

What to Fund..? Discussion 31/09 – 1/10/13

ARC LIEF (Adelaide, UNSW, ANU, USyd, UWS, Monash..)

1. ASTRI SST Mini-Array SiPMT testing, CHEC-S
2. Atmospheric Characterisation (LIDAR , Raman, DIAL)
3. Site infrastructure (e.g. PLATO remote power supplies?)
4. Plug gaps in CTA EoI in-kind outcomes
5. Some common funds to project office?

Note: A common fee is likely soon (~500 Euro/person/year)

Question - 1, 3, or 5 year proposal? 1 or 3 is my preference

Question - how many items can LIEF fund? Better to keep it limited 1 to 2 max?

ARC DP (leveraging CTA involvements)

- Mopra mm-radio telescope time (2015+).
- LIDAR DIAL developments (water vapour..)
- Dark matter studies? CoEPP led
- others..?

Discussion notes:

- Note also ERC Funding linkages
- ARC LIEF is the obvious pathway to kick-start funding.
Remember: this is our ticket to full CTA membership
- Join ASTRII/CHEC team. ASTRII Mini-Array will lead to first stereoscopic observations at CTA-South site.
 - timing is ideal for LIEF
 - >1 TeV astro well-aligned with track record and interests of many CTA-Oz institutions.
 - Science case easy to justify
- Likely merger of ASTRII and SST-GATE telescope designs
 - Mini-array will benefit from many CTA groups
 - Merger of CHEC and other camera groups' experiences
- First ASTRII prototype (Mt Etna!) completed Dec 2014
- CTA Sites finalised ~Dec 2013 by CTA Resource Board
- 3 x ASTRII telescopes by 2015 (all tels to meet CTA Specs)

- ARC LIEF Oz Partners: Adel, UNSW, ANU, Syd, UWS, Monash
\$50K Adel + \$30k rest = \$200k

Assume ARC \$300k (Oz partners = 40%) → **Total \$500k**

International Partners: Leicester, Liverpool, Amsterdam, Nagoya,
ICRR(U.Tokyo)?, INAF (Italy), Washington U (USA)

- What can we get for \$500k?

Consider ASTRII Mini-Array hardware components for 'several' cameras.

SiPMTs (1x CHEC camera SiPMTs ~100k pounds ~ A\$200k TBC)
→ We can buy ~ 2.5 cameras worth of SiPMTs

Other camera hardware? Backend electronics (TARGET ASICs? etc..)

Astronomy in Australian Decadal Plan Working Groups

1.1 Galaxies & Cosmology

1.2 Stars & Planets

1.3 The Galaxy

1.4 High Energy & Fundamental Astrophysics

2.1 International Scale Facilities

2.2 National and Institutional Scale Facilities

2.3 e-Science

3.1 Demographics

3.2 Education Training & Careers

3.3 Industry

3.4 Research Funding