

CHRISTMAS LECTURE



Ground based scientific perspectives for the next decades



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Abstract: A variety of ground based facilities and surveys are broadening our understanding in different astrophysical domains, by relying on complementary techniques and tools. These observations on one side help clarify several contentious issues, on the other introduce new key questions. The situation will become even more intricate with the contribution of upcoming ground-based instruments (such as the Rubin-LSST, ELT, SKA, and CTA) , as well as the next generation of gravitational wave detectors (including LISA and the Einstein telescope).

New discoveries and new debates are expected in the next 10-20 years. Some of the current open problems will have been at least partially answered, others will still be open and new questions will arise. This complex landscape needs to be taken into account when thinking of the next ESO big facility after ELT, a process called Expanding Horizon, that ESO started some months ago. On this basis, and in the context of current and upcoming projects, as well as of the ESO Expanding Horizons initiative, the scientific perspectives for the next decades will be presented and discussed.

Link to google meet: <https://meet.google.com/vjn-anyj-nww>