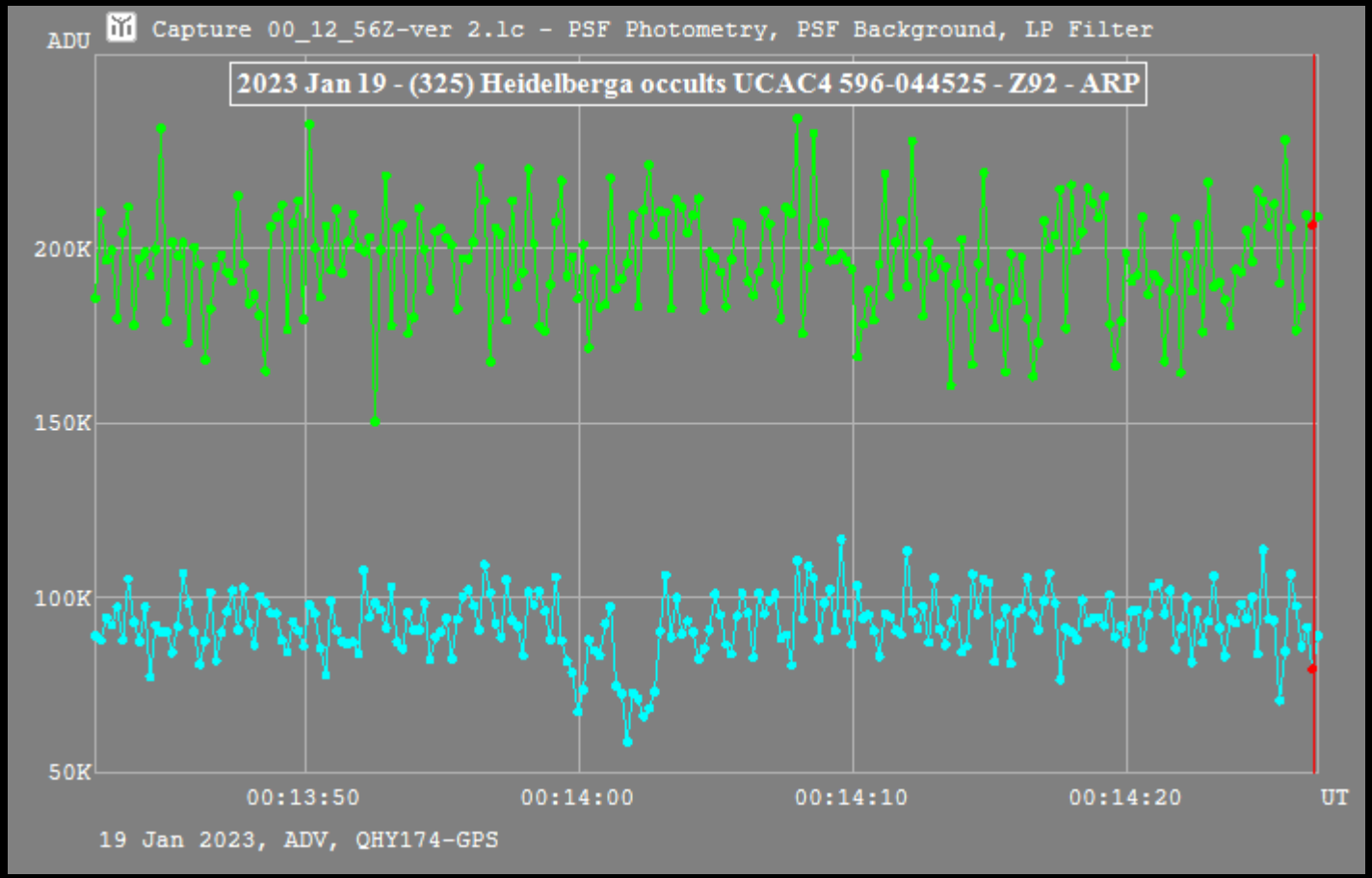
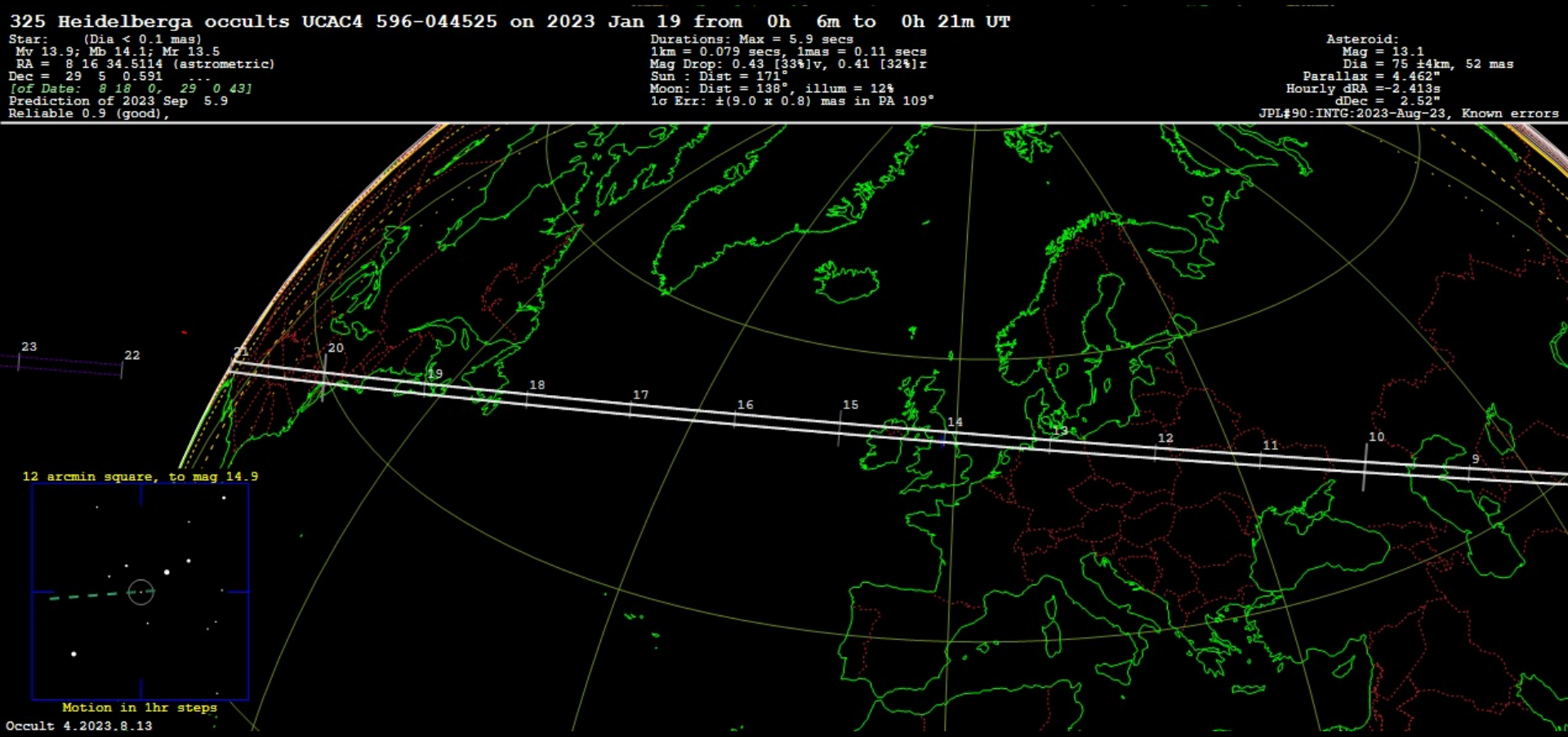
A grazing asteroidal occultation by (325) Heidelberga, 2023 January 19

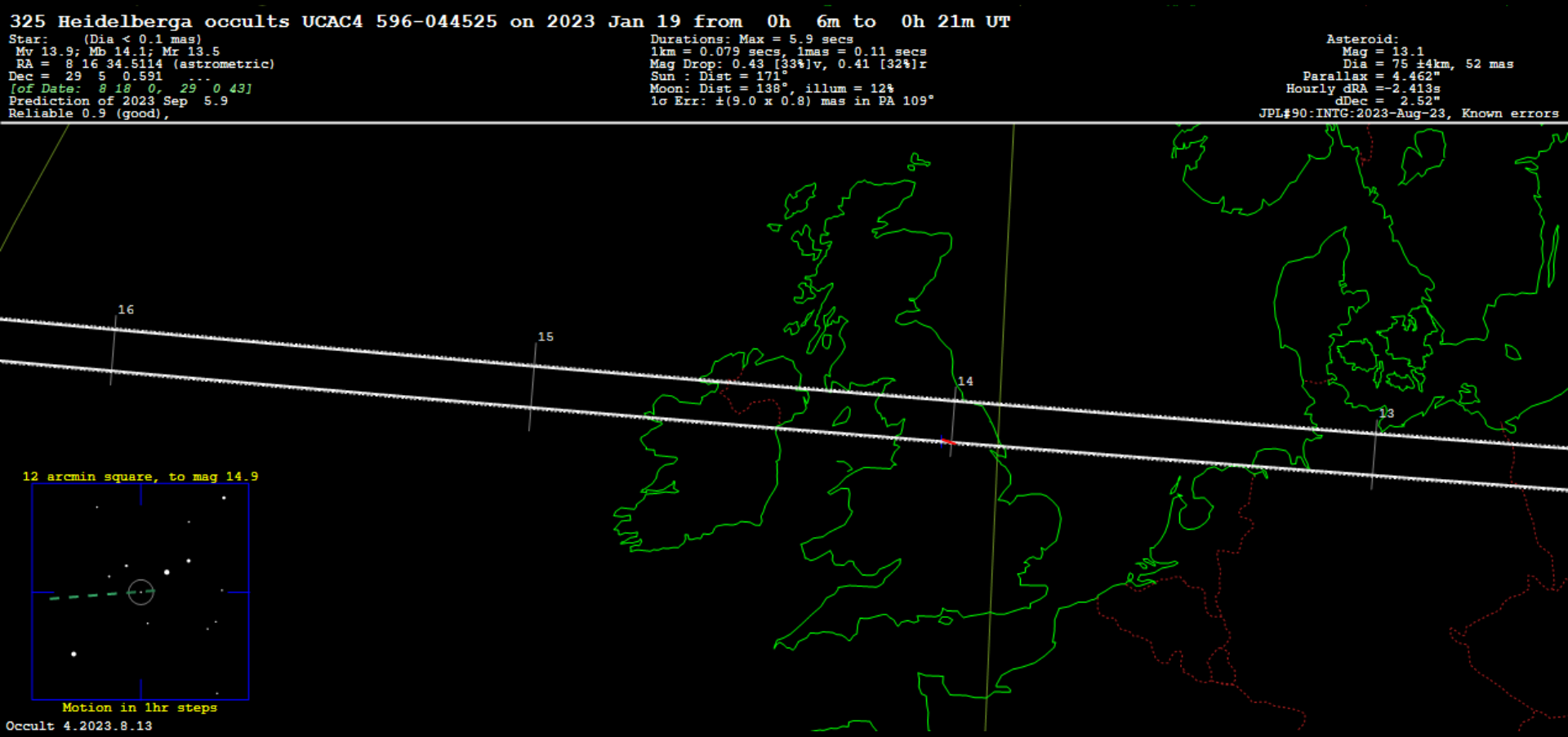


Alex Pratt IOTA-ES, BAA

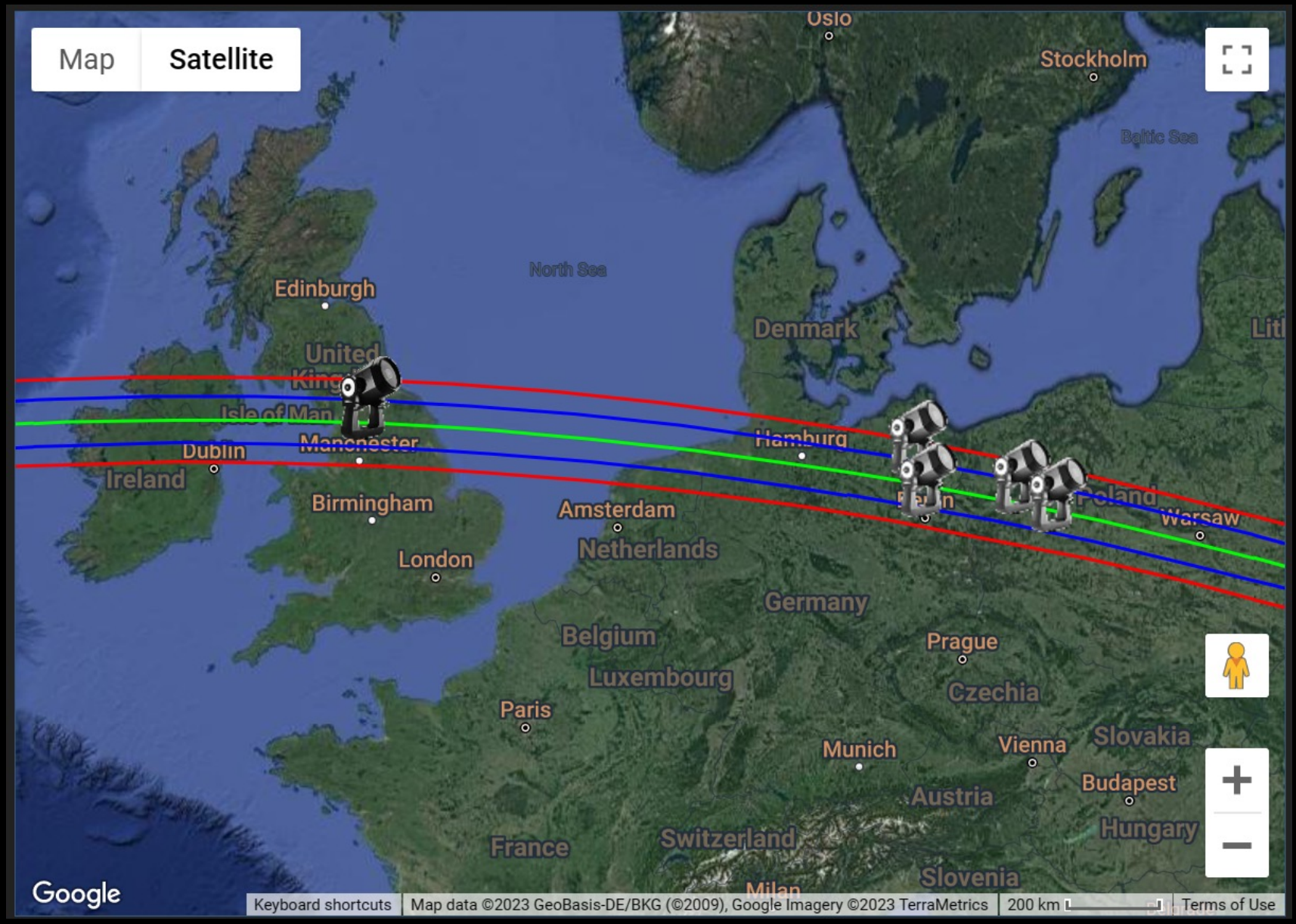
2023 January 19 – mag 13.1 Heidelberga occulted mag 13.9 star for up to 6s mag drop 0.4



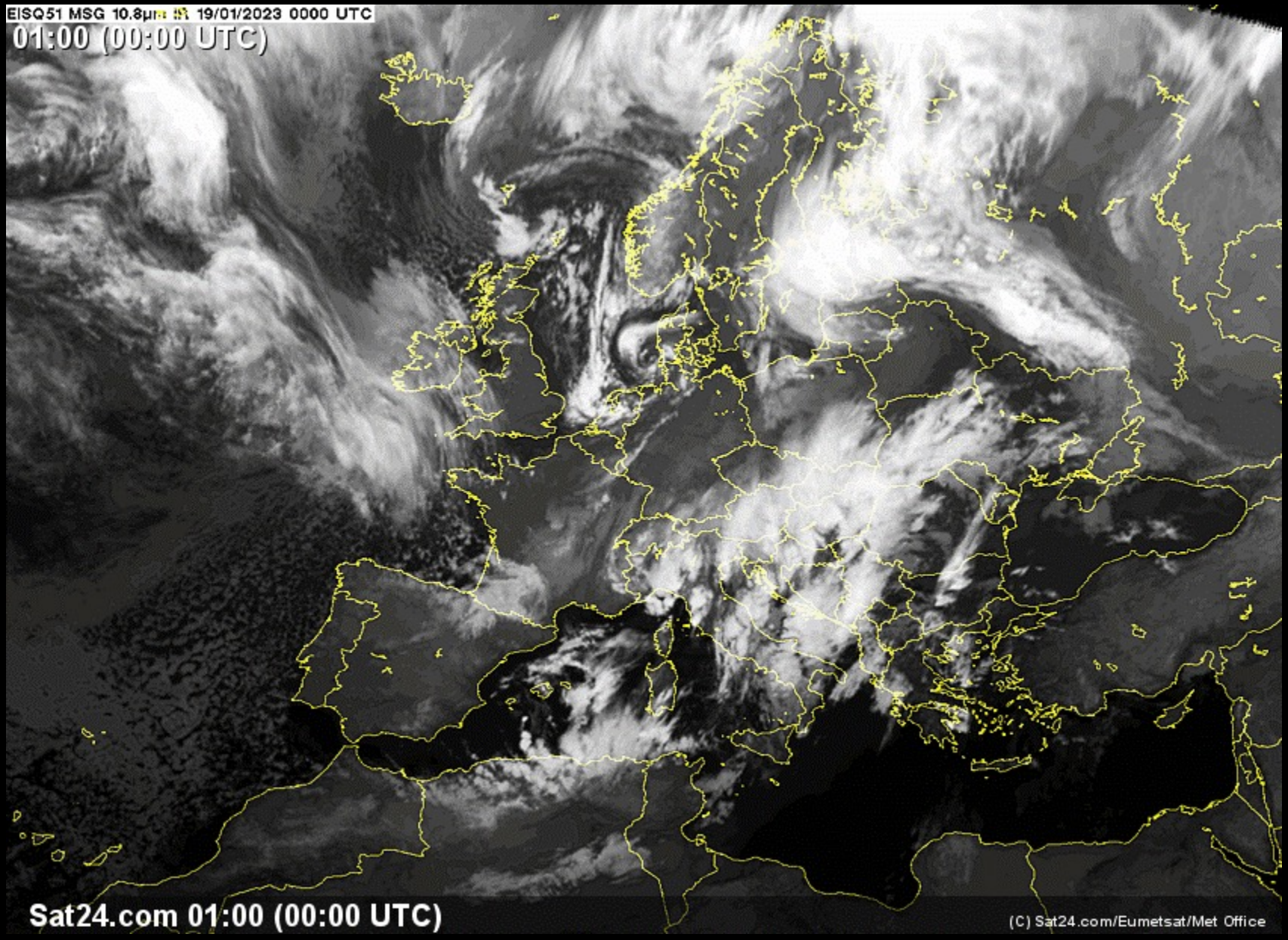
2023 January 19 – mag 13.1 Heidelberga occulted mag 13.9 star for up to 6s mag drop 0.4



2023 January 19 – mag 13.1 Heidelberga occulted mag 13.9 star for up to 6s mag drop 0.4



Cloud cover over Europe – *Sat24*

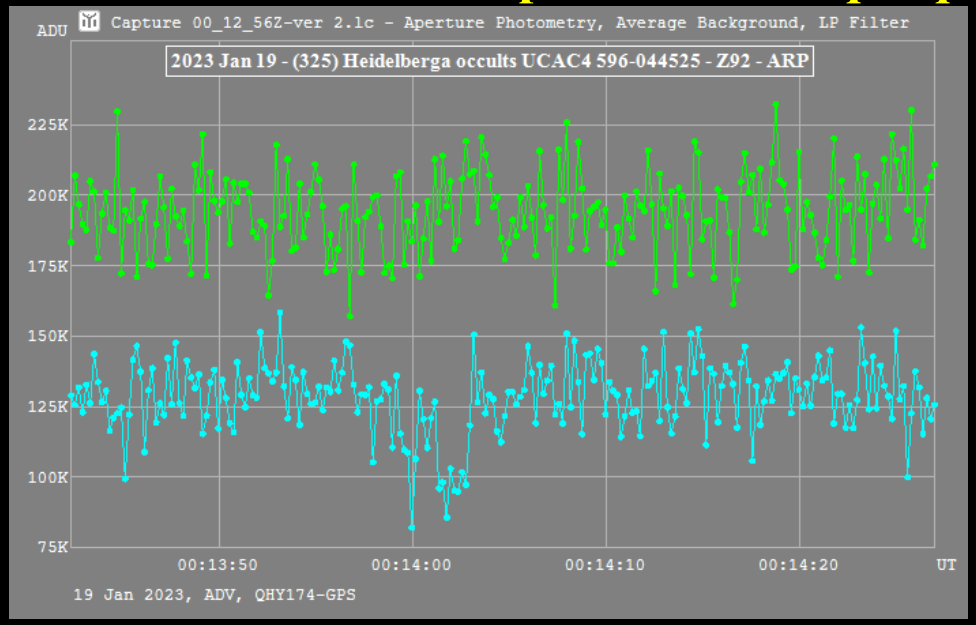


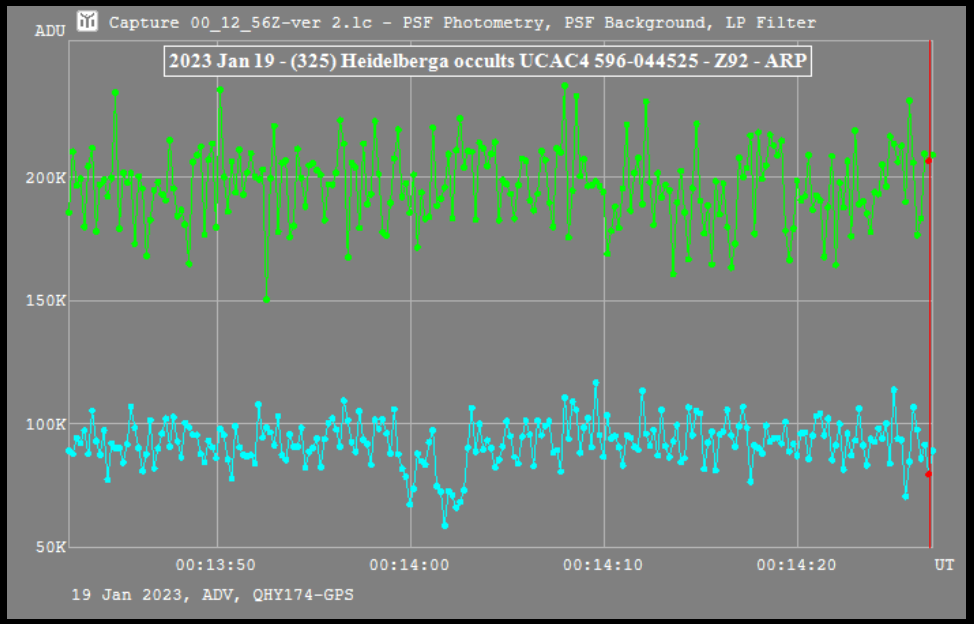
Registered stations - *OccultWatcher*

Station sorts for (325) Heidelberga on 19 Jan 2023

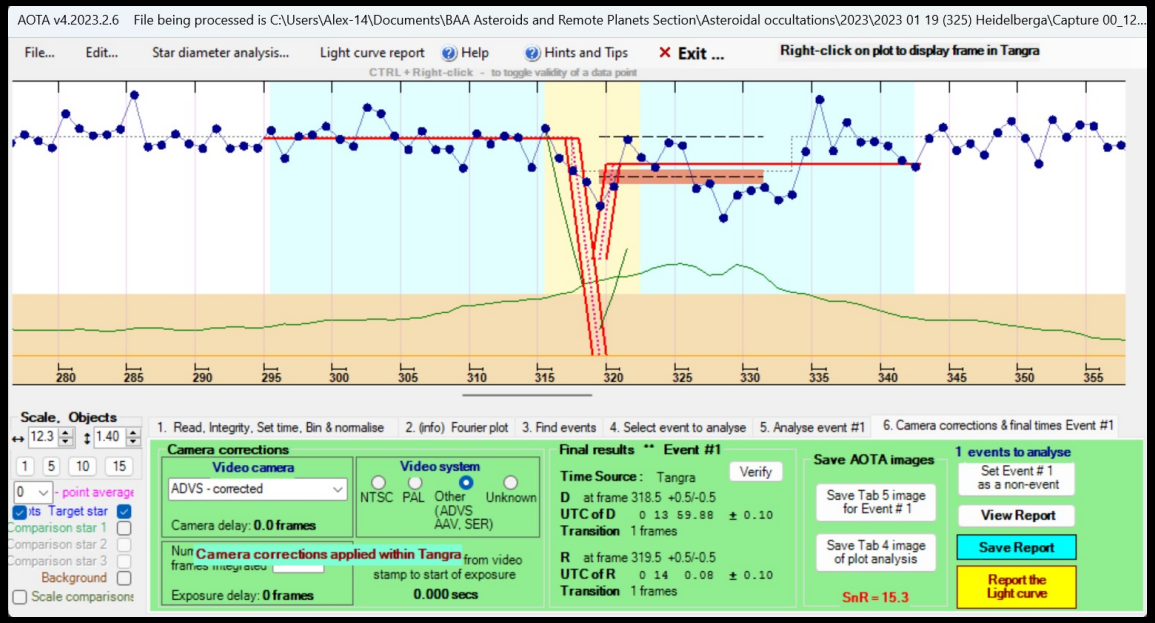
Distance (Occult)	Prob.	Cloudy	Station info	Submitted by	Country	City
147.6 km	0.1%	-	== Right limit plus 3-Sigma ==			
112.3 km	2.3%	-	== Right limit plus 2-Sigma ==			
77.0 km	15.8%	-	== Right limit plus 1-Sigma ==			
41.8 km	49.1%	-	=== Right limit ===			
18.6 km @8°	70.1%	60%	(7) Sternwarte Comthurey : video ...	Konrad Guhl	Brandenburg	Marwitz
9.5 km @308°	74.7%	50%	(3) Green K Home : video + gps	Kevin Green	USA	Westport
0.0 km	76.4%	-	==== Centre Line ====			
-17.9 km @187°	70.6%	100%	(1) Chalin : photoelectric + gps	Anna Marciniak	Poland	Poznań
-26.8 km @183°	63.9%	10%	(4) Z92 : video + gps	Alex Pratt	England	Leeds
-37.6 km @155°	53.5%	40%	(6) Scheck A Home : video + gps	Andrew Scheck	USA	Scaggsville, MD
-39.2 km @188°	51.8%	100%	(2) Borowiec : photoelectric + gps	Anna Marciniak	Poland	Poznań
-41.8 km	49.1%	-	=== Left limit ===			
-60.8 km @188°	29.3%	100%	(8) Weber C Home : video + gps	Christian Weber	Germany	Berlin
-77.0 km	15.8%	-	== Left limit plus 1-Sigma ==			
-112.3 km	2.3%	-	== Left limit plus 2-Sigma ==			
-147.6 km	0.1%	-	== Left limit plus 3-Sigma ==			

Observation from Leeds
C11 - QHY174M-GPS - 200 ms exposures – *SharpCap and Tangra*

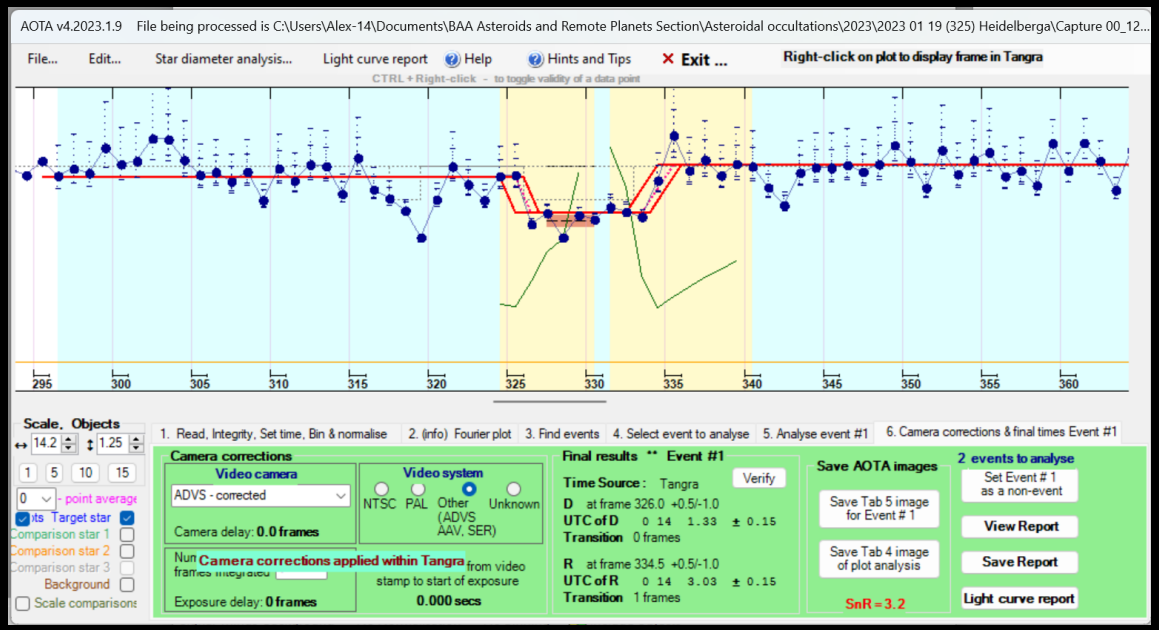




Observation from Leeds
Analysis - *AOTA*

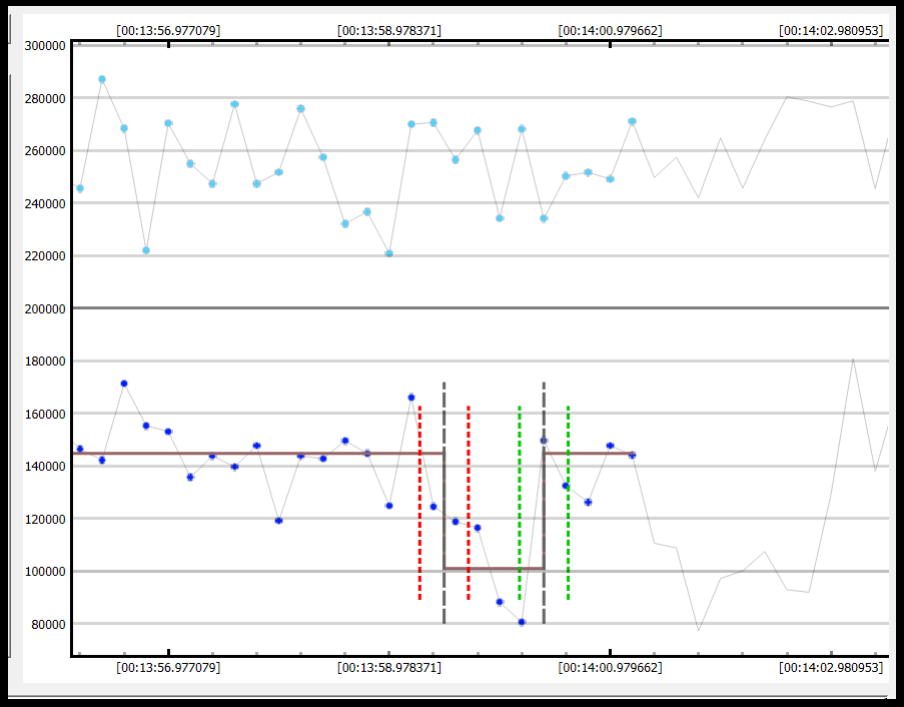


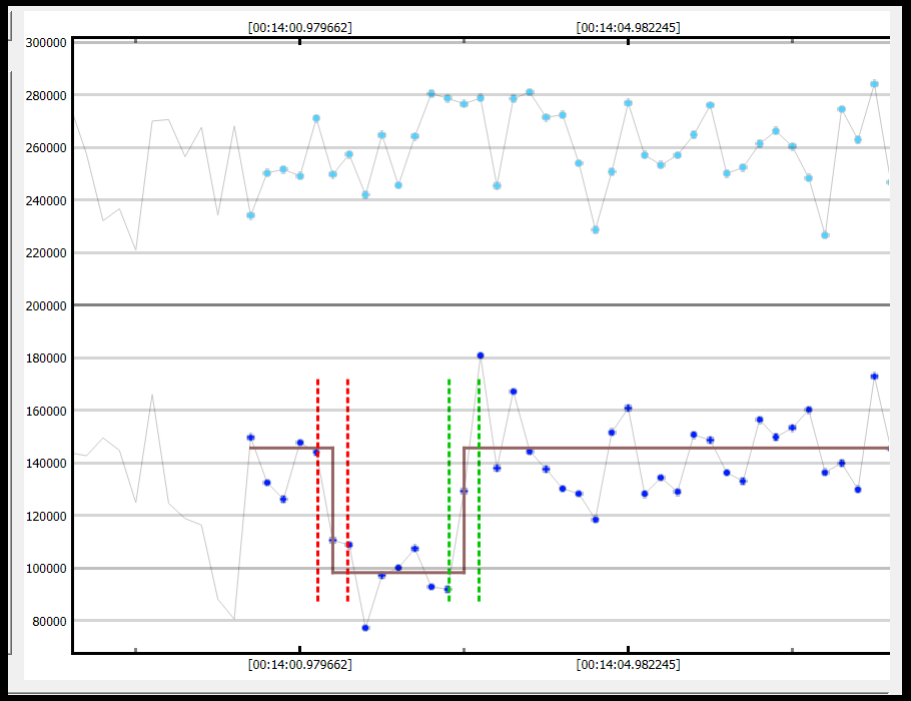
0.4 s?



1.70 s

Observation from Leeds
Analysis – *PyOTE – Christian Weber*

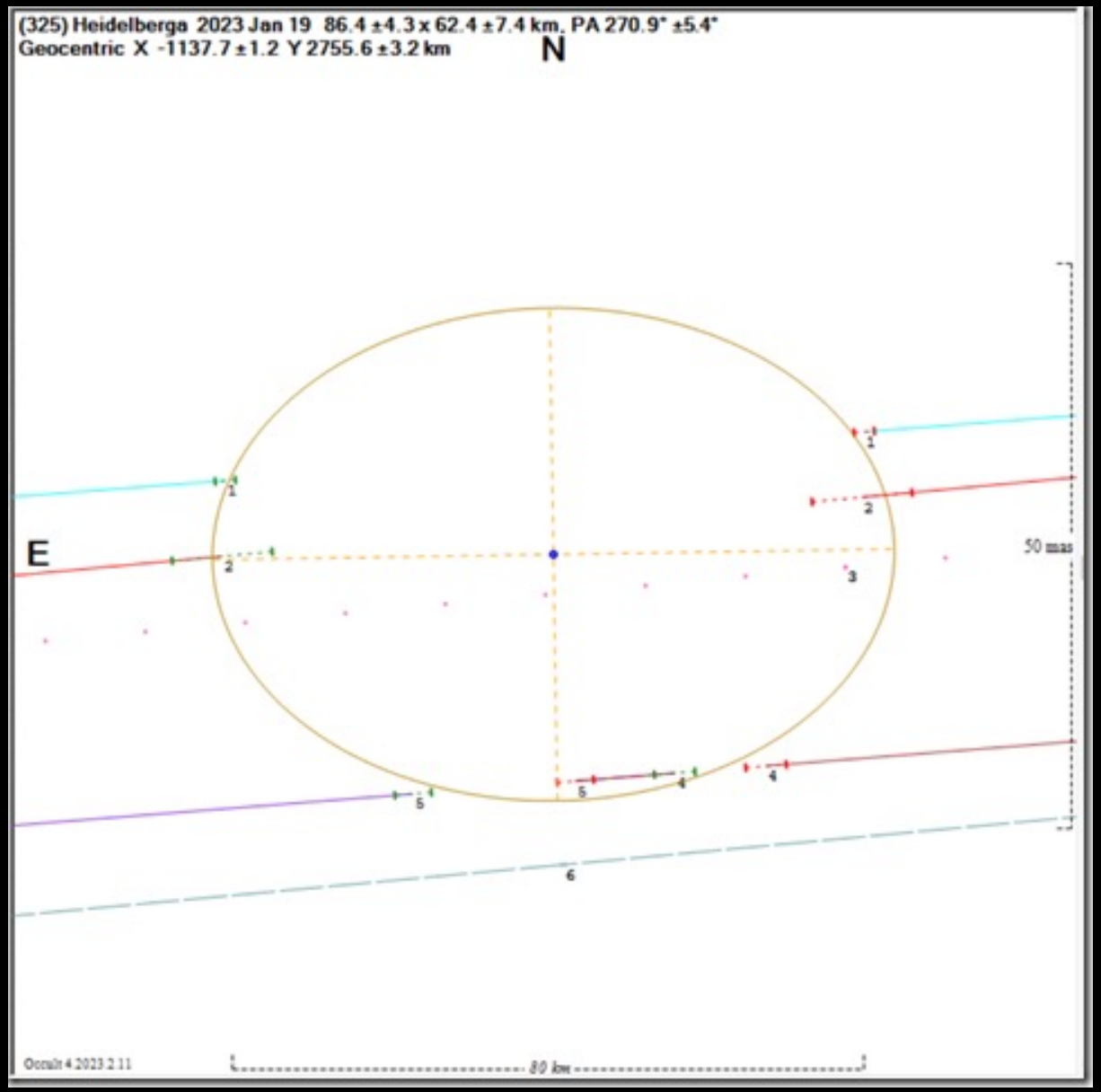




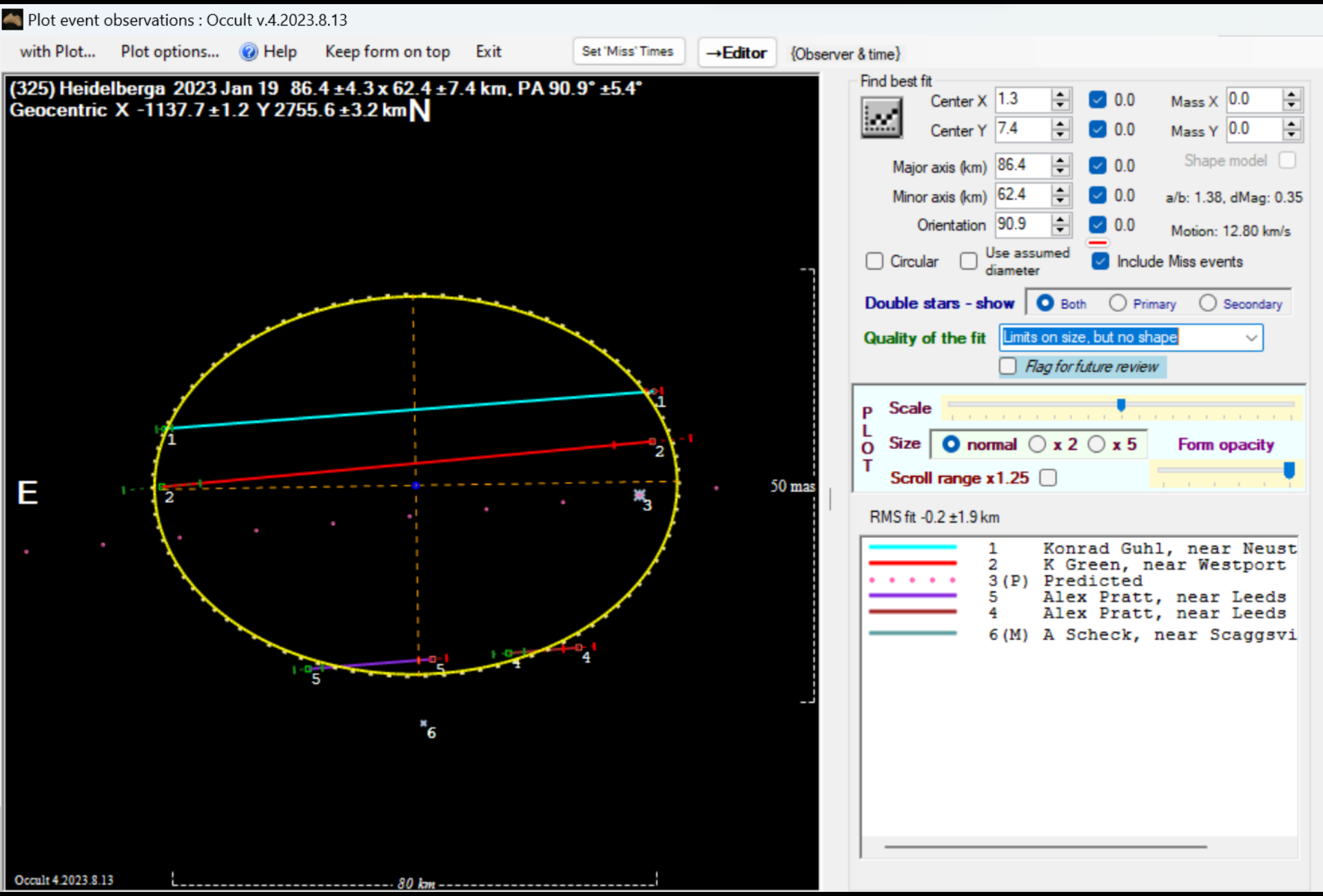
0.90 s

1.60 s

Observation from Leeds
Chord fitting – *Occult – Dave Herald*



Observed chords - *Occult*



Observed chords – *Occult*

Observed chord lengths : Occult v.4.2023.8.13

with Chords... | Help | Exit

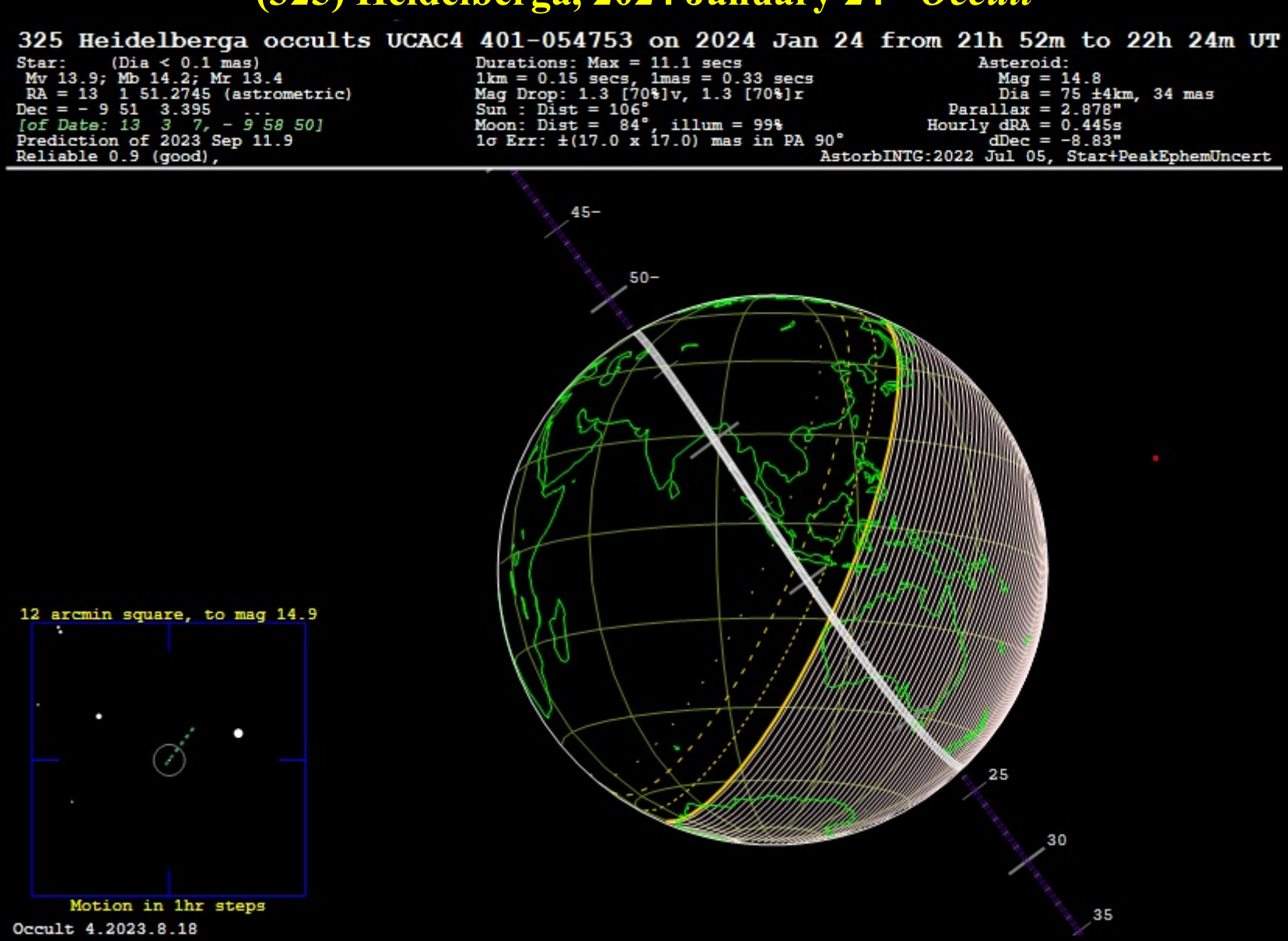
sort by Number | sort by Name

287	Nephthys	7	65.0	sm
289	Nenetta	1	34.9	sm
290	Bruna	1	10.0	sm
292	Ludovica	1	30.7	sm
293	Brasilia	3	57.0	sm
294	Felicia	6	55.4	
295	Theresia	2	28.4	
297	Caecilia	5	39.5	sm
298	Baptistina	3	20.7	
300	Geraldina	5	74.1	
301	Bavaria	3	54.1	sm
302	Clarissa	10	37.0	sm
303	Josephina	8	101.6	
304	Olga	13	68.9	sm
305	Gordonia	5	48.5	sm
306	Unitas	6	47.7	sm
307	Nike	4	58.2	
308	Polyxo	13	136.5	
309	Fraternitas	3	42.5	
310	Margarita	3	32.4	sm
312	Pierretta	2	48.9	sm
313	Chaldaea	24	93.6	sm
314	Rosalia	6	60.6	sm
316	Goberta	4	54.6	
317	Roxane	1	17.7	sm
318	Magdalena	11	83.8	
319	Leona	2	60.8	
320	Katharina	1	24.5	sm
322	Phaeo	5	72.0	sm
323	Brucia	3	31.4	
324	Bamberga	18	231.0	
325	Heidelberga	7	75.0	
326	Tamara	14	93.1	sm
327	Columbia	1	27.5	sm
328	Gudrun	12	129.3	sm
329	Svea	9	76.1	sm
331	Etheridgea	5	75.0	sm
332	Siri	5	40.6	sm
333	Badenia	7	74.1	sm
334	Chicago	11	178.3	sm
335	Roberta	10	95.6	sm

```
Observed chord lengths

Length      # Observer

325 Heidelberga     2005 Jan 21      Tycho2 1765-00663-1
  70.0 km   1 S Basso
  50.8 km   2 S Bolzoni

325 Heidelberga     2010 Aug 25      UCAC4 599-013091
  88.8 km   1 Libor Smid

325 Heidelberga     2011 Mar  3      UCAC4 605-014899
  78.6 km   3 Siegfried Gebhard
  25.8 km   4 Tomas Janik

325 Heidelberga     2012 Mar 25      Tycho2 0839-01544-1
  45.2 km   1 G Nason

325 Heidelberga     2020 Aug 12      UCAC4 296-221742
  67.4 km   1 T Barry
  81.6 km   2 P Nosworthy

325 Heidelberga     2022 Sep 17      UCAC4 595-041415
  80.8 km   1 P Maley
  82.6 km   2 T George

325 Heidelberga     2023 Jan 19      UCAC4 596-044525
  81.2 km   1 Konrad Guhl
  81.4 km   2 K Green
  20.6 km   5 Alex Pratt
  11.6 km   4 Alex Pratt

----------------------------------------

Satellite IR diameters for asteroid (325)

       NEOWISE  61.7 ±  7.4km
          AcuA  81.9 ±  5.4km
          IRAS  75.7 ±  7.8km

Weighted diameter =   74.3 ± 3.8  km
```

No shape models

(325) Heidelberga, 2024 January 24 - *Occult*



Keep observing Heidelberga!