

Instrumentation Section Report – 30 June 2017

Activities of the Instrumentation Section largely revolve around communication, outreach, guidance and education, plus the important aspect of encouraging people in the pursuit of their personal instrumentation projects. There is no drive to formally induct members into the Section. Rather, the approach has been to address ASSA members' ad-hoc needs for information on a case by case basis.

In support of the Society's general communication efforts, which equally support the instrumentation Section's goals, the following activities are ongoing:

- Moderate the ASSA Facebook page
- Moderate the Yahoo! Group mail lists
- Moderate the Telescope Making SA Facebook page
- Respond to email queries by members and public

The Section directly supports the needs of both ASSA members and the public regarding selection, construction, purchase, maintenance and use of instrumentation. This is mostly done via the Amateur Telescope Making (ATM) class, the Telescope Making SA Facebook page, e-mail correspondence, telephonic discussion, and ScopeX.

The distinctly South African "Telescope Making SA" Facebook group has to date attracted **640** members from around the world, including several notable luminaries in this niche field. The international involvement produces an energetic flow of ideas, information, technical assistance and encouragement. Some of the (at times unusual) approaches to instrumentation developed locally have, after being highlighted in this medium, been favorably received and copied abroad. Prospective members are vetted prior to admitting them to the group and appropriate behaviour is gently but firmly enforced. (Unfortunately the usage/viewing statistics enjoyed by Pages are not available for Groups.)

The ATM (amateur telescope making) class has been continuously active since mid-1991. It attracts a steady stream of newcomers to the art, with a good success rate of people finishing their first instruments. In addition, after completion of their first telescope, a fair number of participants stay on or return to tackle more advanced projects. Members come and go per their needs and available time, work at their own pace on individual projects, and sometimes return after a long hiatus dictated by personal circumstances. The class is run informally in a flexible manner to accommodate the vagaries of members' lives. Consequently, there is no feasible way to ascertain the actual numbers of people or projects engaged in at any one time. Membership of ASSA, whilst encouraged, is not a prerequisite for participation in the ATM class. A class register is kept as an indication of activity levels, but signing it is not enforced.

ScopeX, which grew out of the ATM class, has had 15 successful annual events, and is gearing up for the 16th in September. To ensure continuation, it remains vital for competent people to volunteer their time and expertise and follow through. In addition to the primary goals of general astronomy outreach and publicizing the Society, ScopeX provides a platform for the telescope making community to exhibit their work and thereby encourage newcomers to engage in this fascinating hobby. Having a plethora of instruments at one place enables visitors and members alike to see, touch, compare and even use a variety of instruments – be they commercial, amateur-built or modified. This sparks discussion of ideas, approaches and relative merits, enabling people to make informed choices. ScopeX reports are published separately.

At the last tally, approximately **287** individuals have signed the ATM class manifesto since it was introduced in 2005. Although there is generally a spike in newcomers in the months following ScopeX, there is always a sporadic trickle of new candidates. Notable long-term projects underway include a 24" mirror, a Yolo telescope, and a complete telescope control system developed from scratch. Since progress on such part-time amateur projects is affected by personal circumstances, no end dates are currently projected. To date (apart from ScopeX), no formal communal projects have been initiated within the Section. However, the 24" and the telescope control projects remain likely to evolve into collaborative ventures. The Director has put together a portable telescope and camera control system for astrophotography in the field, largely employing off-the-shelf components to ease construction and integration so that others could possibly replicate it for their own purposes. An article on the subject has been submitted to MNASSA. Johan Smit has built the requisite equipment and expertise to collimate binoculars, a vital capability sorely needed in this country.

In July, the Director shall represent southern African telescope making interests as an invited speaker and optical judge to Stellafane, the renowned annual convention in Springfield, Vermont, USA. As the convention attracts visitors from around the world, it is anticipated that face to face encounters with many advanced practitioners will result in fruitful bidirectional exchanges.

Chris Stewart