**PhD mock interview**

**Panel brief (4 people)**

It is 2025. You are members of Byron Bay University’s astronomy department’s graduate admissions panel. BB is an upcoming Uni with 5 new astro faculty all research intensive but with a large teaching load (note students are expected to help out with marking etc.) You are interviewing 2 potential students to work for Dr X. on a project ‘Magnetic fields and Star-formation in z~2 galaxies.’ One student will receive a coveted University scholarship, the other will miss out completely.

The project is to observe with SKA a set of z~2 galaxies (a sample observed with integral field spectroscopy on GMT and with ALMA to map optical star-formation and molecular gas) to measure their magnetic fields, they have been selected to lie behind the radio-lobes of z~4 radio galaxies. The project will involve a lot of hands-on reduction of new radio-data and comparison with complex optical and ALMA data.

Dr. X. is a high-flyer and has won several prizes. He is well known to be a smart-alec but also quite draconian and controlling – he meets with his students twice a week and always wants progress reports on action items. Students either love him or hate him but all are relieved when he is absent (which is quite frequent).

Dr X is on the panel - one of you may volunteer to channel him, another volunteer will be the Chair. One question per panel member.

Each student will be asked the same four questions, - you have up to 15-20 mins total - and then you are allowed a few mins to consult and then you must select one and give your reasons to the audience. After you decide but before you reveal your decision to the audience we will do, for fun, an ‘ask the audience’. (i.e. show of hands).

I will pick two questions for you on Weds night from our poll and you may pick the over two questions among yourselves.

Why have you applied to work here?

How do you think the project would benefit from your expertise?

**Karl** is a undergraduate student from the University of Bournemouth in the UK. He has very outstanding grades in physics and maths. His letters of recommendations talk about his great coursework. His cover letter talks about his passion for astronomy when he was a kid – how he used to observe the moon and the planets from his backyard and how he is excited by the mysteries of cosmology.

Bournemouth is a top 10 UK University with world known astro faculty.

**Bryan** is a undergraduate from the University of Mildura. His grades in physics are Bs, maths are Cs. He has done a masters research project which involves using the University’s small telescope to take CCD images of nearby low-luminosity radio-galaxies. (These are in the South and have not been done by SDSS and are too faint for Skymapper) in order to measure their surface brightness profiles. His reference letters say he has done an OK job on this project but beyond this are generally unhelpful and there was no cover letter.

No one on the panel has heard of Mildura or realized that they did any astronomy. In reality they have 2 astronomers working in obscure areas.

**Private brief (Karl & Bryan’s eyes only!)**

The idea is to make it difficult for the panel and have each of us give a mix of good/bad answers to the 3 questions according to the profiles below. There is no right answer to their choice – just like real life!

Note bad answers can be short!

**Karl** has no idea what he really wants to do with his life. He enjoyed astronomy as a kid but does not know anything about professional astronomy or research. In particular he has not done a research project. On the other hand his grades are impressive and he seems to know a lot. Karl has read about Prof. X’s research and is excited about it. However he knows bugger all about Australia nor even which state Byron is in.

**Bryan** is the opposite – his grades are not so spectacular but he has done very good research. He is good at explaining the observing work he has done however it is not clear how relevant it is and he is poor at explaining that. (Doing himself a disservice). He has not done his homework – he does not know anything about Prof. X’s research nor any of the other faculty’s. His main motivation for applying to Byron appears to be surfing.