

# Astronomy Town meeting 8 - 9 September 2022

## Outcomes & Recommendations

### A. Operational outcomes

1. There is an appetite for an annual astronomy town meeting in conjunction with an astronomy science meeting in South Africa. There is, as yet, no consensus on the best vehicle for such a meeting, e.g. through the SAIP conference, the SARAO bursary conference, alongside the AfAS annual meeting, in association with ASSA, or entirely independent.
2. The Astronomy Advisory Council has been discontinued.
3. An HCD task team should be constituted, comprising Heads of University Departments, NASSP, NRF facilities and DSI representatives, to take immediate action on late payment of student bursaries. Key issues are summarised in §C below. The interim committee (see point #A.5, and afterwards the Astronomy Community Task Team) will follow up on the progress of the task team.
4. There is a need for a community-led team, the Astronomy Community Task Team (ACTT), that can a) organize town and science meetings, b) coordinate operational aspects of Astronomy in South Africa, and c) establish committees or teams that can address the variety of strategic issues listed in 2 below.
5. An interim committee<sup>1</sup> has been established to a) refine these outcomes, b) draft terms of reference for the ACTT and c) set up the ACTT through an open call to the South African astronomy community.

### B. Strategic outcomes

1. While the South African community currently has access to state-of-the-art research equipment, planning is required for renewal or new investments on a 10 year horizon. The current multiwavelength strategy was developed for the period 2015 to 2025. The ACT should coordinate the process for renewal of the strategy for the 2025-2035 period.
2. In the short term, the optical community will focus on building capacity and expertise for home grown instrumentation and astronomy research infrastructure development.
3. The community needs a consolidated policy and meaningful, actionable roadmap for South Africa's development of an SKA Regional Centre (SRC). An SRC is essential to ensure that South African scientists are effectively enabled and supported to compete for leadership and involvement in SKA Key Science Projects.

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<sup>1</sup> Membership of this committee: Sunil Chandra, Daniel Cunnama, Kelebogile Gasealahwe, Marisa Geyer, Munira Hoosain, Lucia Marchetti, Lia Labuschagne, Vanessa McBride, Itumeleng Monageng, Jack Radcliffe, Patrick Woudt.

4. There is a gap in the South African radio research community with very few local *pulsar* astronomers. A well coordinated human capacity development strategy is required if South Africans want to participate in and lead pulsar science in both the MeerKAT and SKAO eras.
5. The state-of-the-art observational facilities in South Africa may be leveraged to participate in large international projects (e.g. Euclid, JWST) or to ‘timeshare’ with observational facilities in the northern hemisphere.
6. The 20-year experience in the National Astrophysics and Space Science Programme (NASSP) should be leveraged to ensure fit-for-purpose postgraduate training in a very dynamic and different South African astronomy landscape. This process will begin through regional discussions and a curriculum review.
7. A small diameter, low-cost EHT station in South Africa could offer a high return on investment for developing VLBI capabilities, and using this as a driver of multiwavelength and multi-messenger astronomy.
8. Future and current strategies for astronomy in South Africa should build in the value of computational and theoretical support for the observational facilities. These are essential for producing the science and informing the next generation of observational facilities.

**C. Key issues around student funding: to be taken up by the HCD task team**

1. Funding levels have dropped in a highly inflationary environment, and new funding rules have capped top-ups from supervisors’ grants.
2. Timing around student recruitment is challenging, coming too early in the academic year.
3. Can we broaden the scope to make bursaries available to students from other African countries?
4. Tying student funding to individuals has the unintended consequence of delaying science projects. Good scientific ideas for student projects may take years to get funded as a PhD project.
5. Student payments are late in the year. Students are borrowing money to survive until NRF funding comes. The recent revamp of the system was intended to prioritise those who are most needy, but these very students are left without means.