

**Astronomical Society of Southern Africa**  
**Report of the Comet, Asteroid and Meteor Section for the year ending June 2023**  
*Tim Cooper, Director*

The following observations are reported for the full year ending 30 June 2023.

### **Comets**

Comet C/2017 K2 (PanSTARRS) was observed visually by Magda Streicher and Tim Cooper. The comet was imaged by Kos Coronaios and Lafras Smit. Comet C/2022 E3 (ZTF) was observed visually by Tim Cooper and imaged by Kos Coronaios and Angus Burns.

### **Meteors**

Meteor shower observations totalling 43.51 hours were conducted as follows:

<b>Meteor shower</b>	<b>Tim Cooper hours</b>	<b>Magda Streicher hours</b>
August delta Capricornids	1.00	
September epsilon Taurids	2.00	
Meteors from asteroid Bennu	8.49	7.43
Meteors from P/2016 BA14	4.05	
pi Puppids	1.00	
eta Aquariids	10.85	8.69
<b>Total</b>	<b>27.39</b>	<b>16.12</b>

Kos Coronaios captured a fine image of a gamma Normid meteor. The image was sent to the Editor of the Journal of the IMO, and will be used on the back cover of a future issue.

### **CAMS**

The Cameras for Allsky Meteor Surveillance (CAMS) operates 16 cameras in two arrays, with 8 cameras at the Director's observatory (Station BR) and 8 cameras at Hartebeesthoek Radio Astronomy Observatory (Station HA). CAMS@SA captured and determined orbits for 4486 meteors during the past year. Due to the increased frequency of load shedding and the risk of damage to equipment, the system was shut down on 30 November 2022 and only restarted on 20 May 2023. Lost nights due to load shedding totalled 255.

### **Global Meteor Network**

Paul Ludick commissioned two cameras which have enabled the GMN to fill an important void in the southern hemisphere coverage. Tim Cooper is serving on the Project Team for the GMN Outreach Project, which aims to provide cameras to secondary schools to promote STEM education and to create a network between schools and meteor scientists. Four cameras, kindly sponsored by a private individual and completed by Istrastream in Croatia, have arrived and will be used to roll out the project in the coming months.

### **Fireballs**

34 fireballs were reported to the Director, all of which were analysed before adding to the Southern African Fireball Catalogue (SAFC). The Director cooperates closely with Robert Lunsford, who coordinates reports of fireballs reported to the International Meteor Organisation and the American Meteor Society, and his forwarding of events from Southern Africa for investigation is gratefully

acknowledged. The Director also wishes to acknowledge the contribution of Paul Ludick, who forwards details of fireballs recorded by his GMN cameras.

### **Asteroids**

Asteroid 2023 BU was imaged by Carol Botha using the Slooh Canary Three telescope in a mission set up courtesy of BerndL.2014, Slooh. Efforts by Tim Cooper and Kos Coronaio to observe the same event were thwarted by cloud.

All members who contributed observations are warmly thanked.

Tim Cooper

Director