

ASSA Instrumentation Section Report – July 2021

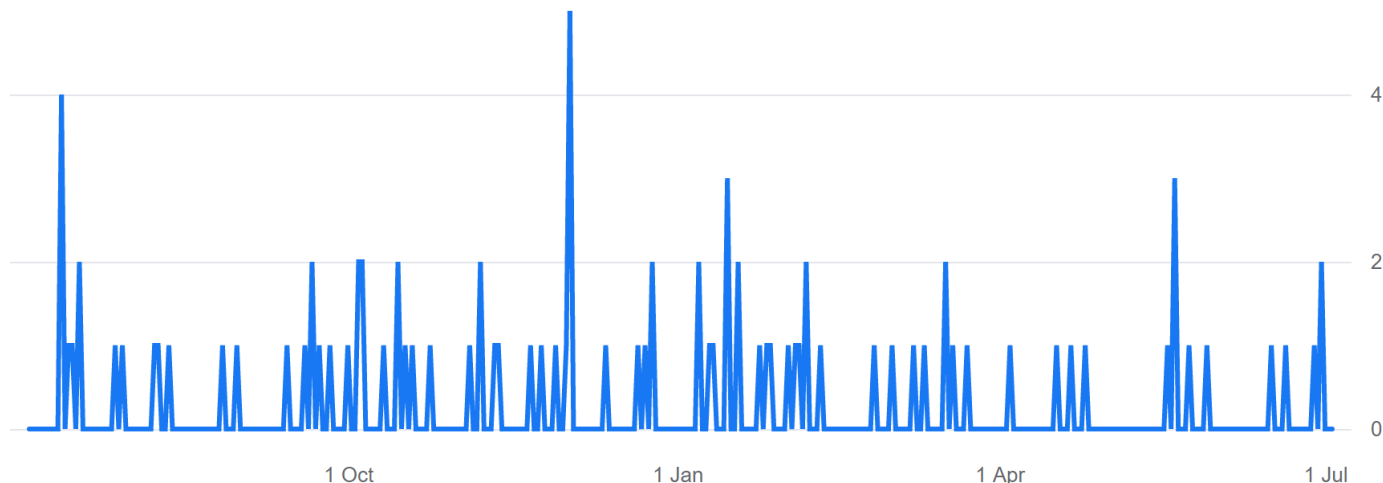
Activities of the Instrumentation Section continue to largely revolve around communication, outreach, guidance and education, plus the important aspect of encouraging people in the pursuit of their personal instrumentation projects. There is no drive to formally induct members into the Section. Rather, 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, activities in the following media are ongoing:

- ASSA FaceBook page
- .IO group mail lists
- Telescope Making SA and Amateur Telescope Making FaceBook pages
- Telescope Making Class WhatsApp group

The Section directly supports the needs of both ASSA members and the general public regarding selection, construction, purchase, maintenance and use of instrumentation. This is mostly done via the Amateur Telescope Making (ATM) class, the FaceBook pages, e-mail correspondence, telephonic discussion, and WhatsApp/SMS.

The distinctly South African "Telescope Making SA" Facebook group attracts members from around the world. 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. At the time of writing, the Telescope Making SA Facebook page currently has 992 members, an increase of 92 since the last report. Of these, 344 are in South Africa. In the year under view, 527 members have been active, with 92 posts as graphed below. Following a surge in activity early in the Covid-19 era, activity has normalized.



The ATM class has been continuously active since July-1991, with expertise, materials and components freely shared for individuals' projects. Following an easing of Covid-induced restrictions, it was possible to resume physical classes (subject to intermittent interruptions due to lockdowns). A handful of newcomers are making good progress on their first instruments, whilst others are continuing their projects. Members come and go according to 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 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. Recorded attendance over the previous 2 years averaged at 6 people per week, but as with other social activities the class has been in lockdown due to the pandemic so no reasonable comparisons can be drawn this year. Apart from the Facebook interactions, there has been limited exchange of e-mails, phone calls and WhatsApp messaging.

Etsuo Takayanagi was able to get the majority of the telescope's optical tube assembly constructed prior to his return to Japan. Notably, this included a novel hybrid pantograph / helical focuser conceived by myself and realized through 3D printing by Johan Smit. A great number of other interesting 3D printed parts have emerged, notably geared drives and bearing supports for equatorial platforms capable of taking large telescopes.

Percy Jacob has successfully completed construction of a higher-resolution second spectrograph in order to better serve the scientific community's need for quality spectra of chronically underrepresented southern hemisphere objects.

Overall, the foregoing indicates a continuing healthy level of activity and interest.

--- *Chris Stewart*