



# Comet, Asteroid and Meteor Section

## CAMnotes 2011 No.3

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### Latest News

#### Comets

Comet C/2009 P1 Garradd has been well observed and imaged in the last month by Nigel Wakefield, Mike Begbie, Magda Streicher, Kos Coronaios, Oleg Toumilovitch and the writer. With the comet visible in the early evening sky and the moon due to move out of the way, the opportunity exists for more observers to contribute observations of this comet as it becomes brighter during September and October.

Comet C/2010 X1 Elenin was predicted to be possibly visible to the naked eye after perihelion on September 9, but appears to be in the process of disintegrating and has faded. Some traces may be visible with CCD imaging, but the comet will probably no longer be detectable by visual observers.

#### Meteors

Observers may read of a potential outburst from the October Draconids on the evening of October 8, with rates briefly reaching a ZHR of 600/hour. European/African longitudes are favoured. However, this shower is NOT observable from southern Africa, and the radiant sets at around 19h45 SAST. What's more is the 90% moon will interfere. By all means lay back in your easy chair and gaze in the hope of seeing one or two very-long pathed, exceptionally slow moving meteors if you want to, but we down here cannot add anything scientific to the study of this shower. I'm often asked about why I do not publish details about the August Perseids. The answer is exactly the same.

### Observations required for the remainder of 2011

Observations of the events on the following pages are required by the Comet, Asteroid and Meteor Section in the remaining months of 2011.

| Date              | Event  |
|-------------------|--|
| September-October | <p><b>Comet C/2009 P1 Garradd</b><br/>           Currently magnitude 7 and visible in binoculars. Although the comet only reaches perihelion on December 23, it will be too close to the sun at its brightest and thereafter too far north for observation from southern Africa. Observe until possibly early November when it will set early evening.</p> |
| September         | <p><b>Asteroid 193 Ambrosia</b><br/>           Photometry required to determine rotation period. The asteroid is designated a priority object for study.</p>   |
| September 29      | <p><b>Asteroid 1309 Hyperborea</b><br/>           Occults mag 9.9 TYC 0579-00507-1 at 23h05-23h07 UT. The predicted path crosses Limpopo in the north (observers in Makhado and Polokwane should observe) and near the Cederberg in the south, crossing Vredenberg in the Western Cape.</p>  |
| September onwards | <p><b>Comet 45P Honda-Mrkos-Pajdusakova</b><br/>           No observations of this comet have been received, which is currently around magnitude 9. After its close approach to earth in August it is currently unobservable and will remain a difficult object low in the morning sky as it fades.</p>  |
| September 30      | <p><b>Asteroid 2120 Tyumenia</b><br/>           Occults mag 8.3 TYC 0728-01670-1 at 03h30 UT. The predicted path is well placed for observation from the Garden Route.</p>   |
| October 3         | <p><b>Asteroid 2159 Kukkamake</b><br/>           Occults mag 8.4 HIP 116559 at 23h39 UT. Favourable for Limpopo, with Polokwane near the track.</p>  |
| October 13        | <p><b>Asteroid 177 Irma</b><br/>           Occults mag 9.3 HIP 30289 at 01h19 UT. The predicted path crosses Western Cape north of Cape Town to KwaZulu Natal, with Richards Bay in the path. The star's altitude will be around 25° at the time of occultation.</p>   |
| October 15        | <p><b>Asteroid 593 Titania</b><br/>           Occults mag 10.2 TYC 1342-00748-1 at 01h49 UT. The predicted path crosses Cape Agulhas, as well as KZN between Newcastle and Ladysmith. Altitude of the star may however pose a problem especially for the southern Cape (about 15°).</p>  |

| Date         | Event   |
|--------------|---|
| October 17   | <p><b>Asteroid 241 Germania</b><br/> Occults mag 11.5 UCAC2 23715725 at 19h18 UT. Large telescopes are best suited as the star is faint and the 73% moon will produce a bright sky. The path crosses the mid Free State with Bloemfontein near the track.</p>   |
| October 21   | <p><b>Meteor activity</b><br/> Orionid meteor shower. Is the inbound debris stream from comet 1P Halley. The Orionids are high enough to observe from about midnight until dawn. Meteors are fast, often trained, ZHR about 23 but the maximum is quite broad, often showing a number of sub-maxima. Observations are required to establish whether a possible 12-year periodicity is present in the activity.</p>  |
| November 21  | <p><b>Meteor activity</b><br/> Alpha Monocerotid meteor shower. The parent comet is unknown. The shower showed strong outbursts in 1925, 1935, 1985 and 1995. No outburst is expected in 2011 but the shower should be observed to determine if anything unexpected occurs. The meteors are faint, quite fast, and any outburst is of short duration, probably less than 1 hour in duration.</p>  |
| December 1-6 | <p><b>Meteor activity</b><br/> The Phoenicid meteor shower showed only one notable outburst to date, in 1956. Potential activity is predicted in 2011 from an encounter of the earth with the dust trail left behind in 1870, but 5 days earlier than the normal date of maximum, and with a more northerly radiant between Sculptor and Cetus. Observers are encouraged to observe this shower during the first week of December, despite the presence of a bright moon, which reaches full on December 10. The paths of all observed meteors should be plotted on a gnomonic chart (ask me if you want one) for further analysis and radiant association.</p> |
| December     | <p><b>Meteor activity</b><br/> The Puppis-Velid complex is a poorly understood complex of radiants only visible from the southern hemisphere. They are ideal for evening observation and require plotting to elucidate the centres of activity. Observers prepared to add to our understanding of this complex should indicate if they are prepared to participate in an organised observing program.</p>   |