

Observational Astrophysics

7. Topics for the First Seminar

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1 Ground-based telescopes

The topic for the first series of seminars is “Telescopes”. **The date for the presentation of these seminars is November 16.** The list of presenters is given below.

The goal here is for us to get to know some of the other telescopes that are out there and that we might find useful to use for our science. The VLT and SALT are not included as topics, as I already gave a general overview of them.

My goal was to select some of the largest ground-based telescopes currently in operation, but for those with diameter below ~ 5 m, I chose a few of particular interest.

Instructions are: you should plan to use 4-5 minutes for your presentation. This probably means something like 3-5 slides.

Try to find the following information to mention in your seminar: where is the telescope located; since when it operates; what is the telescope design; the focal ratio and plate scale; the foci; the mount; the technology used in the mirrors or lenses (monolithic, segmented, 2 or 3 mirrors,...); find a figure to show the optical path; mention the image quality in the site and of the system; (can you define the entrance pupil, aperture stop); mention aberrations if applicable; is there active or adaptive optics; which community can use it/apply for time?; and you can list the instruments (mentioning if they are imagers, spectrographs, ...) but you do not need to discuss the instruments!

My tips: Look for the telescope website, and see if it links to documents of the design and/or construction phase. Another places where you can find useful information are in press releases and the call for proposals of the telescopes. Wikipedia can be a good starting point, as a lot of the information is already there. The valuable things are usually in the list of references of the Wikipedia page. You can dig into these references, and find other publications where to find relevant information. Most of such projects had designs discussed in publications available in SPIE proceedings, or journals like Astrophysics & Space Sciences, Experimental Astronomy, IAU Proceedings, etc. **If there is a particular reference that you think will be useful, but that you do not have access and can not download, do let me know. I might be able to download the publication elsewhere and send you a copy.**

1. Gran Telescopio Canarias (GTC, 10.4m)
2. Hobby-Eberly Telescope (HET, 10m)
3. Keck Telescopes ($2 \times 10\text{m}$)
4. Large Binocular Telescope ($2 \times 8.4\text{m}$)
5. Subaru (8.2 m)
6. Gemini ($2 \times 8.1\text{m}$)
7. Magellan ($2 \times 6.5\text{m}$)
8. LAMOST (4.9m)
9. Blanco Telescope (4m)
10. United Kingdom Infrared Telescope (3.8m)
11. ESO 3.6 m Telescope