

.....just now begins the contribution of an

Amateur - Astronomer

amateur-astronomer are not the historic star gazer from earlier times, today they are highly specialized operating observer

< according to scientific methods >

only without pay

Max and Moritz

observe minor planets



University of Bialystok
Faculty of Physics
27th – 29th August 2021

Dr. Eberhard H. R. Bredner

Dolberg Observatory, IOTA/ES, DOA, Club Eclipse



I am just a pure observer.

I am mainly dependent on calculations by Edwin Goffin, Steve Preston, Derek C Breit and Dave Herald.

Konrad Guhl, Dr. Christian Weber and Eric Frappa support me with reductions of my measurements.

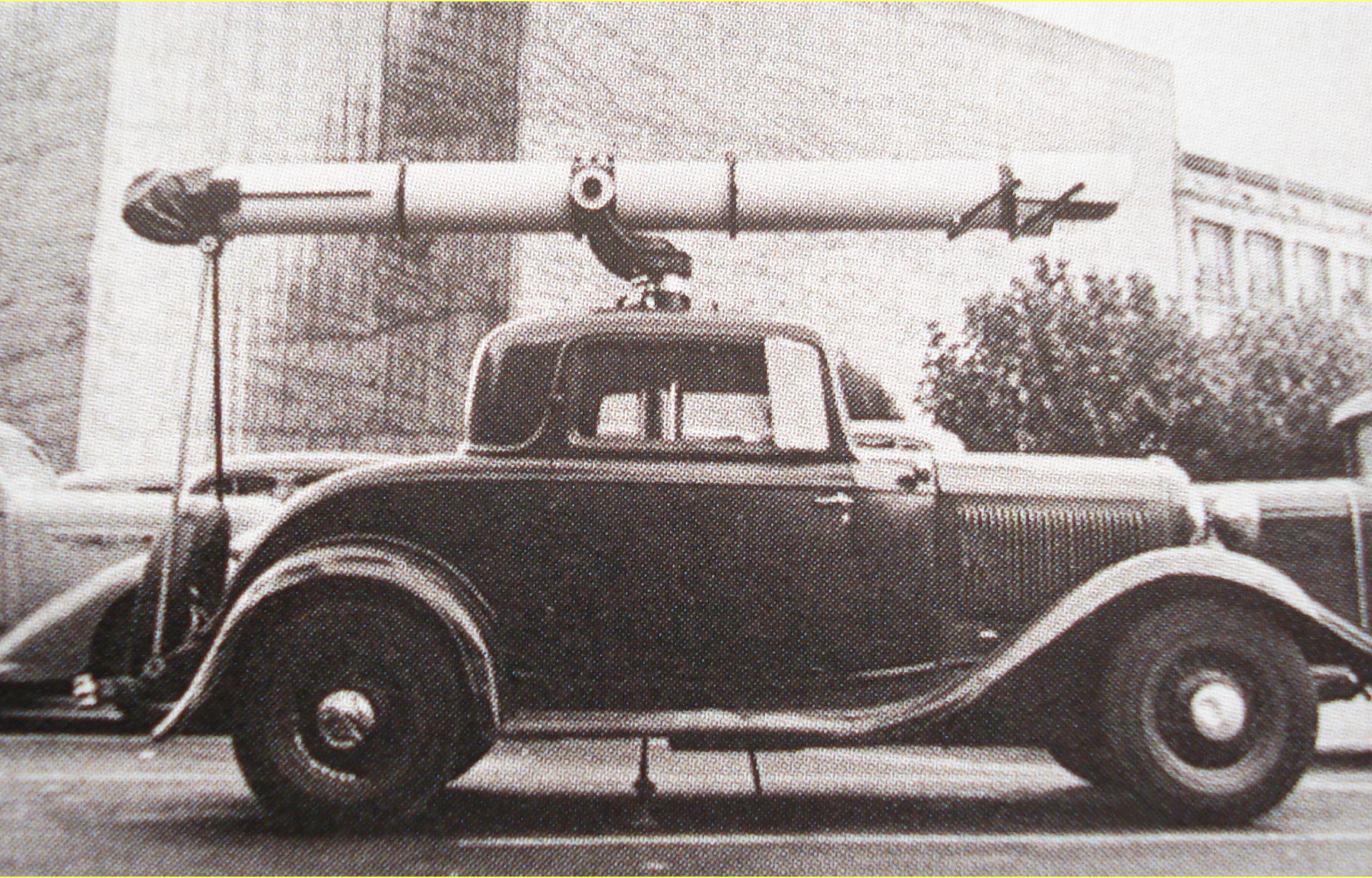
To name just a few from the large community of occultation observer.

I live in the north of Germany,

my "normal" radius of action is 400 km.

For rare outstanding special events,
I extend my radius to all of Europe,
the USA and China.

All equipment is transported with my car.



This solution < Stoodscope > was published just this month in Ciel&espace AOÛT 2021

Le Stoodyscope
était aux yeux de
Shelly Stody, son
créateur, l'instrument
de la liberté absolue,
celui qui pouvait lui
permettre d'accéder
en quelques tours
de roue aux ciels des
plus purs



a very strange equipment
not my way
of mobile observation

I have been observing occultations
for 40 years and in the meantime I have
acquired a lot of astronomical
equipment.

At the moment I am working with two
arrangements

Max and Moritz



MAX

Moritz



MAX



MAX



Home of Moritz









Preparing for ESOP

overview of upcoming events

Occult Watcher, ver. 5.0.0.5 - Mobile (UTC +02:00 Sommerzeit)

Jetzt synchronisieren Konfiguration Add-ins Hilfe

Name Asteroid	Datum Ereignis...	Rang	Distanz Erd...	Magn..	Stern ...	Max. Dauer	Abn...	Meine ge...	Feed	Gemeldete Stationen	Letztes Update
Meine Ereignisse											
<input type="checkbox"/> (16046) Gregnorman	Mo 09 Aug, 02:46	71	169 km...	4,3	4,3	2,7	14,0	2	IOTA	8	15 Jul, 22:12 *
<input type="checkbox"/> (3317) Paris	Di 10 Aug, 23:40	82	180 km...	12,8	12,9	8,7	2,7	1	LuckyStar	19	30 Jul, 20:27
<input type="checkbox"/> (648) Pippa	Mi 18 Aug, 02:02	100	213 km...	12,0	12,1	13,4	3,1	1	IOTA	9	15 Jul, 22:13 *
<input checked="" type="checkbox"/> (1437) Diomedes	Sa 21 Aug, 00:49	70	5 km...	13,8	14,0	5,2	2,2	1	LuckyStar	8	30 Jul, 20:27
<input checked="" type="checkbox"/> (54598) Bienor	Mi 25 Aug, 00:28	52	130 km...	16,9	17,0	9,2	2,5	1	LuckyStar	2	30 Jul, 20:27
<input checked="" type="checkbox"/> (276) Adelheid	Di 31 Aug, 23:29	100	10 km...	12,1	12,2	14,0	2,3	1	IOTA	4	15 Jul, 22:16 *

GREGNORMAN : clouded out

PARIS : wrong starfield,
no significant brighter stars to find the target

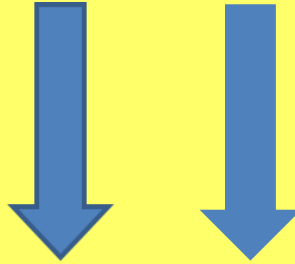
====> PIPPA ! : careful observation of the weather forecast

Wolkenbedeckung_in [%]

??? 17.08.2021



Moritz Max

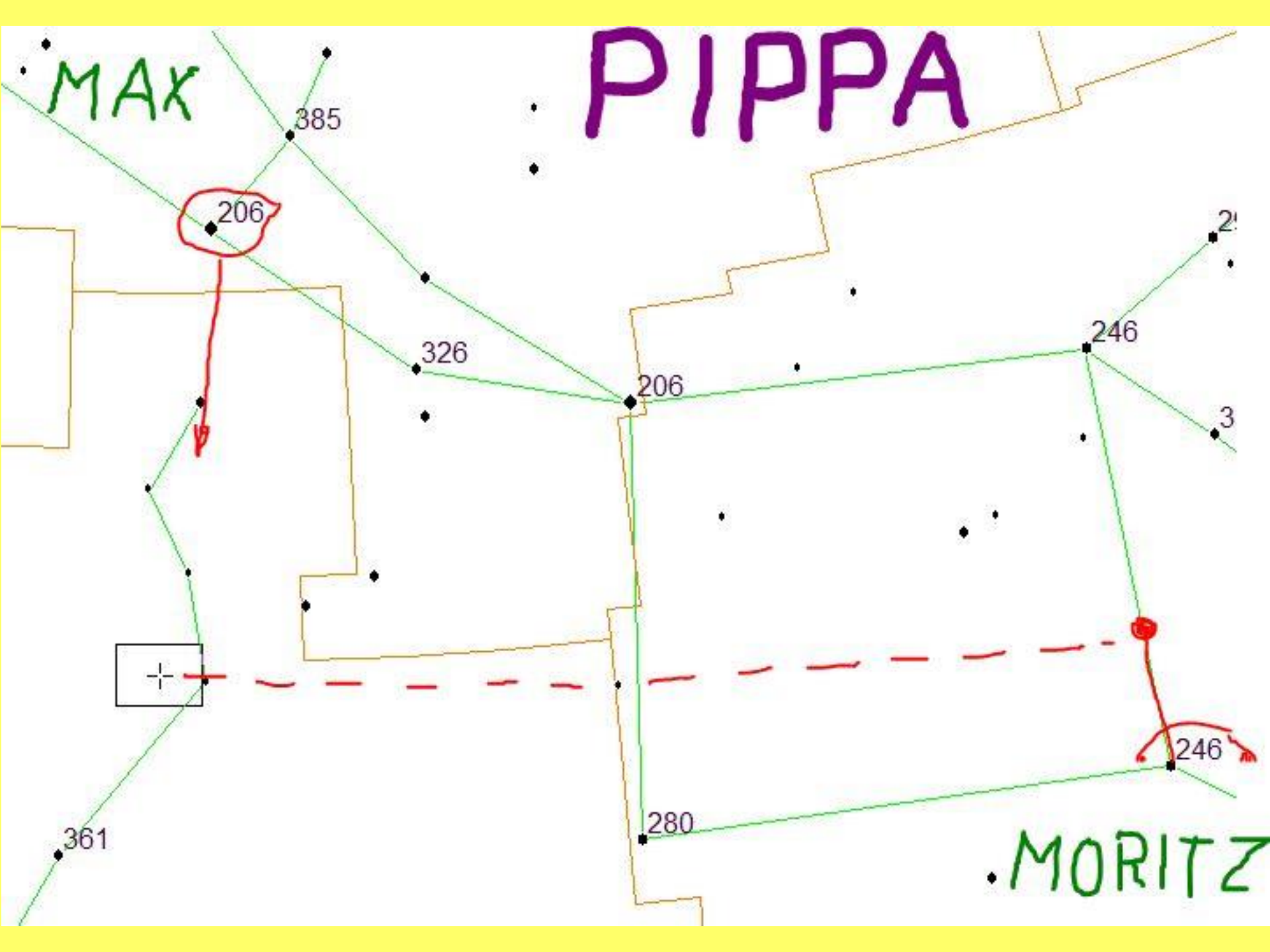


GREEN LINE

Distribution of observers according to Occult Watcher

MAX

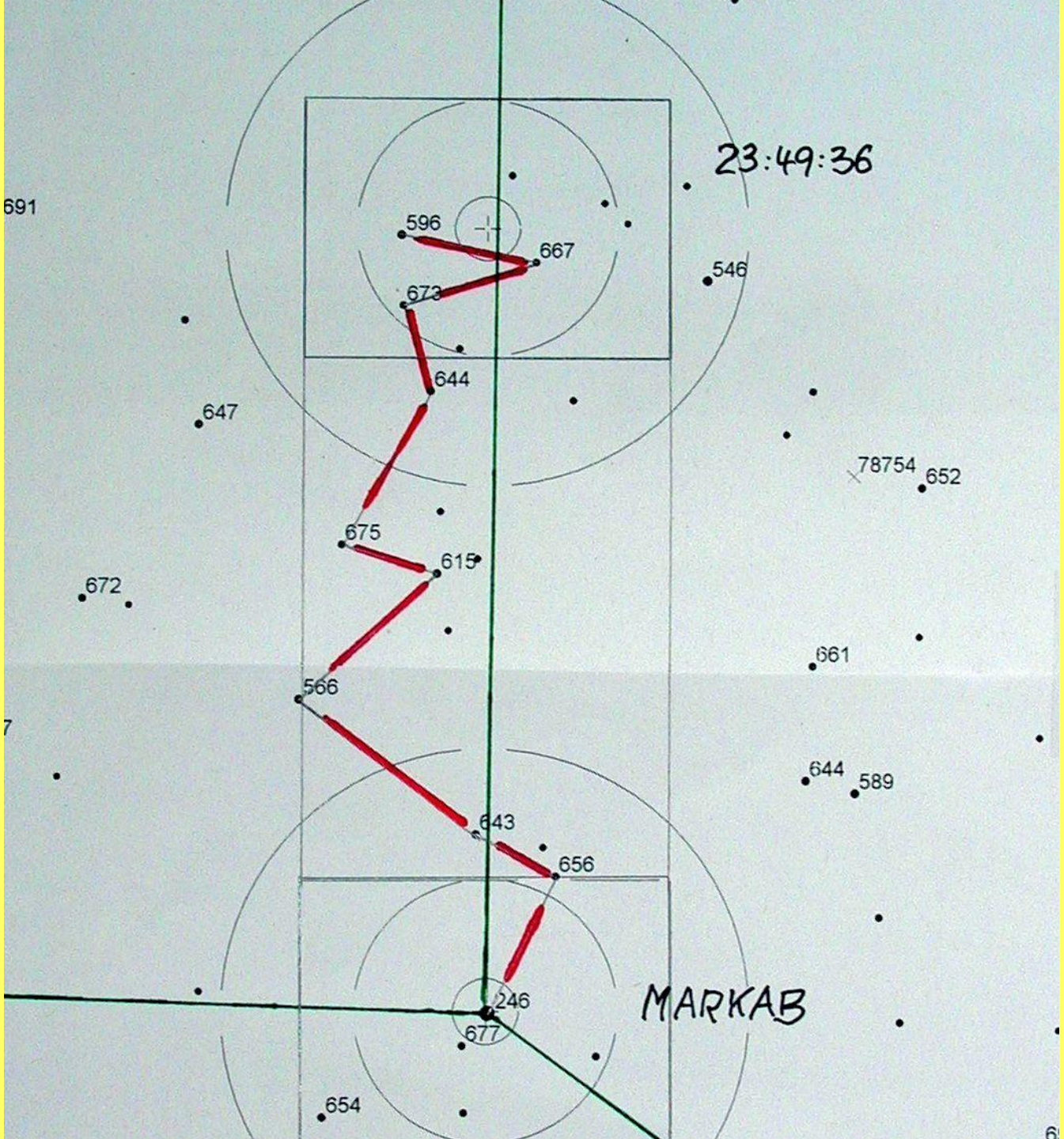
PIPPA



MORITZ

assembling Moritz OK

Adjust field "prepointing" OK



assembling Moritz OK

Adjust field "prepointing" OK

Cancel:

not predicted clouds cover the sky

assembling Moritz OK

Adjust field "prepointing" OK

Cancel:

not predicted clouds cover the sky

End of

a carefully prepared Pippa excursion



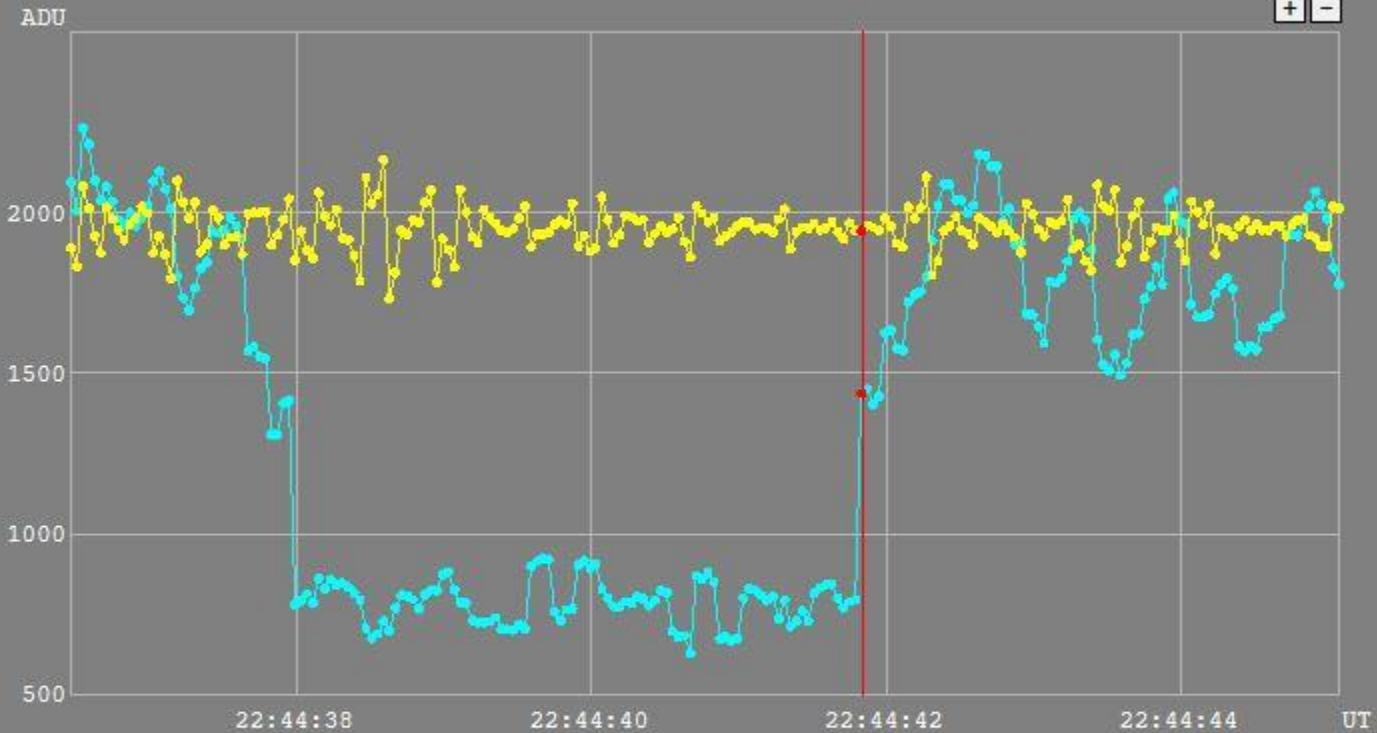
V09

355

210110:224410GE375

Light Curve - Aperture Photometry, Average Background

File Data Customize Add-ins



<

Frame No: 1323
★ Time: 22:44:41.854



Signal-minus-Background ▾ Normalised ▾ No Binning ▾ Include Objects ▾

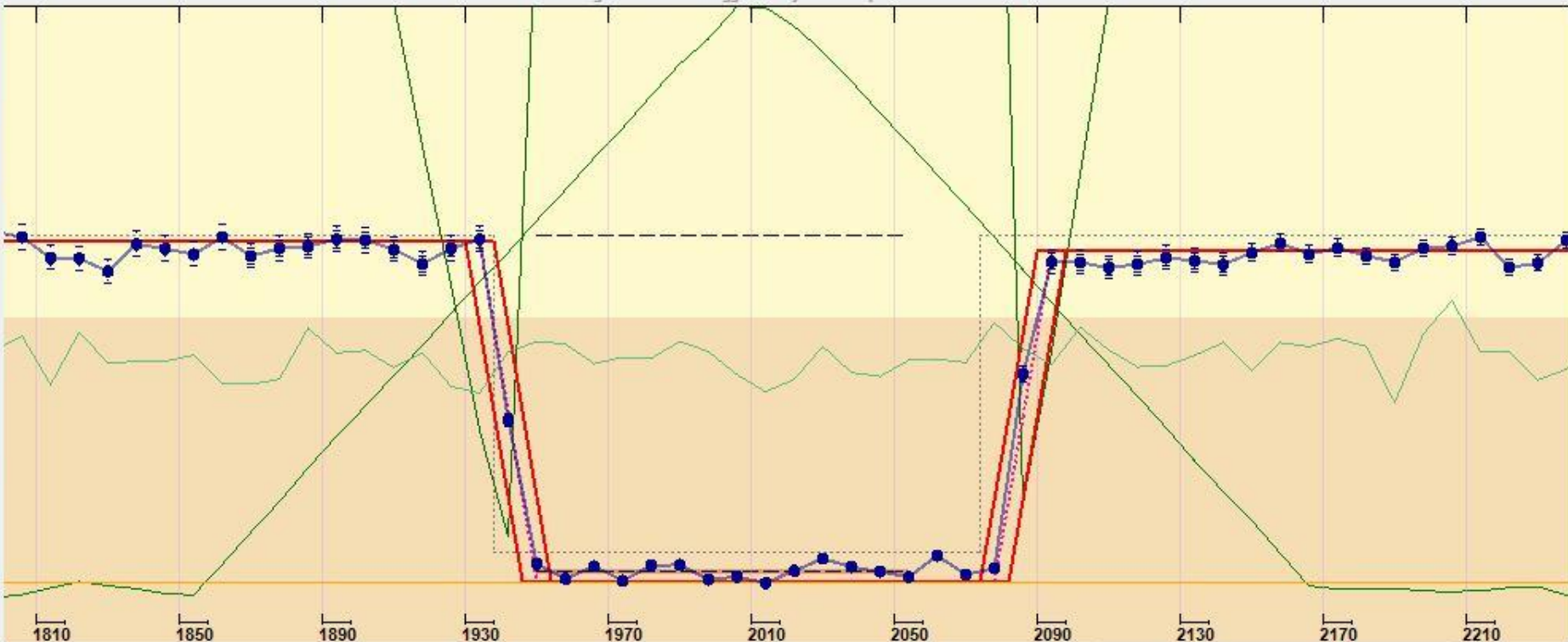


P8

23 : 28 : 25

0354 714517

CTRL + Right-click - to toggle validity of a data point



Scale. Objects

Horizontal

Vertical

- point average

its Target star

Comparison star 1

Comparison star 2

Comparison star 3

Background

1. Read, Integrity, Set time, Bin & normalise
2. (info) Fourier plot
3. Find events
4. Select event to analyse
5. Analyse event #1
6. Camera corrections & final times Event #1

Camera corrections

<p>Video camera</p> <p>WAT-120N+</p> <p>Camera delay: 0.8 frames</p> <p>Number of video frames integrated: <input type="text" value="8"/></p> <p>Exposure delay: 8 frames</p>	<p>Video system</p> <p><input type="radio"/> NTSC <input checked="" type="radio"/> PAL <input type="radio"/> Other <input type="radio"/> Unknown (ADVS, AAV, SER)</p> <p>Time difference from video stamp to start of exposure: -0.350 secs</p>
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Final results ** Event #1

Time Source: Tangra

D at frame 1942.0 +4.0/-4.0
 UTC of D 23 29 42.32 ± 0.16
 Transition 8 frames

R at frame 2086.0 +4.0/-4.0
 UTC of R 23 29 48.08 ± 0.16
 Transition 8 frames

Save AOTA images

1 events to analyse



THE END

THANK YOU FOR LISTENING

