

Viewing aspect of C/2013 A1 Siding Spring from 31° South (151.6° E) – Chris Wyatt

The comet makes its closest approach to Earth on the 5th of September at a distance of 0.892 AU (NASA JPL Horizons), and the comet will reach Perihelion on 23rd October at 1.399 AU (NASA JPL Horizons) about 3 days after its closest approach with Mars.

The Mars-Comet encounter occurs on the 20th October (AEST) at 18h UT (4am AEST). At this time the comet will be around 34 degrees below the horizon locally (Walcha, NSW, Australia). The locations of best viewing would be around the Eastern regions of South Africa (Pretoria = UT + 02hrs) and Madagascar as the comet would set around 22:45 local time for those regions approximately.

The U.S. will be in daylight, Eastern Europe will be in darkness but the Comet will remain low if not below the horizon from more northerly latitudes and the equatorial region.

C/2013 A1 encounters dense star fields over October / November as it traverses the Milky Way's galactic centre, crowded star fields will interfere with visual observations but will still be highly encouraged.

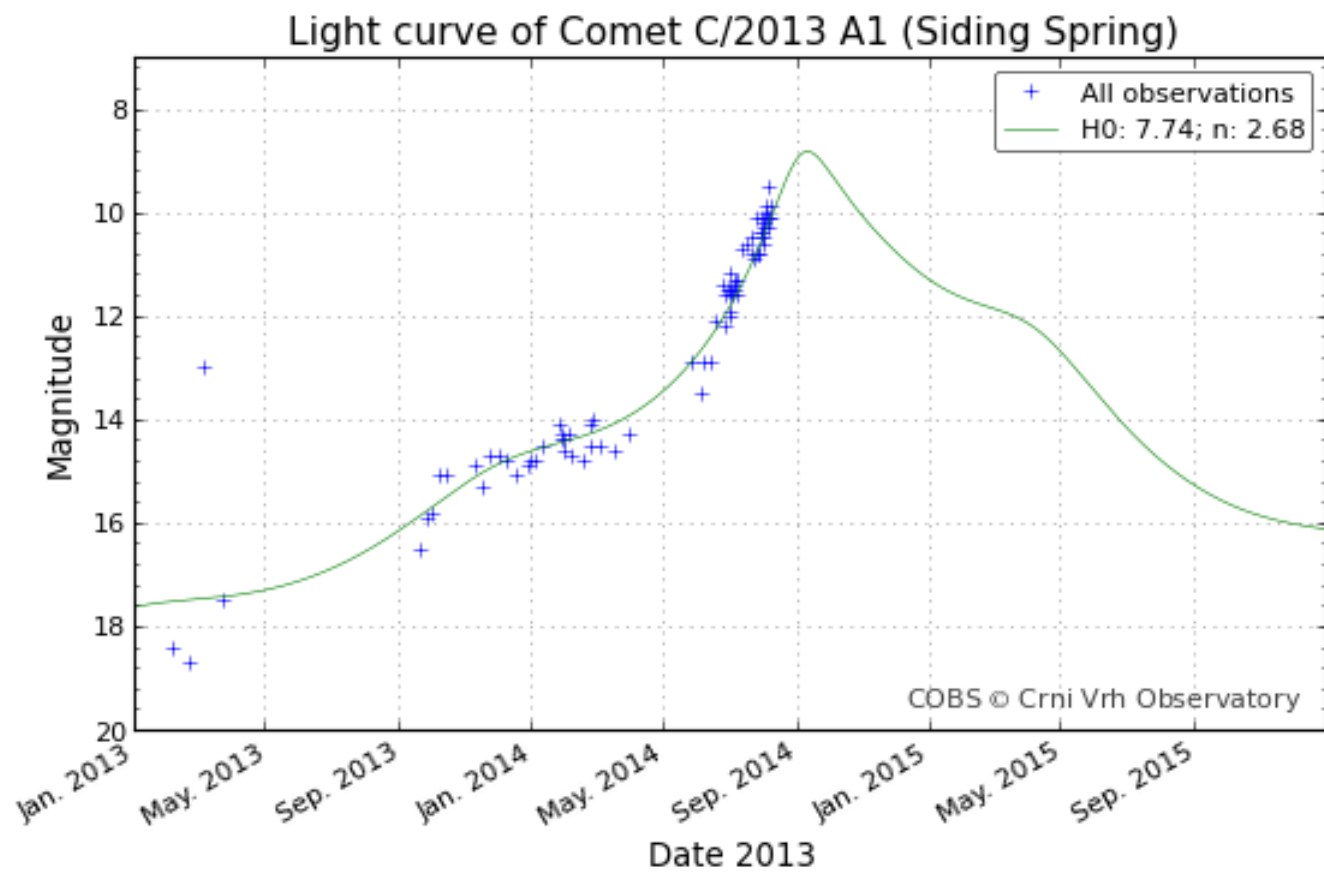
For Australian observers at 31° S the comet will become circumpolar on the 20th of August although best viewing would be when the comet is 10 degrees above the horizon in the early evening around the 22nd August, with the comet getting higher as the night progresses. The comet passes by the Small Magellanic Cloud on the 29th, slicing through NGC 362 at 2am on that date, and squeezing between the SMC and NGC 104 on the 30th and leaving the SMC region on the 31st August.

During the Encounter on 19th/20th October the Moon will be in Waning Crescent phase, so observers will have dark sky in the evening. The comet will be close to bright 8th and 10th magnitude stars on the 19th.

On the 8th October there will be a Total Lunar Eclipse for Australian observers, an opportunity will be there for observers to make an observation in a dark sky of the comet.

Below is a calendar which shows some close approaches to bright stars which may interfere with observations.

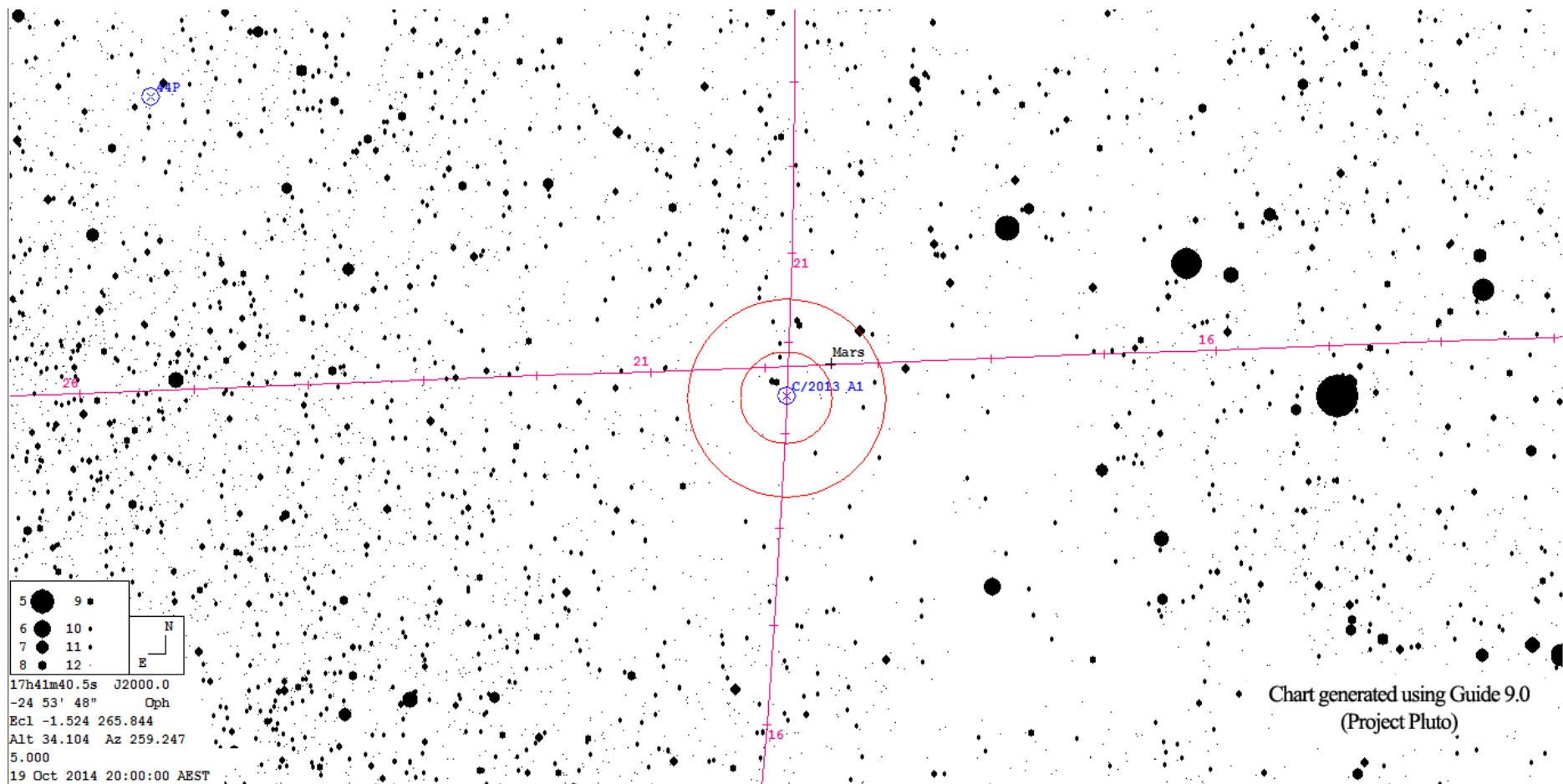
My definition of "close" means within a 1° field centred on the comet at 20:00 AEST (Walcha).



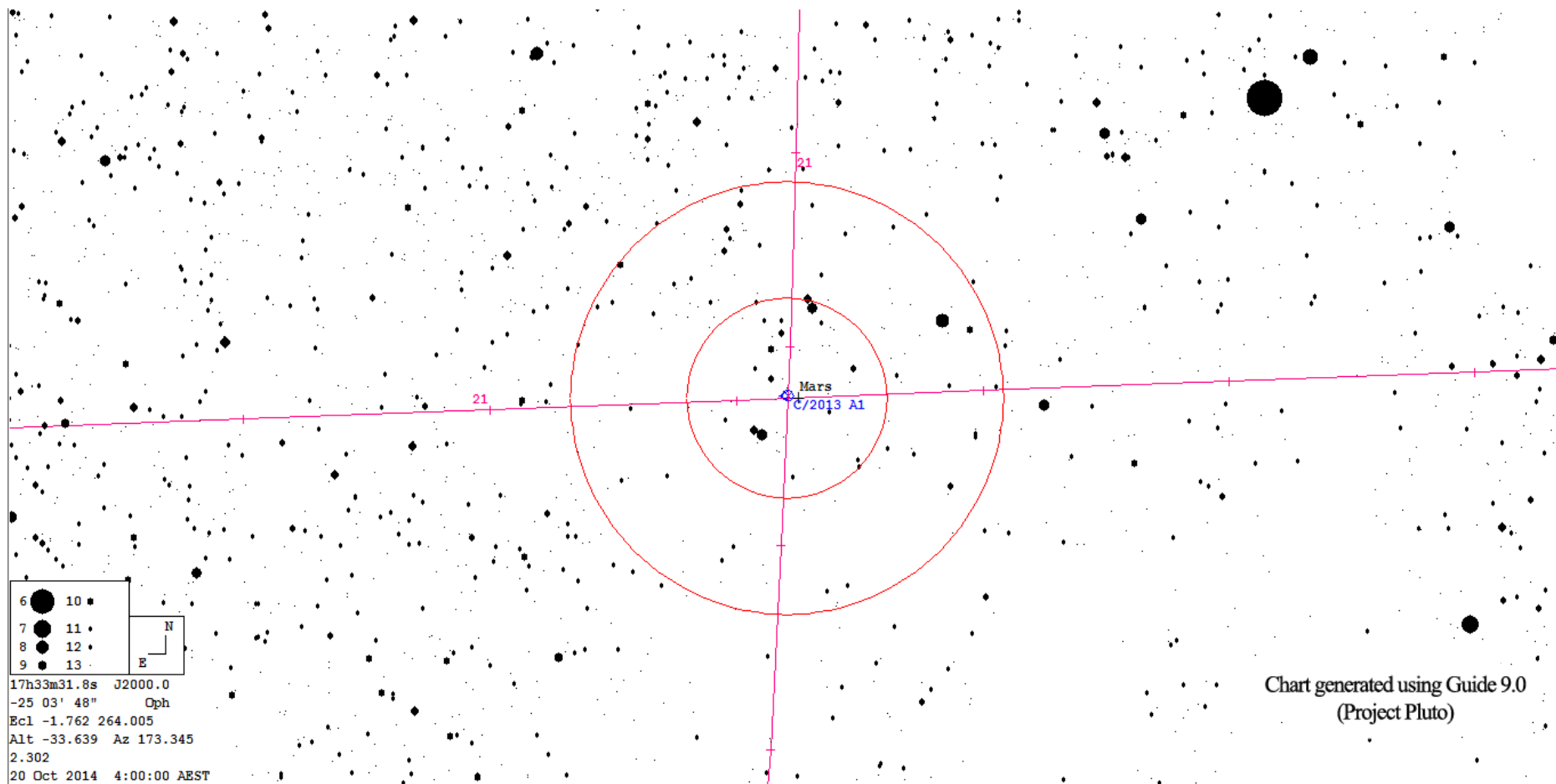
The light curve above was generated by COBS database (Crni Vrh Observatory), this is only preliminary. (Light curve current as at 11th Aug 2014)

C/2013 A1 Siding Spring - OCTOBER 2014

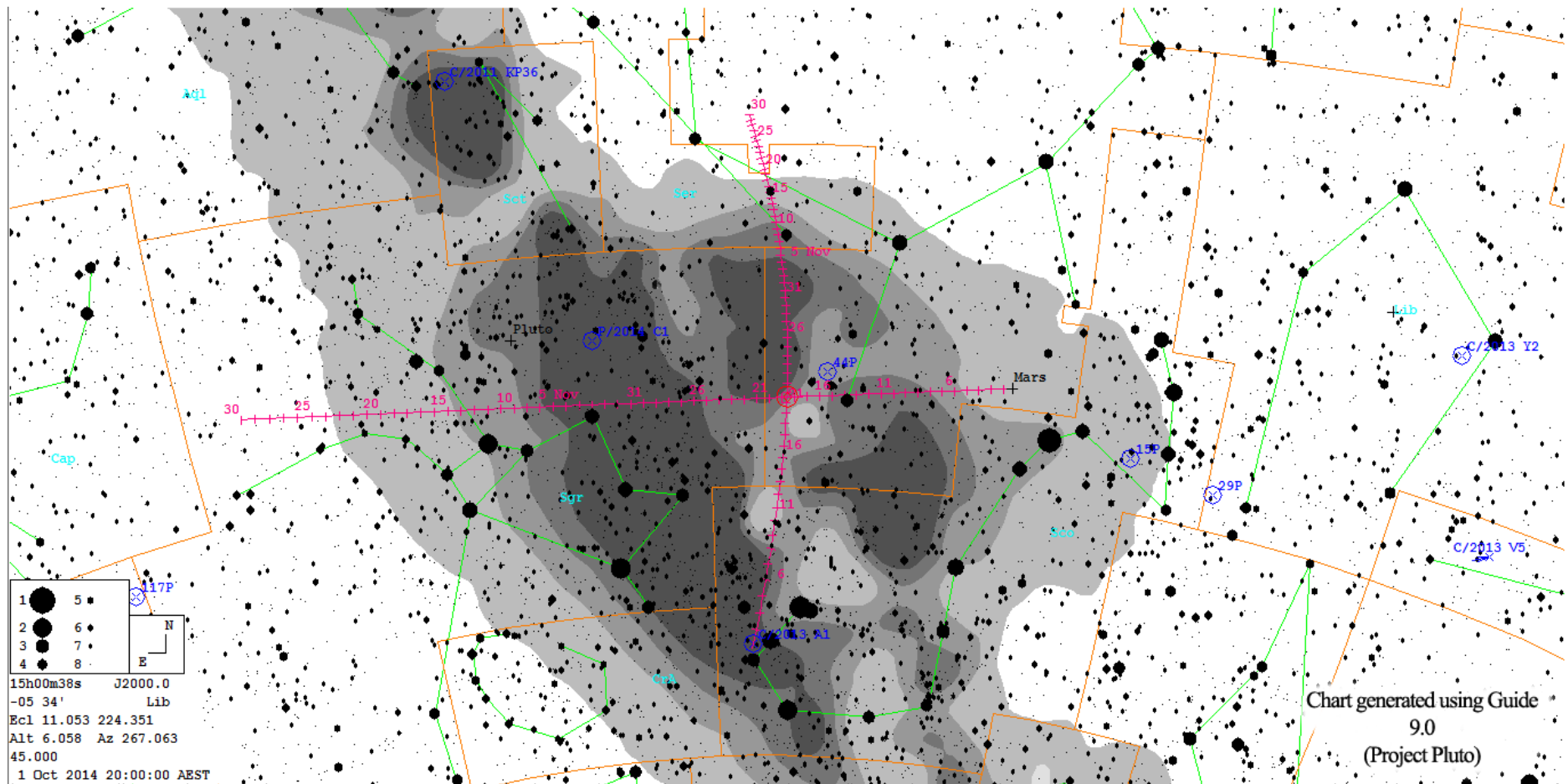
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1. Close to 7 th mag star.	2. Close to 6.4 mag star. FIRST QUARTER MOON	3. Close to mag 9.8 star.	4.
5. Occults 7.1 mag star.	6. Close to 8 th mag star.	7. Close to mag 6.8 star V905 Sco.	8. Close to bright stars of 8 th mag and Open Cluster M6. FULL MOON - LUNAR ECLIPSE	9. Close to Open Cluster M6	10.	11. Close to mag 9.9 star.
12. Close to mag 6.8 star.	13.	14. Close to 7 th mag stars.	15.	16. LAST QUARTER MOON	17. Close to 11 th mag stars.	18.
19. Close to 8 th & 10 th mag stars. <div style="border: 1px solid black; padding: 2px; display: inline-block;">MARS ENCOUNTER</div>	20. 18hrs UT – 4am AEST – Encounter. (Below Horizon – Aus)	21. Close to NGC 6401 (Glob.)	22. Close to mag 8.6 star.	23. Close to 8 th & 10 th mag stars.	24. Close to mag 6.5 star. NEW MOON	25. Close to mag 6.5 stars.
26. Close to mag 8.6 stars.	27. Close to 8 th mag stars.	28. Close to 10 th mag stars.	29. Close to 8 th mag stars.	30. Close to 8 th & 10 th mag stars.	31. Close to mag 7.5 stars.	



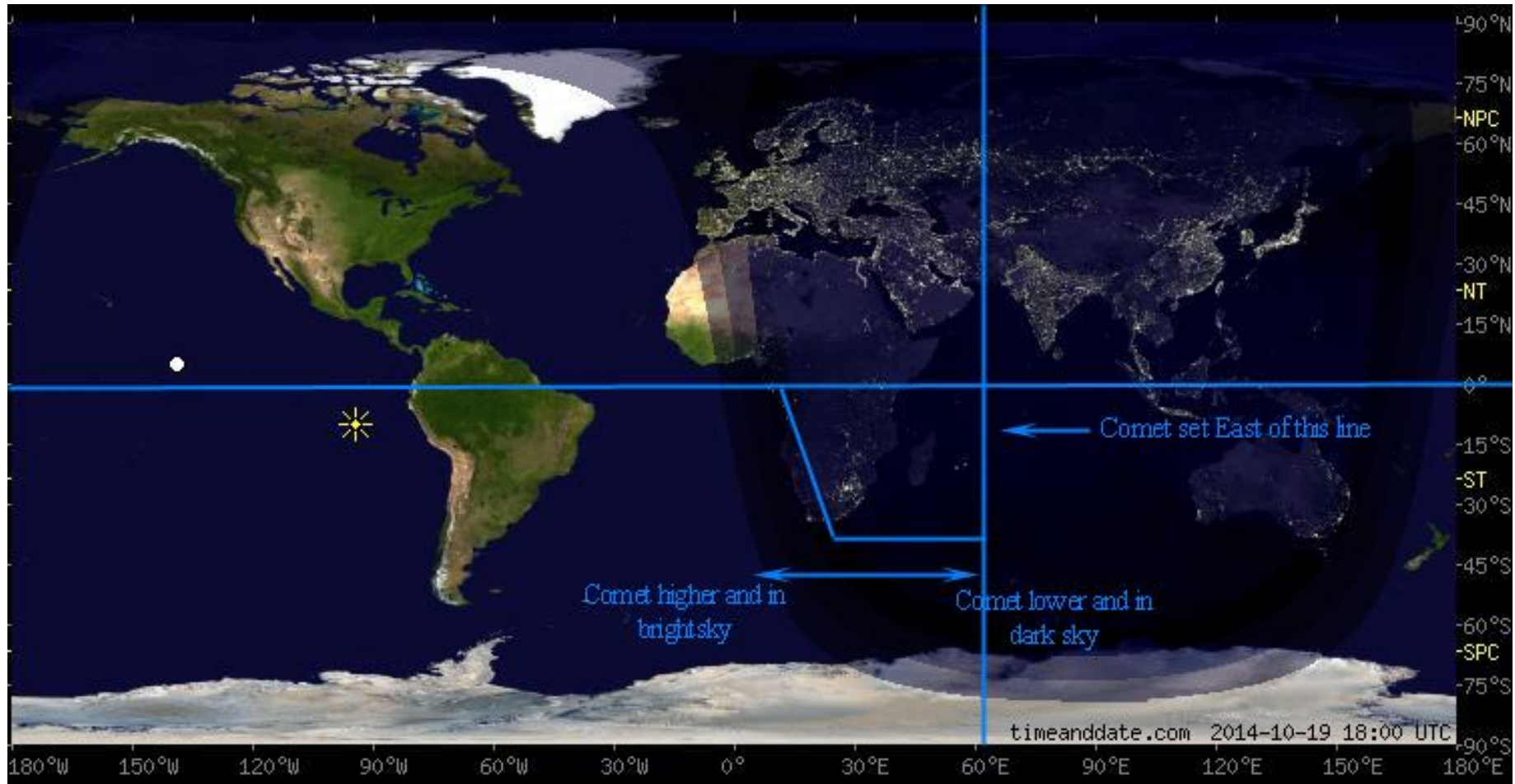
Graduations of the above chart are at 0hrs UT, the Comet and Mars are shown in position at 20:00 AEST (Daylight saving will be in force for NSW and VIC Observers, add one hour) with the dates of 16th and 21st October shown on the lines, other dates are shown as intersections which are set for 00:00 UT. The two circles represent the field of view through a 10-inch f/5 reflector at x39 (outer ring = 77') and x83 (inner ring = 36'). The comet is above the horizon as shown in the box at lower left (Alt 34.104).



This chart shows the Comet/Mars encounter at 4am AEST (18hrs UT), the comet is BELOW the horizon for Australian observers (as shown in the box at lower left: Alt -33.639)

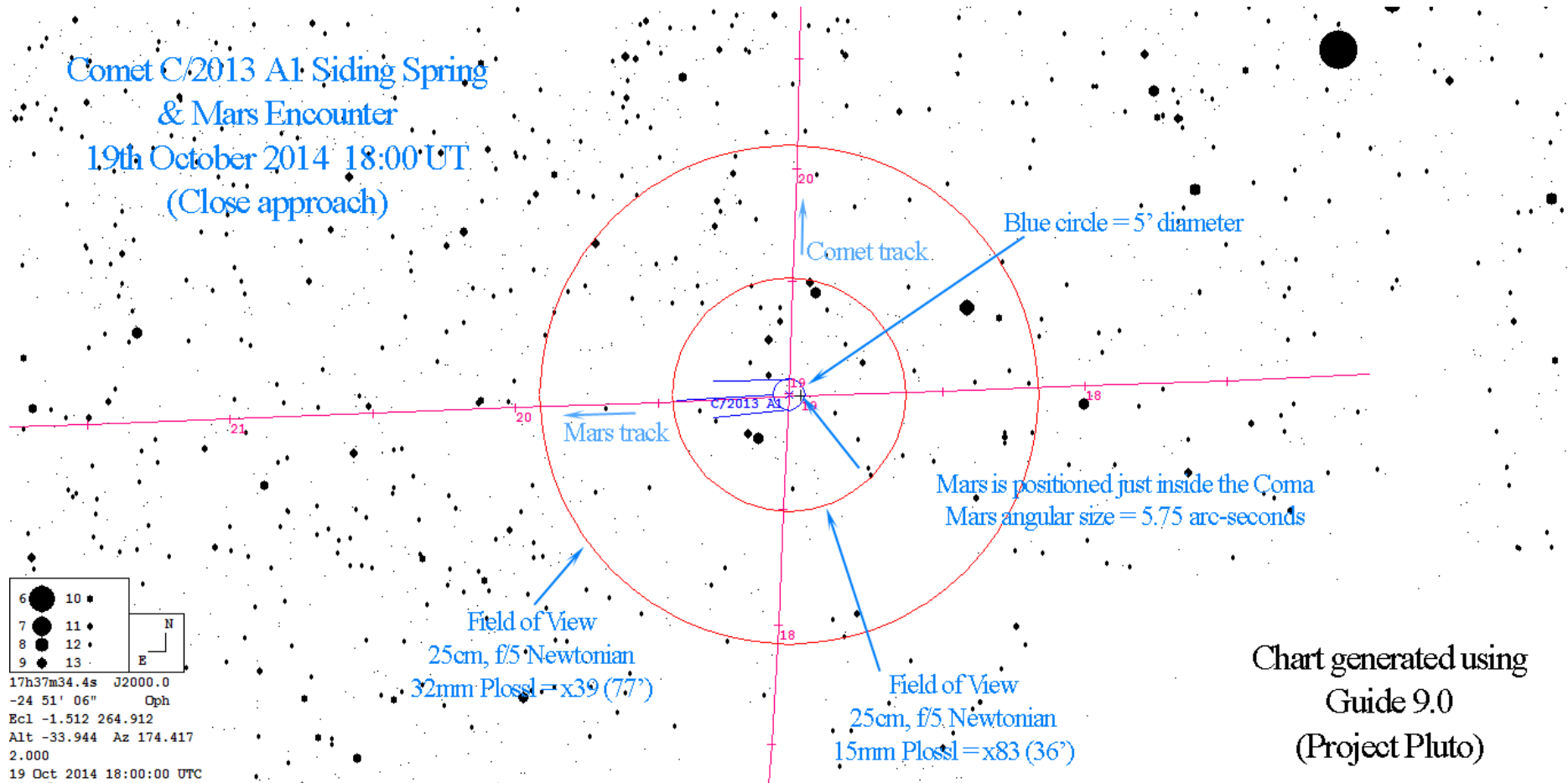


This chart shows the Comet/Mars encounter throughout October, Mars tracks to the left along the horizontal line and the comet tracks from lower to upper along the vertical line. Isophotes are used to highlight the Milky Way and the dense star field where the encounter will take place, this may play a factor in determining visual and photometric magnitude estimates.



The World Map showing night and day. The lower South-East portions of South Africa (inside the box) would be the ideal region to view the encounter from, during closest approach. Any areas East of 60° East longitude the Comet will have already set, any areas above the Equator the comet will be too low or not visible at all. Areas to the West of the slanted box line the Comet will be in a bright twilight sky during the encounter.

Comet C/2013 A1 Siding Spring
& Mars Encounter
19th October 2014 18:00 UT
(Close approach)



This chart shows the field of view through my 25cm Newtonian reflector at different magnifications. The comet diameter represented here by the software shows a 5 arc-minute coma, the visual magnitude prediction for the comet will be around 8.5 at this time and the coma may be larger than depicted here, expect the tail to be slightly curved to the SE. Mars tracks to the left while the Comet tracks to the top of the chart. Mars angular size will present a challenge as will making visual magnitude estimates.