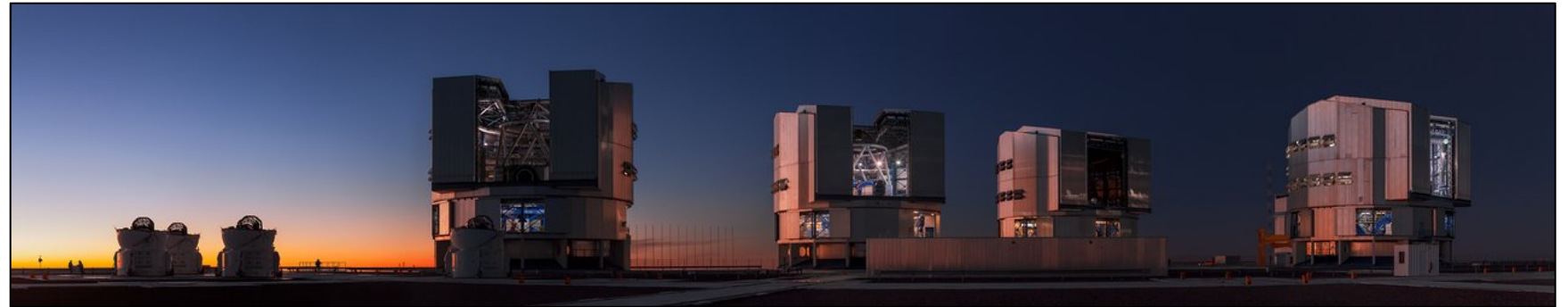
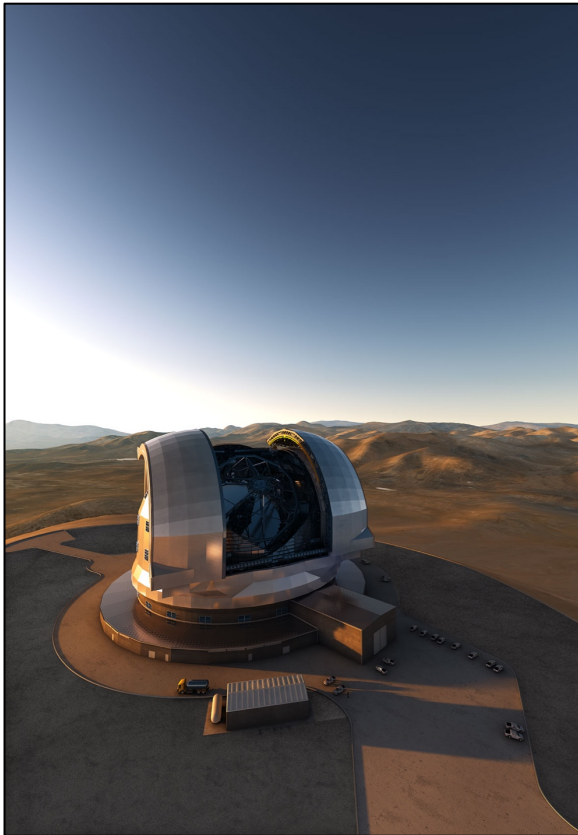
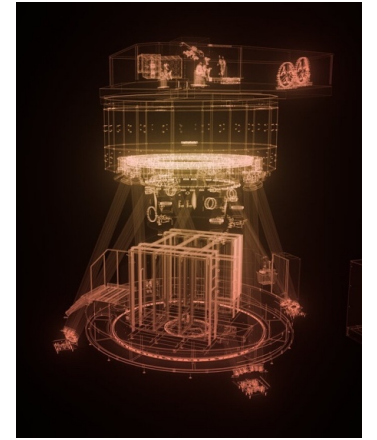


Finnish Centre for Astronomy with ESO (FINCA = Suomen ESO-keskus)



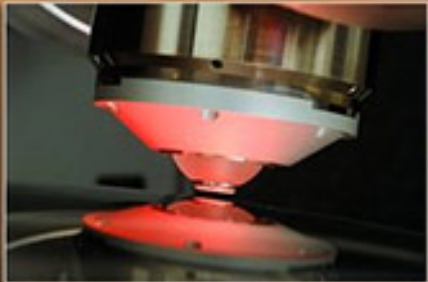
Petri Väisänen
FINCA director
Univ. of Turku



European Southern Observatory



Science, technology development, and training



ESO Special Session on Thursday (Brinchman, Korhonen, De Breuck, Doro)



- Est. 1962 – to develop and operate world-class observing facilities for astronomical research
- International Treaty organization, HQ in Germany, 700 staff, €300m operations budget
- **16 member states** currently – *Finland* joined in 2004 (€3.4m annual fee)
- ESO is a flagship *Research Infrastructure on European Roadmaps*
- Facilities in **Chile**: **La Silla, Paranal, ALMA, and the Extremely Large Telescope (ELT)**





FINCA est. 2010



“ The ultimate goal of FINCA is to improve the scientific and industrial benefit of Finland’s membership in the European Southern Observatory, and Finland’s competitiveness and international visibility in astronomical research. ”

A National Research Organization

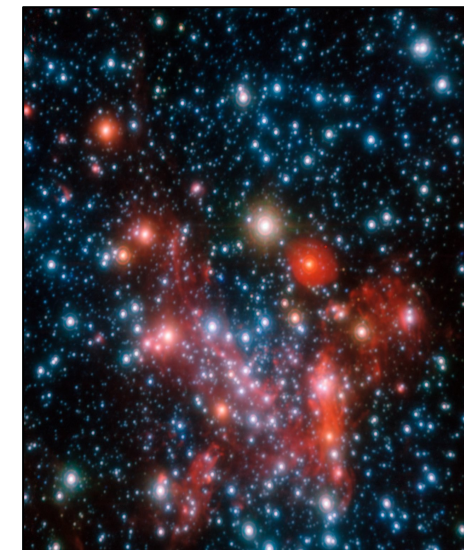
Established to make sure Finland benefits from the ESO membership

Partnership: Aalto, Helsinki, Oulu, Turku.

- Administratively a Special Unit of the University of Turku

Mandate:

- **Finnish research using ESO facilities** – with related value-add
 - Develop the national *skills* required for cutting-edge ESO science projects
 - Develop *industrial partnerships*
- **Strengthening the role of Finland in ESO, and role of ESO in the Finnish science landscape**
- **Participate in on-going and future instrumentation & science projects**
- **Strengthen European & Finnish astronomy/science co-operation**



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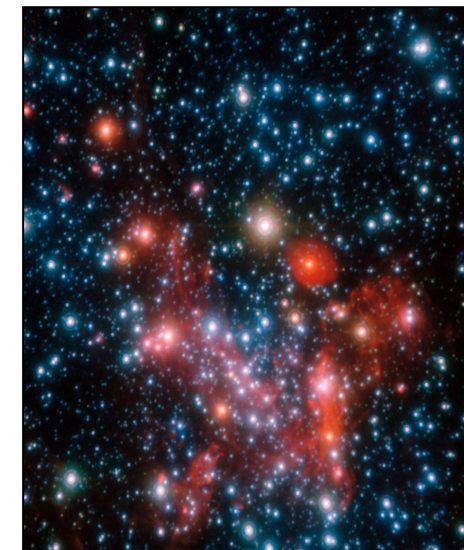
- Administratively a Special Unit of the University of Turku

Basic Funding ~900keur per year

- from the Ministry of Education and Culture *and* from the four partner universities

Additional funding from various Research Council Projects, and others (~200-400 keur/year)

Staff: Typically 12-16 staff and post-docs, including several doctoral researchers



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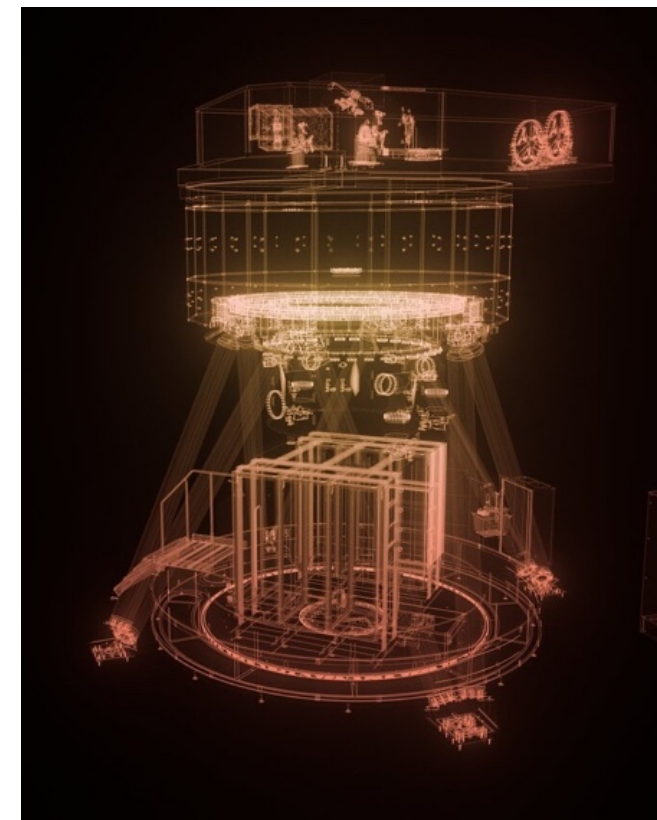


“ The ultimate goal of FINCA is to improve the scientific and industrial benefit of Finland’s membership in the European Southern Observatory, and Finland’s competitiveness and international visibility in astronomical research. ”

A National Research Organization

Main Activities:

- **Research** using ESO facilities. Several successful FIN-PI programs per cycle. **Incentive grants** for those being awarded ESO/ALMA time
- **FINCA Fellowship Program** (30+ postdocs so far)
- National **Mobility & Visitor** programs
- Funds all **NOT-related research costs** in the country
- National ESO-data and NOT **university courses** (with UTU)
- Participation in **ESO / ELT consortia developing new technology for new scientific instruments**: in particular, **MICADO, SOXS, MOSAIC**



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Astronomy with ESO
Suomen ESO-keskus

120 m

100 m

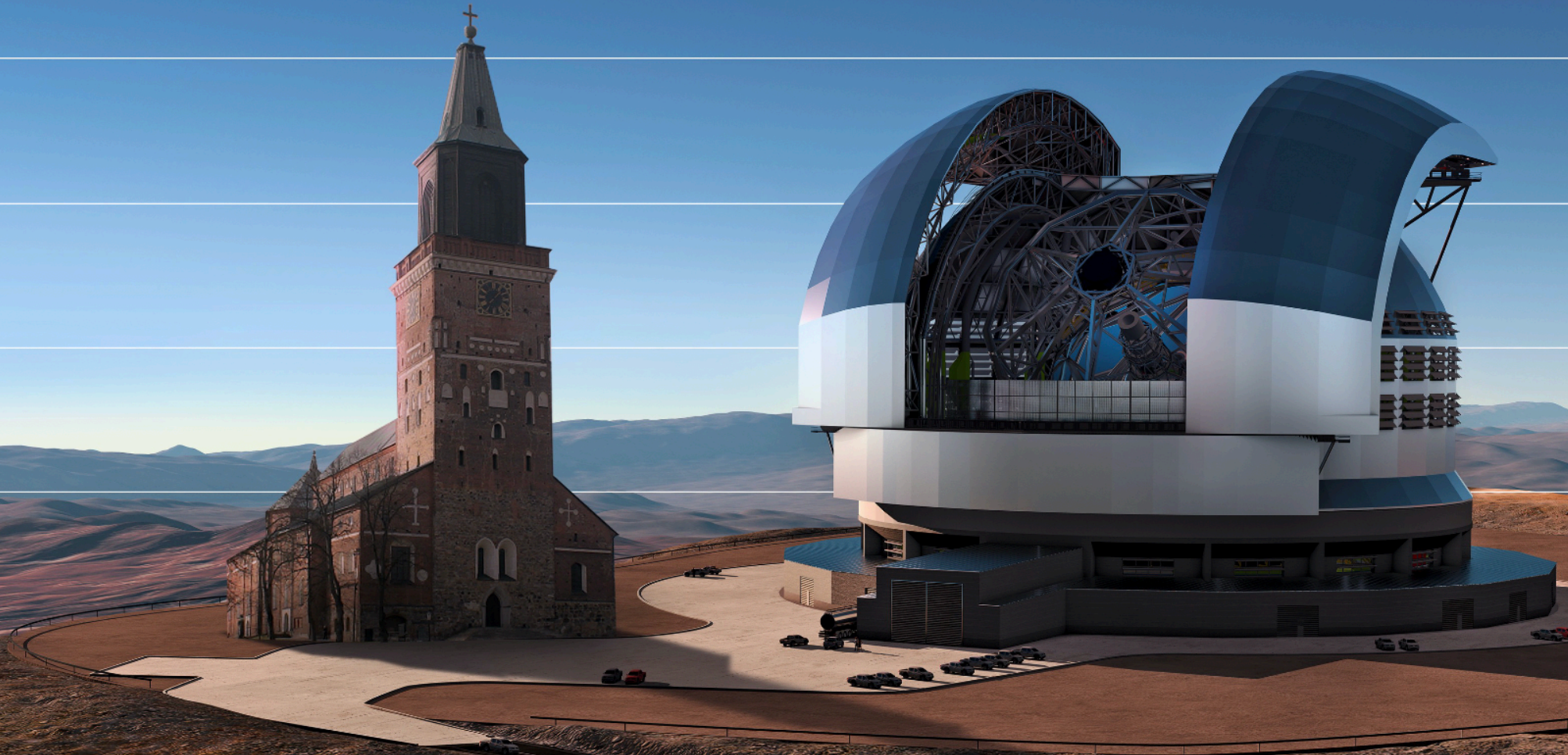
80 m

60 m

40 m

20 m

The 39-m Extremely Large Telescope (ELT) first light ~2029

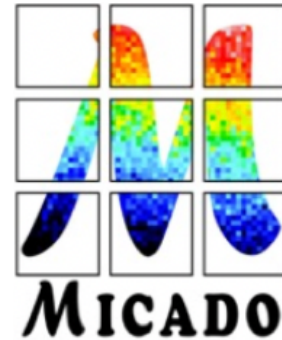
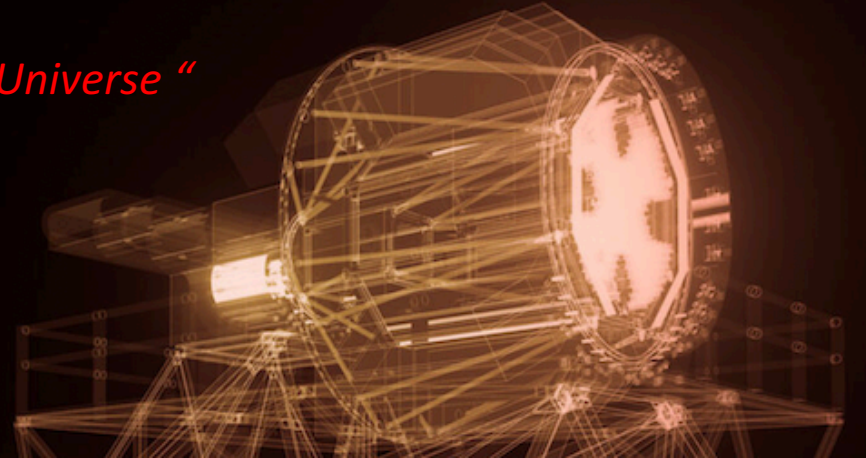


MOSAIC

“ the first exhaustive inventory of matter in the early Universe “

Multi-Object Spectrograph

Finland a consortium member: *FINCA, Helsinki, Turku*



(Talk to: Alexis Finoguenov, Hanin Kuncarayakti)

(Talk to: Hanin Kuncarayakti, Johanna Hartke, Jani Achren)

MICADO

Finland a consortium member: *FINCA, Turku*

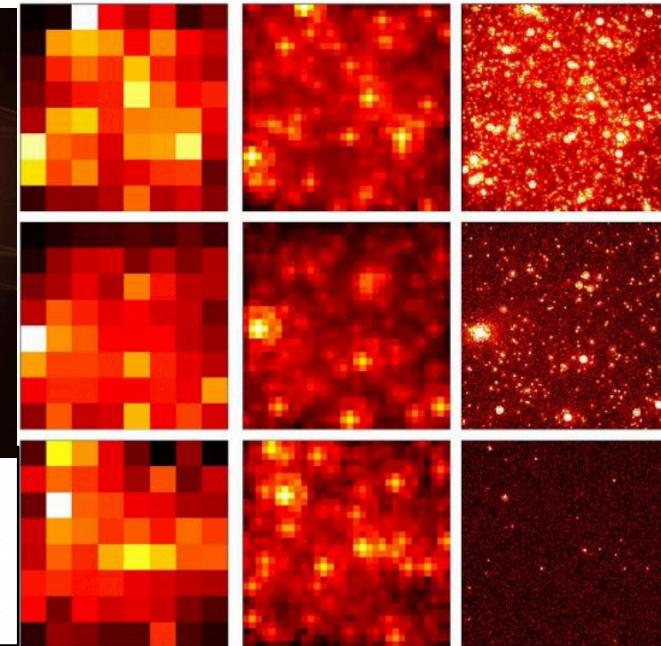
Multi-AO Imaging Camera for Deep Observations



HST / WFC3

JWST / NIRCam

ELT / MICADO





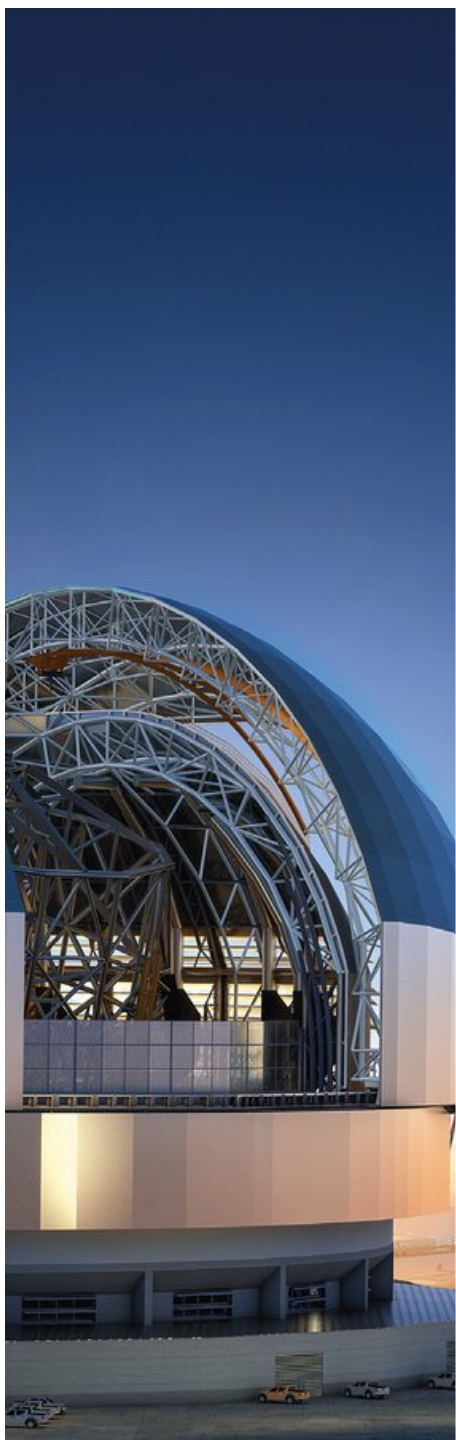
Reach New Heights

Fellowships in
Germany and Chile

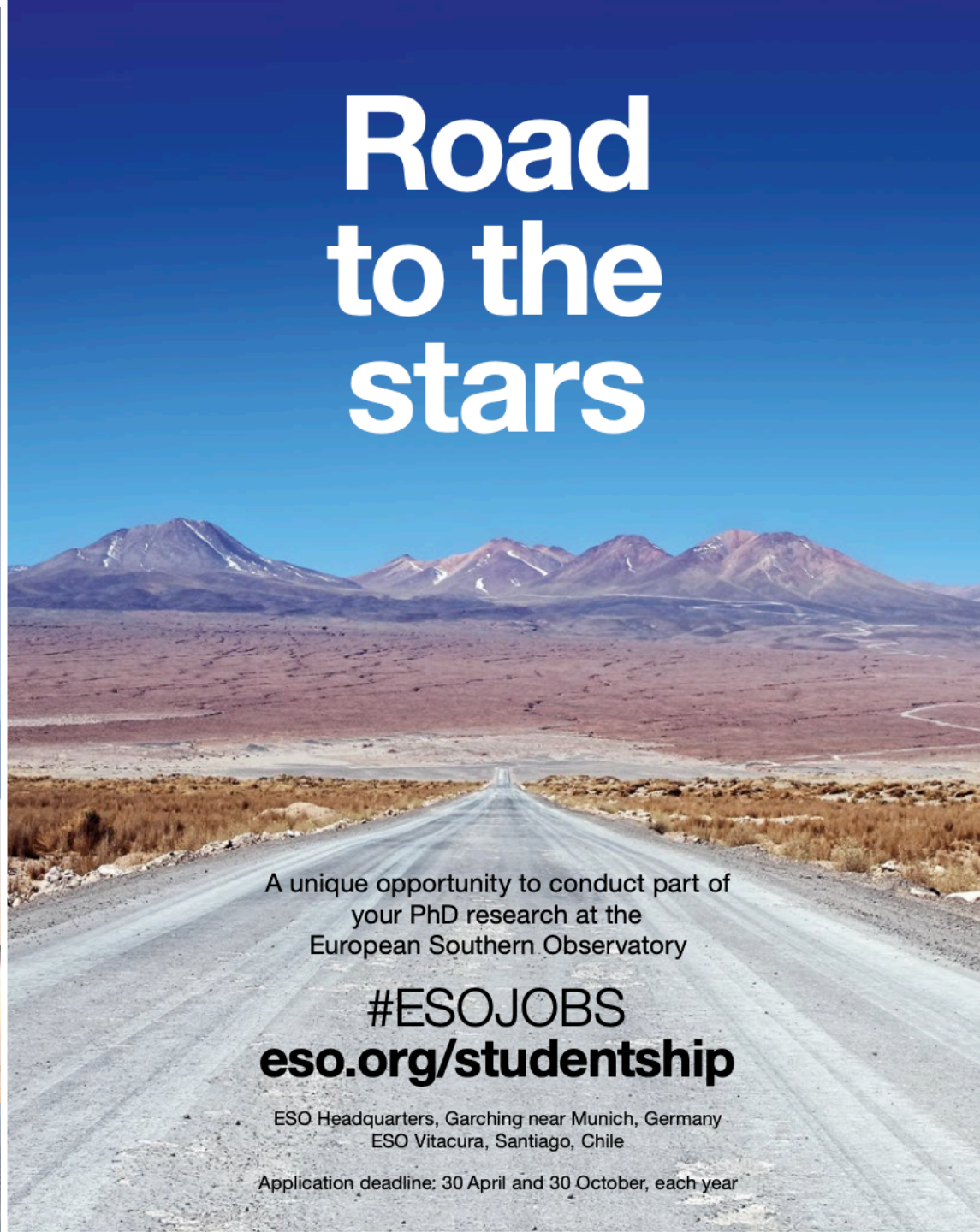


- ❖ ESO postdoc Fellowship program
- ❖ Annual Call
- ❖ Note: Research *and* operational *and technical* focus options

- ❖ Massively useful, and influential. Fet a leg-up on your career!!



Road to the stars



A unique opportunity to conduct part of
your PhD research at the
European Southern Observatory

#ESOJOBS
eso.org/studentship

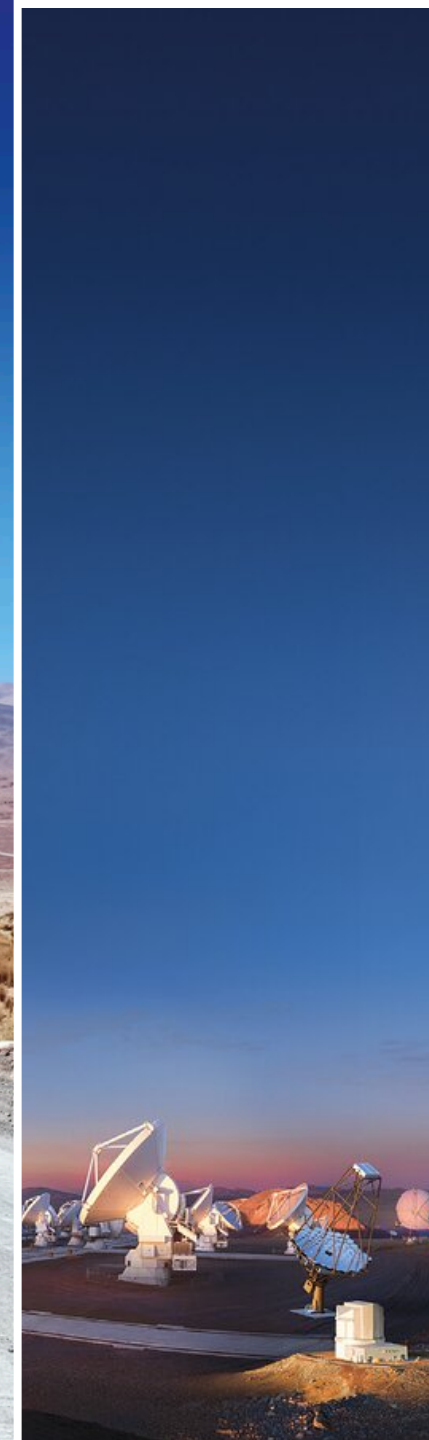
ESO Headquarters, Garching near Munich, Germany
ESO Vitacura, Santiago, Chile

Application deadline: 30 April and 30 October, each year



- ❖ ESO studentship program
- ❖ Two Calls per year
- ❖ One or two years, Chile or Garching

- ❖ Very good track-record of students





European
Southern
Observatory



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[White Papers](#)

[Senior Science Committee](#)

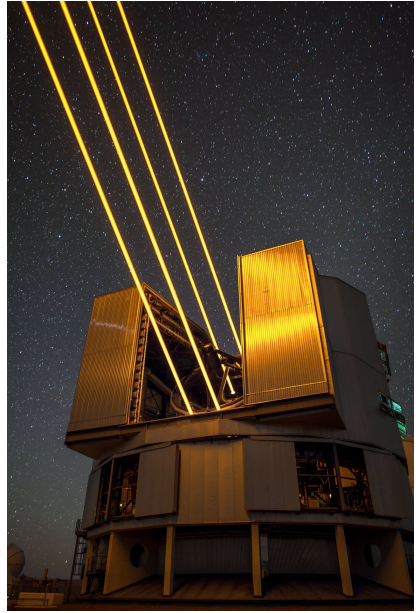
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Expanding Horizons

Transforming Astronomy in the 2040s

Summary – FINCA



- **FINCA, as a national entity** aims to give the Finnish universities, and to Finland, full benefits of the ESO-membership in terms of science, technology, and training
- Finland has, historically, invested significantly in front-line astronomy (e.g. Tuorla, Väisälä). NOT and ESO assured that we stay in the frontlines of global astro-development. Further jumps ahead e.g. with ELT, CTAO, and Expanding Horizons.
- We wish to focus on **hands-on training, while simultaneously** doing science and being involved in technology-development.
- **Newest developments & strategic directions:** Increase effort in astronomical instrumentation, in training and industry relations, together with universities.

