## 2nd PACMAN workshop



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## The European Extremely Large Telescope

Monday 13 June 2016 11:00 (30 minutes)

The European Extremely Large Telescope (E-ELT) is a 39m diameter optical/infrared telescope to be located on Cerro Armazones about 25 km away from the current ESO VLT Observatory at Cerro Paranal, Chile. After initial conceptual studies and a formal approval of the Programme by ESO Council back in 2012, the actual start of construction was actually authorised in 2014 when the required funding level became available. Since then, the programme has entered a very busy phase leading to the signature of the first major industrial contracts as well as agreements with scientific institutes in ESO Member States to design and built the first suite of science instruments.

One of the new technological challenge of the E-ELT is its primary segmented mirrors made of 798 hexagonal segments that need to be phased with each other to nanometres precision. Another challenge is the 2.5m-diameter adaptive optics mirror (M4) which will correct the wave front errors due to atmospheric turbulence with 5316 voice-coil actuators bending the 1.95mm thin mirror also to nanometre precision.

This presentation will summarise the current status of the E-ELT Programme and present some aspects related to scientific objectives, managerial and programmatic organisation, engineering approach and procurement strategies put in place to achieve the goal of the Programme: building the "world's biggest eye on the sky" within the next decade.

## Summary

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Session Classification: Metrology and alignment challenges