

Radio (distributed)

- ✓ Filabres, a new pipeline for the automatic data reduction of CAFOS direct imaging (N. Cardiel López et al.)

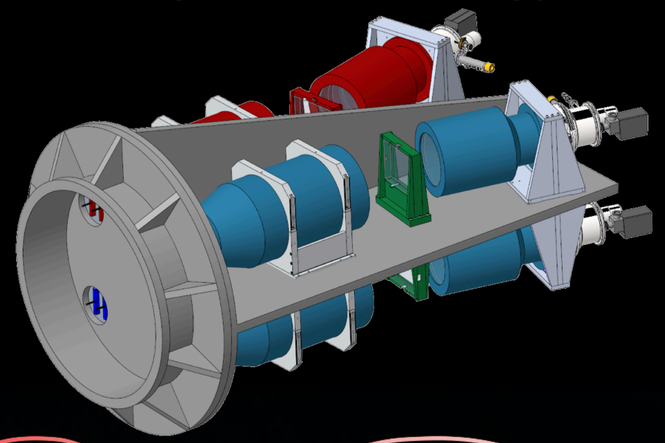
Pipeline

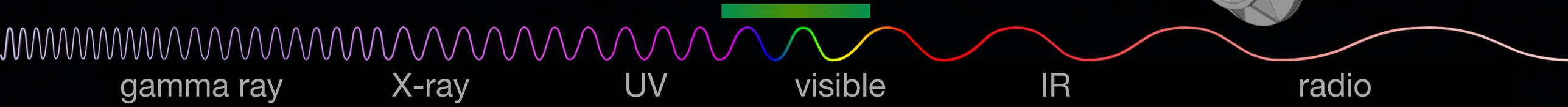
Tetra-ARmed Super-Ifu Spectrograph (A. Gil de Paz et al.) main characteristics & science
Institutional contributions to TARSIS (J. Gallego et al.) of UCM, IAA-CSIC and INAOE
TARSIS management plan (M. García Vargas et al.) Team, calendar, budget and strategy

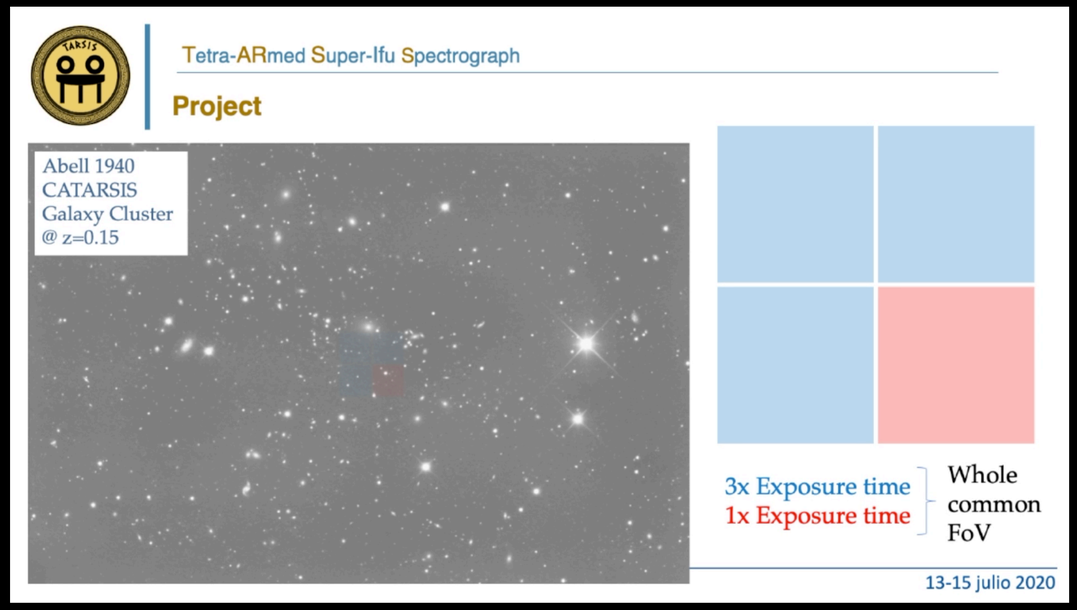


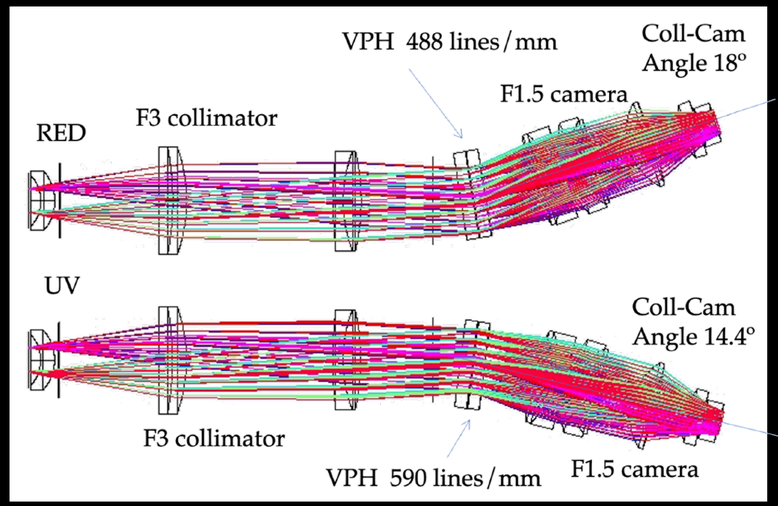
IFU for the CAHA 3.5m telescope:
FOV 3'x3' and 2''x2'' spaxels
3/4 of FoV –> 320-520 nm
1/4 of FoV –> 510-760 nm

selected on July 3 2020 to move on the Conceptual Design phase
First light on 2025



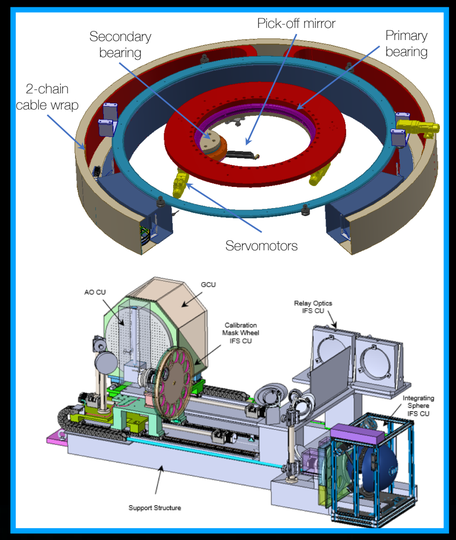


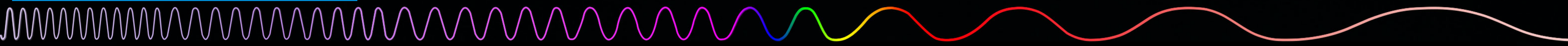




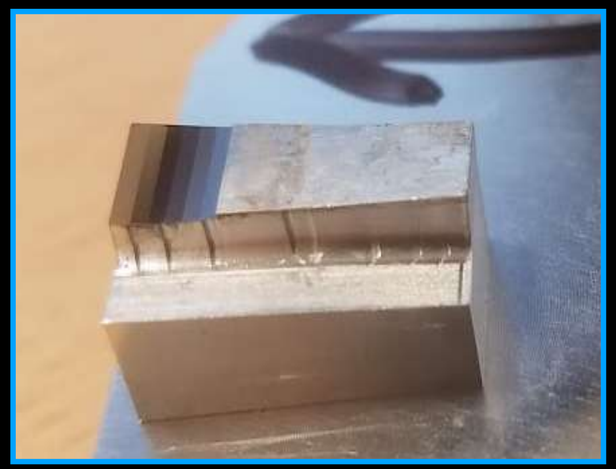
CAB contribution to ELT-HARMONI (J. Piqueras López et al.)

1st light Integral field spectrograph for the ELT
CAB and IAC belong to the international consortium
CAB contribution and team is presented:
- calibration plan
- low-order wavefront sensing sub-system
- calibration module
- science simulator
First light on 2026





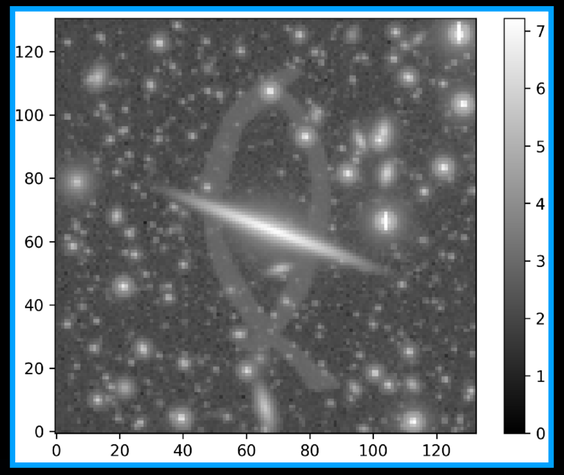
GNIRS image slicers for GEMINI: Design and Manufacturing (A. Calcines et al.)



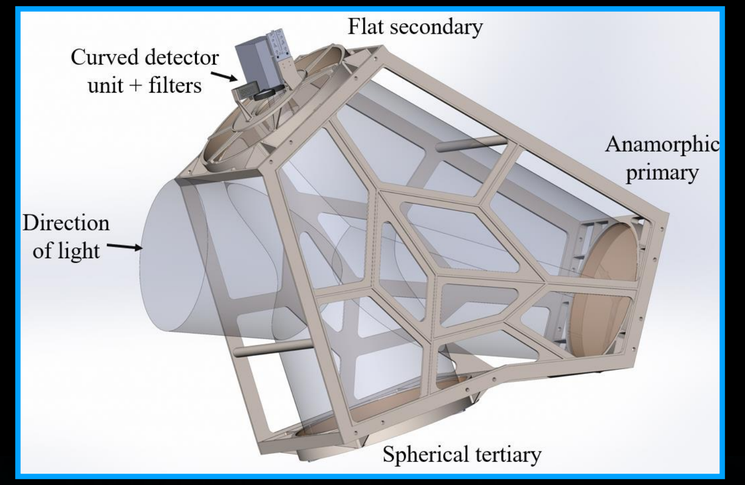
1 - 5.4μm, diffraction limited
This contribution presents two image slicers (LR and HR)
being built at Durham University for the GNIRS at Gemini North

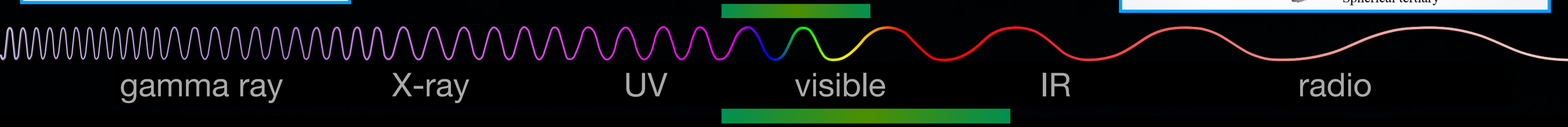
***LR IFU**: FoV 3.15″x4.80″ 21 slicers (0.15″ x 0.15″)*
***HR IFU**: FoV=1.80″ x 1.25″, 25 slicers (0.05″ x 0.05″)*

The Calar Alto Schmidt-Lemaitre Telescope (CASTLE): An innovative concept for wide field astronomy (S. Lombardo et al.)

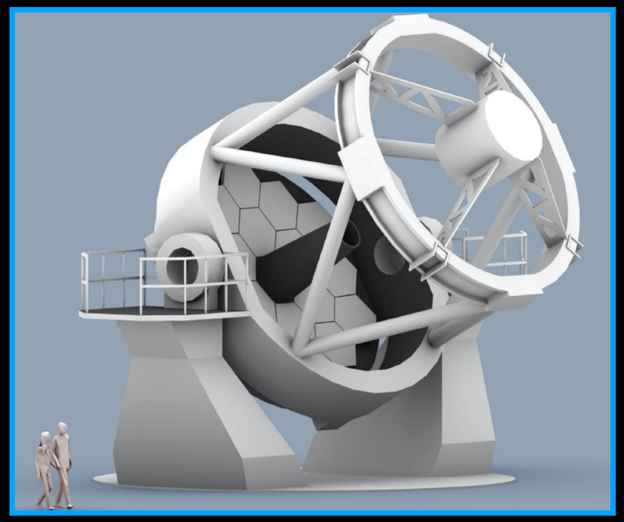


36cm aperture robotic telescope at CAHA
Technology demonstrator for curved detectors
Optomechanical design with no spider & no lenses
PSF with very low-level wings and reduced ghost features
suited to study the low surface brightness Universe
FOV 2.36° x 1.56° and 1''/pix

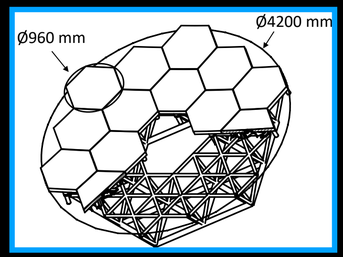




The 4-m new robotic telescope (NRT): status of the optomechanial system (A. Oria et al.)

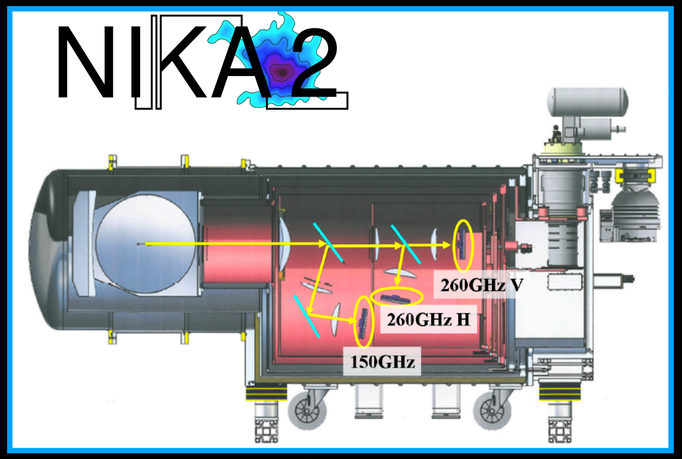


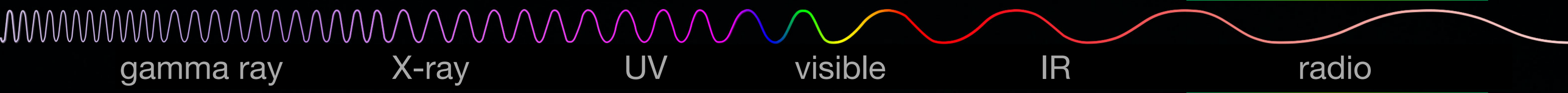
4m robotic telescope at ORM.
Currently at Conceptual Design Phase
Segmented primary mirror
Fast response (on target <30s): Time Domain Astrophysics (GWs, GRBs, SN…)
350 - 2400 nm. Versatile instrumentation, focused on spectroscopy
This contribution presents M1 assembly and M2 subsystem concept studies
First light on 2025



First application of a Kinetic Inductance Detector (KID): Camera to Pulsar Science in the Millimetre Regime (P. Torne et al.)

The KID technology offers large instantaneous bandwidths and high sensitivity, potential to increase transient detections to radio wavelengths
First application to study pulsars in the millimetre band is presented:
NIKA2 camera on the IRAM 30m-telescope:
2896 KIDs: 150 and 260 GHz simultaneously, FOV: 6.5 arcmin
First results on Reactivation of radio magnetar XTE J1810−197 are shown

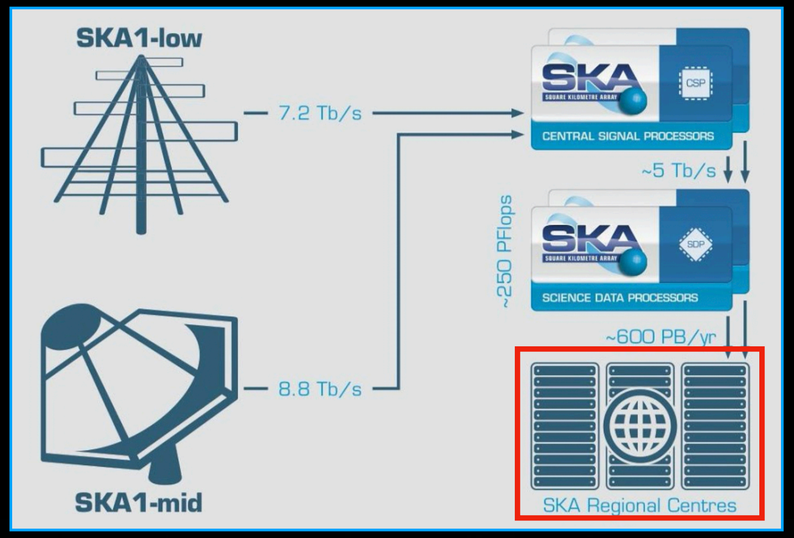




Yebes RT40m: a radiotelescope in a village of La Mancha (or almost) (M. Santander-García et al.)

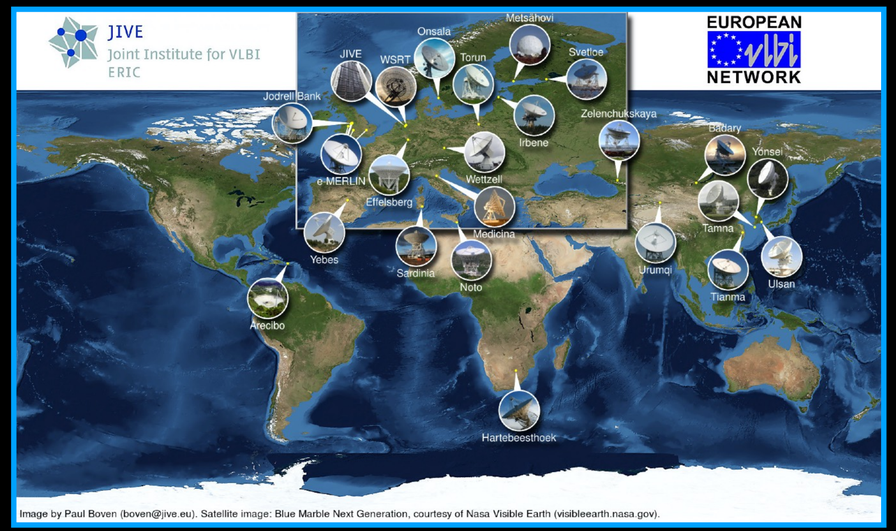
40m radiotelescope at Yebes ICTS
Observes in the range 2-90 GHz
Available observing modes and published results are presented.
Telescope time distribution:
- Routinely operates in single dish mode and as part of
- Very Large Baseline Interferometry (VLBI) networks such as EVN and GMVA
- Semestral open time call for proposals

IAA-CSIC activities to develop a SKA Regional Centre Prototype (S. Sánchez Expósito et al.)

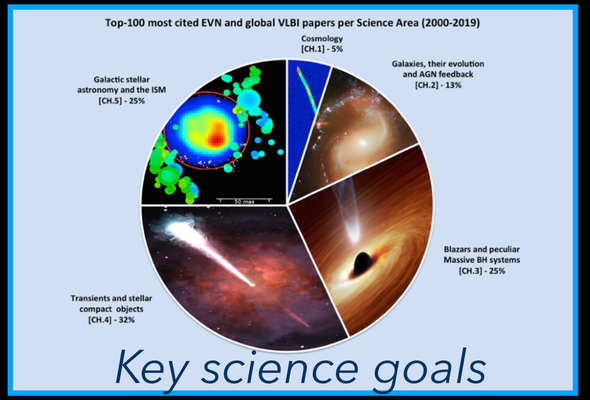


Square Kilometer Array (SKA) consortium to build a radio-interferometer
High data rate & complexity (600PB/year)
A network of SKA Regional Centers to provide access to SKA data & analysis tools
IAA-CSIC is developing a Regional Center prototype
SKA science, IAA-CSIC contribution & Team are also presented
RC assembly by 2028

VLBI20-30: A scientific roadmap for the next decade (F. Colomer)



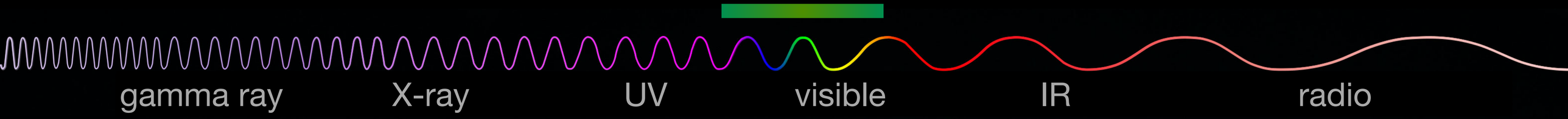
The European VLBI Network (EVN) scientific roadmap
for VLBI in the next decade is presented:
1- Cosmology
2- Galaxy formation and evolution
3- Innermost regions og AGN
4- Explosive phenomena, transients
5- Stars and stellar masers in the MW
6- Earth and Space



Filabres, a new pipeline for the automatic data reduction of CAFOS direct imaging (N. Cardiel López et al.)

Filabres pipeline developed for CAFOS (Calar Alto Faint Object Spectrograph) direct imaging is presented

- Designed to perform automatic reduction
- Implemented in Python
- Provides reduced images through CAHA archive (hosted by Spanish VO)
- Pipeline SW publicly available
- WIP: Now reducing data (2016-2017 completed)



Thank you!