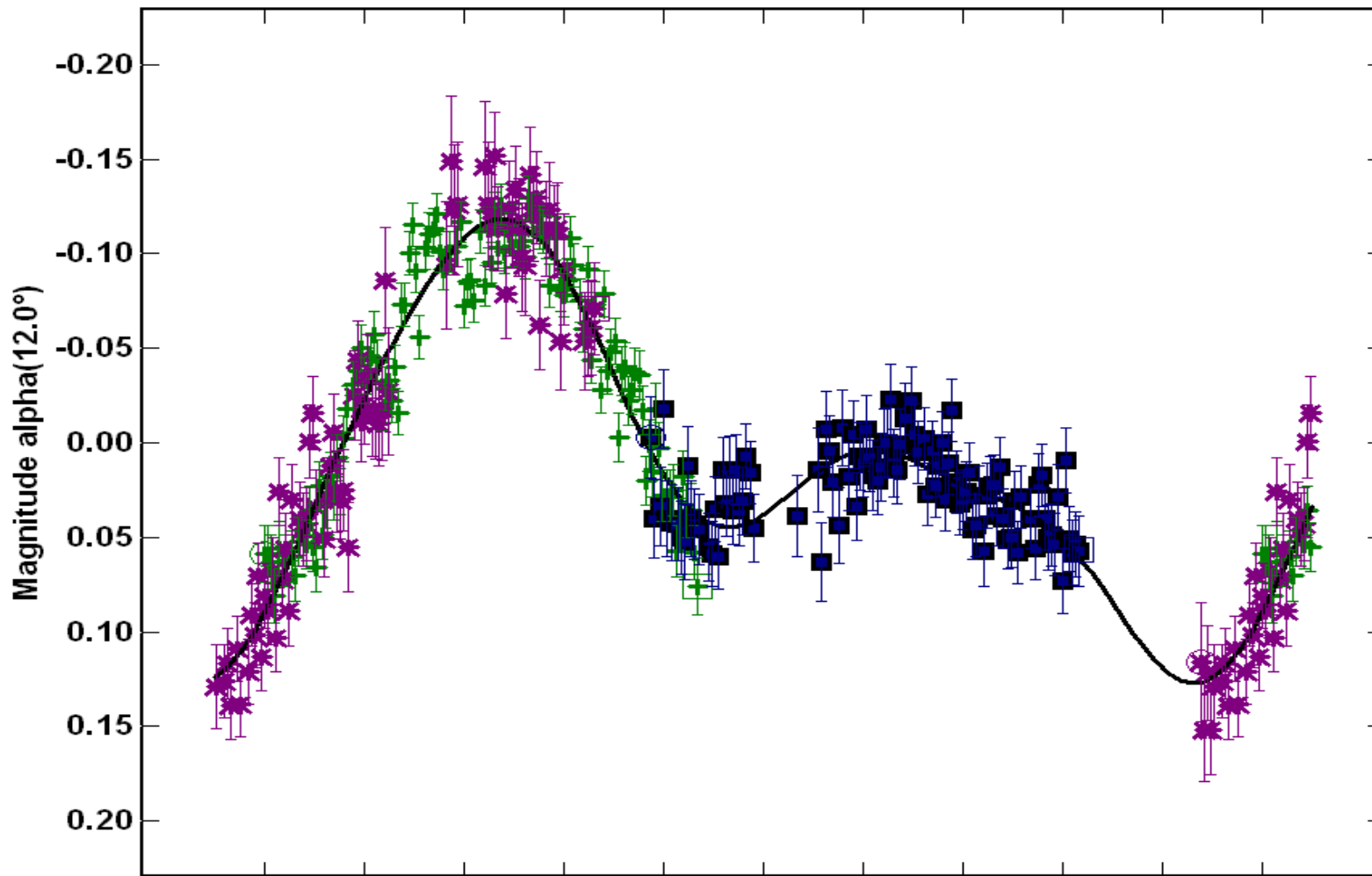


Phased Plot: 2448 Sholokhov

Year: 2013
+ 285 - 05/13
■ 286 - 05/14
* 287 - 05/26



Period: 10.062 ± 0.002 h Amp: 0.25 JDo(LTC): 2456426.360734

Summary

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Assumptions

Discovered 18/01/1975 at Crimean Astrophysical Observatory by Ljudmila Ivanovna Cernych

Semi-major axis: 2.7933UA

Orbital eccentricity: 0.1126

Orbital inclination: 17.71°

Diameter: 30 Km

This minor planet is reported on Minor Planet Bulletin n. 40-2 with period = 10.065 hours, amplitude = 0.63 Mag. and quality code 2+

Initial data

Analysis was done with measurement taken between 13/05/2013 and 26/05/2013.

Observations cover 13 days span.

These sessions was included

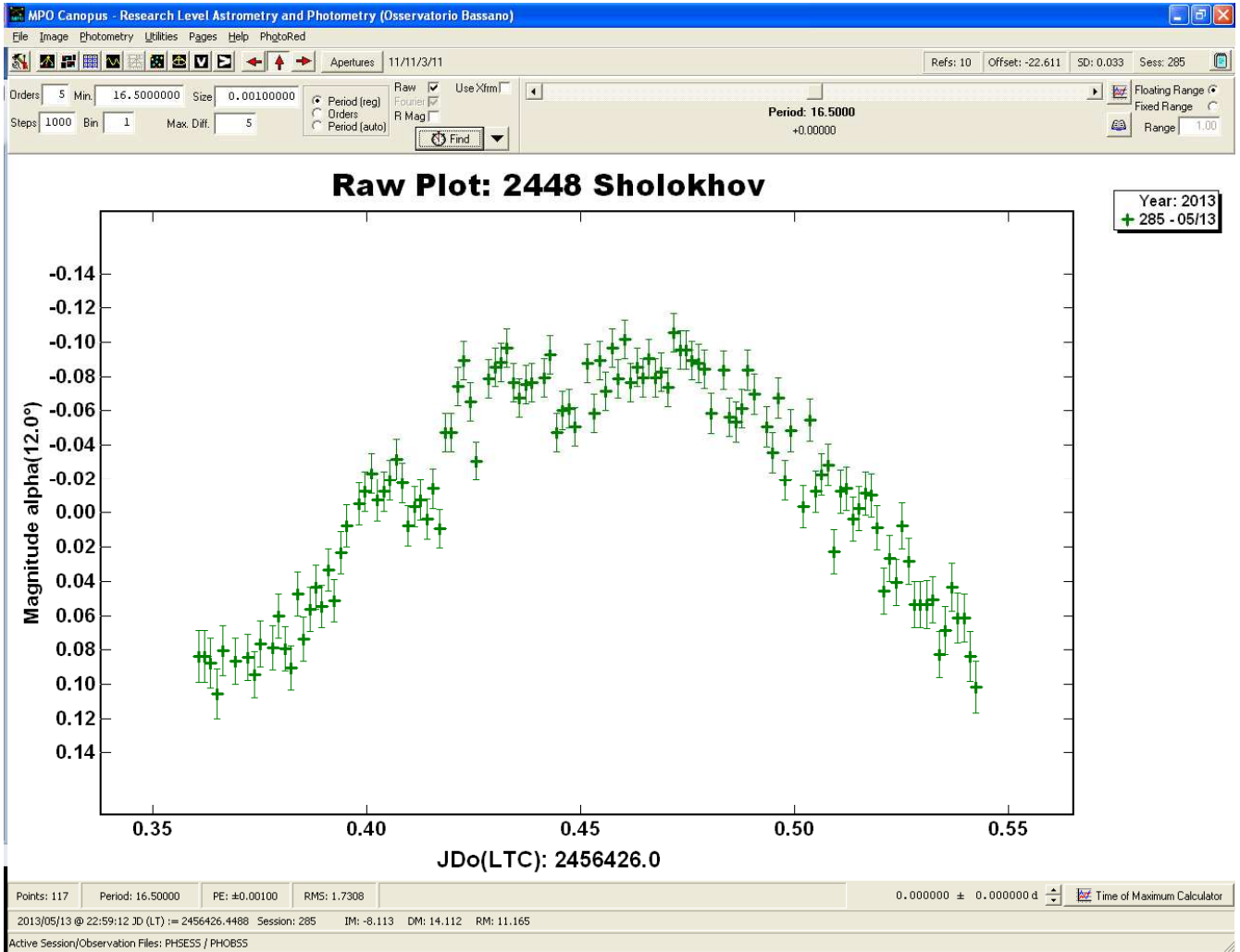
Bassano Bresciano Observatory

Jun 2013

2448 Sholokhov rotation time find out

Pag.3

Sessions 285 taken 13/05/2013



117 points in 4:20 hours

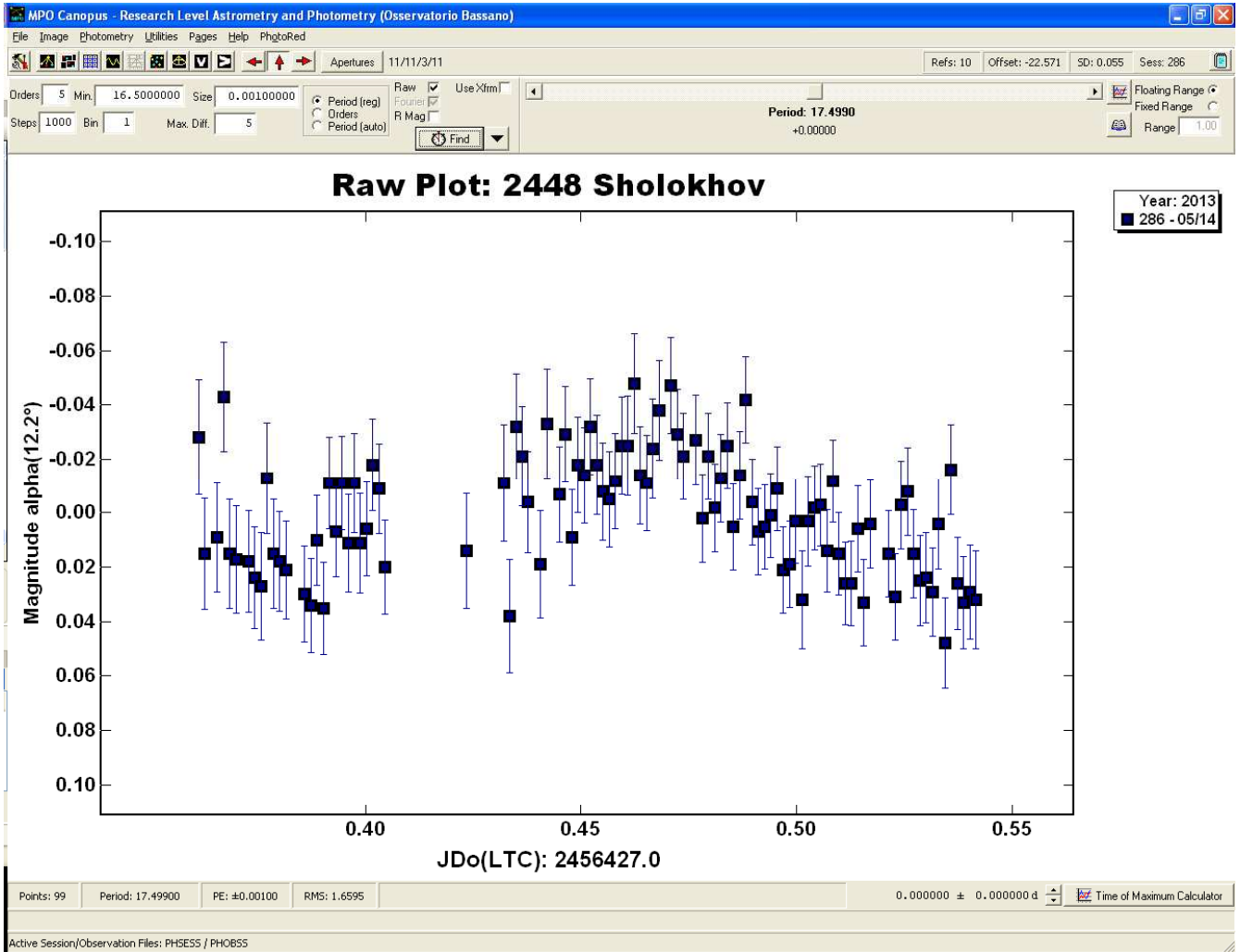
Bassano Bresciano Observatory

Jun 2013

2448 Sholokhov rotation time find out

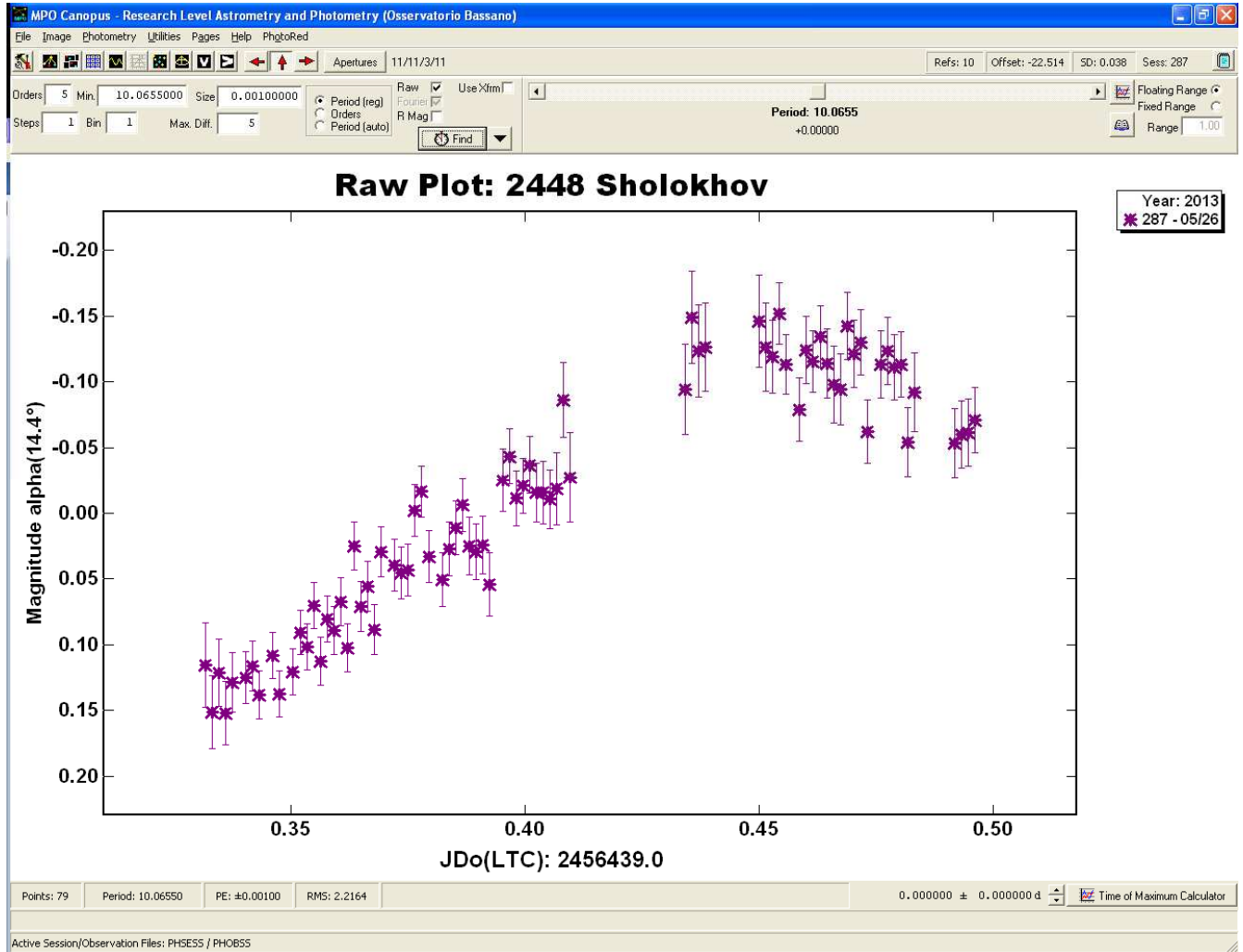
Pag.4

Session 286 taken 14/05/2013



99 points in 4:15 hours

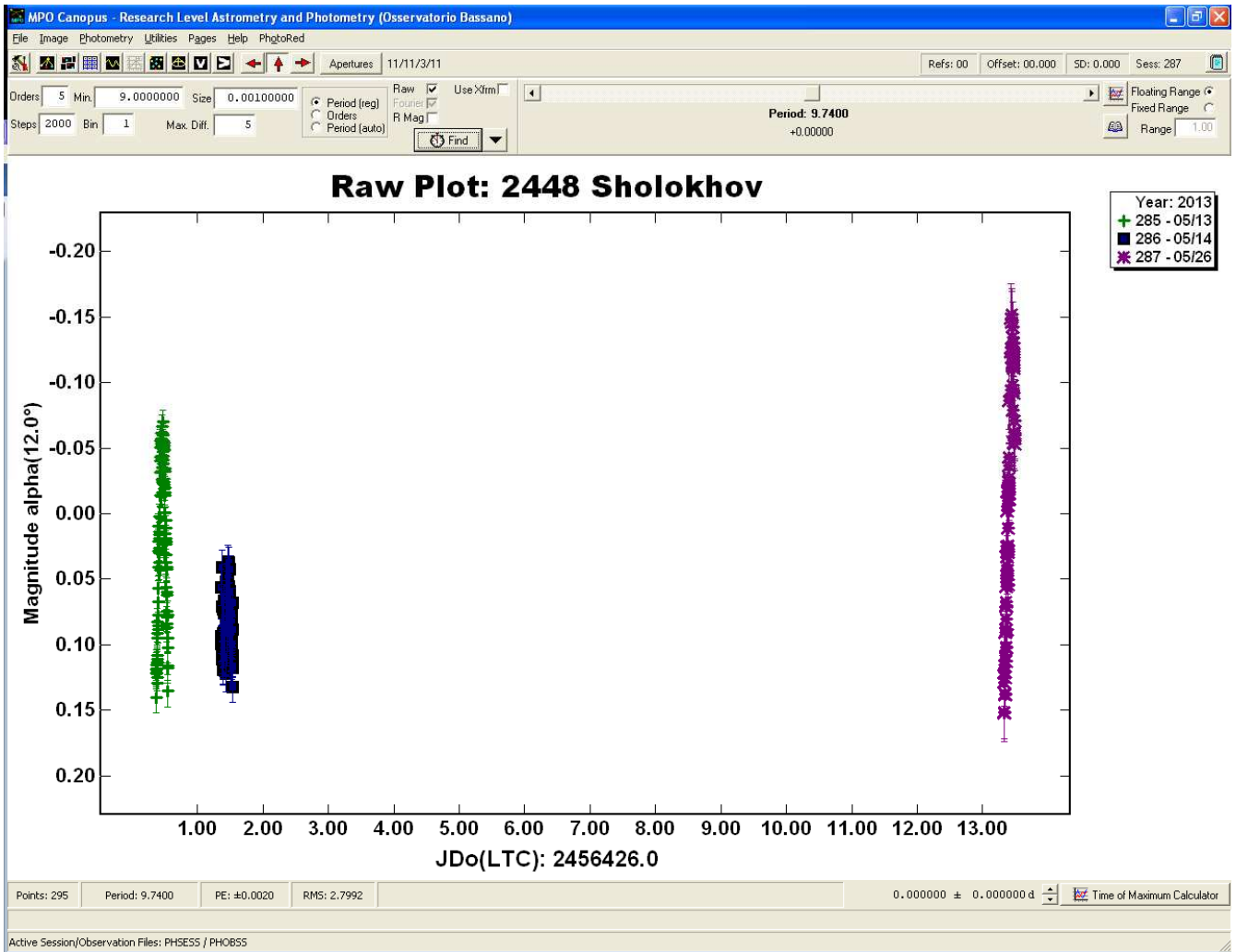
Sessions 287 taken 26/05/2013



79 points in 4:20 hours

Analysis

A first check was done with all raw values.

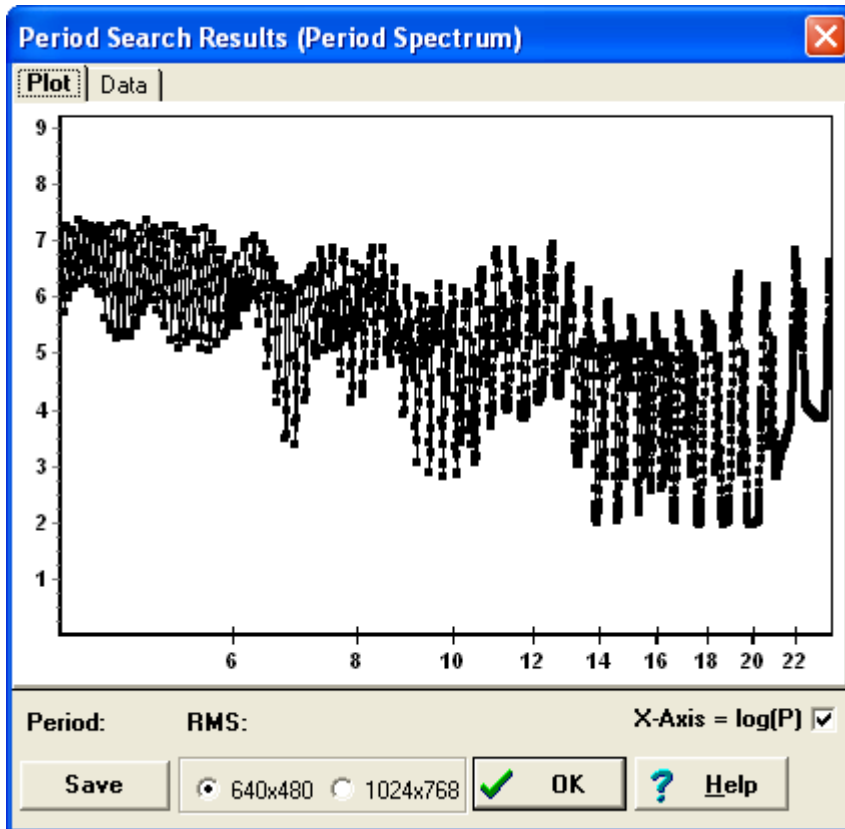


Sessions from 285 to 286 have a good catalog check.

From single night measurement is clear period should be more than 4 hours if monomodal and 6 hours if bimodal.

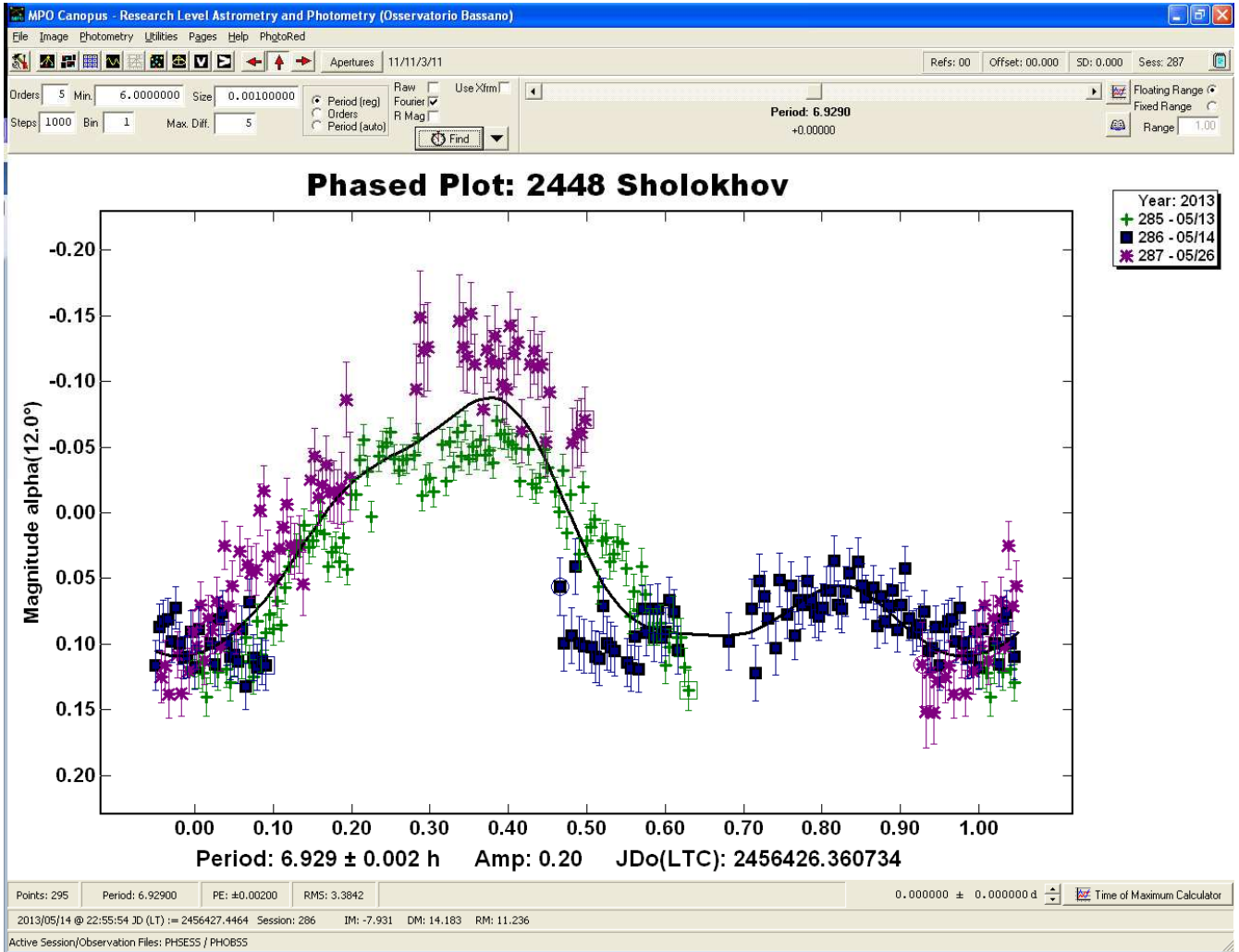
A first analysis was done in the range between 4 and 24 hours with step 0.01.

This is period spectrum.



It show possible rotation time at: 6.6, 10, 14.5, 18

An analysis in the range between 6.0 and 7.0 hours with step 0.001 shows this phase diagram.



Good correlation

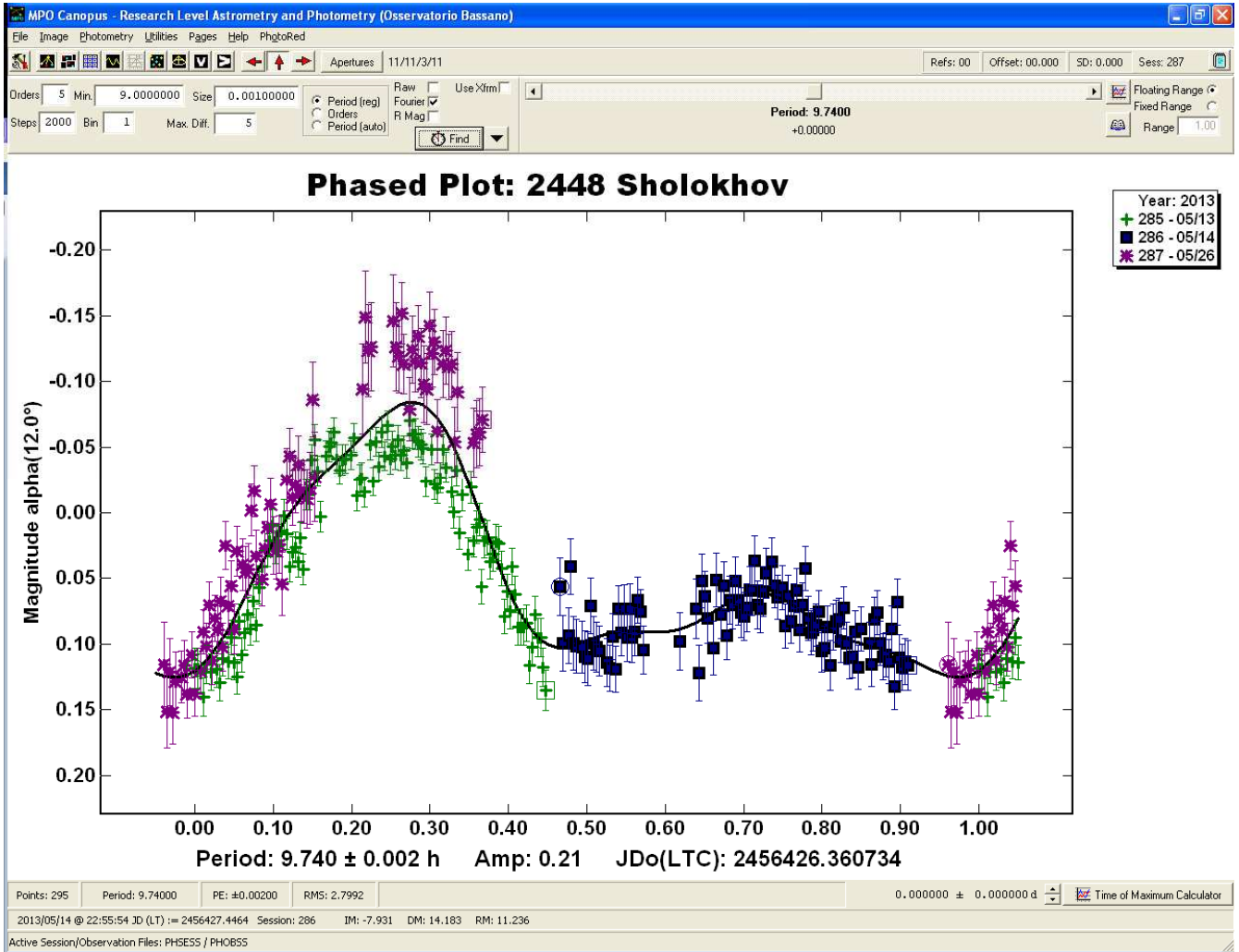
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2448 Sholokhov rotation time find out

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An analysis in the range between 9.0 and 11.0 hours with step 0.001 shows this phase diagram.



Good correlation.

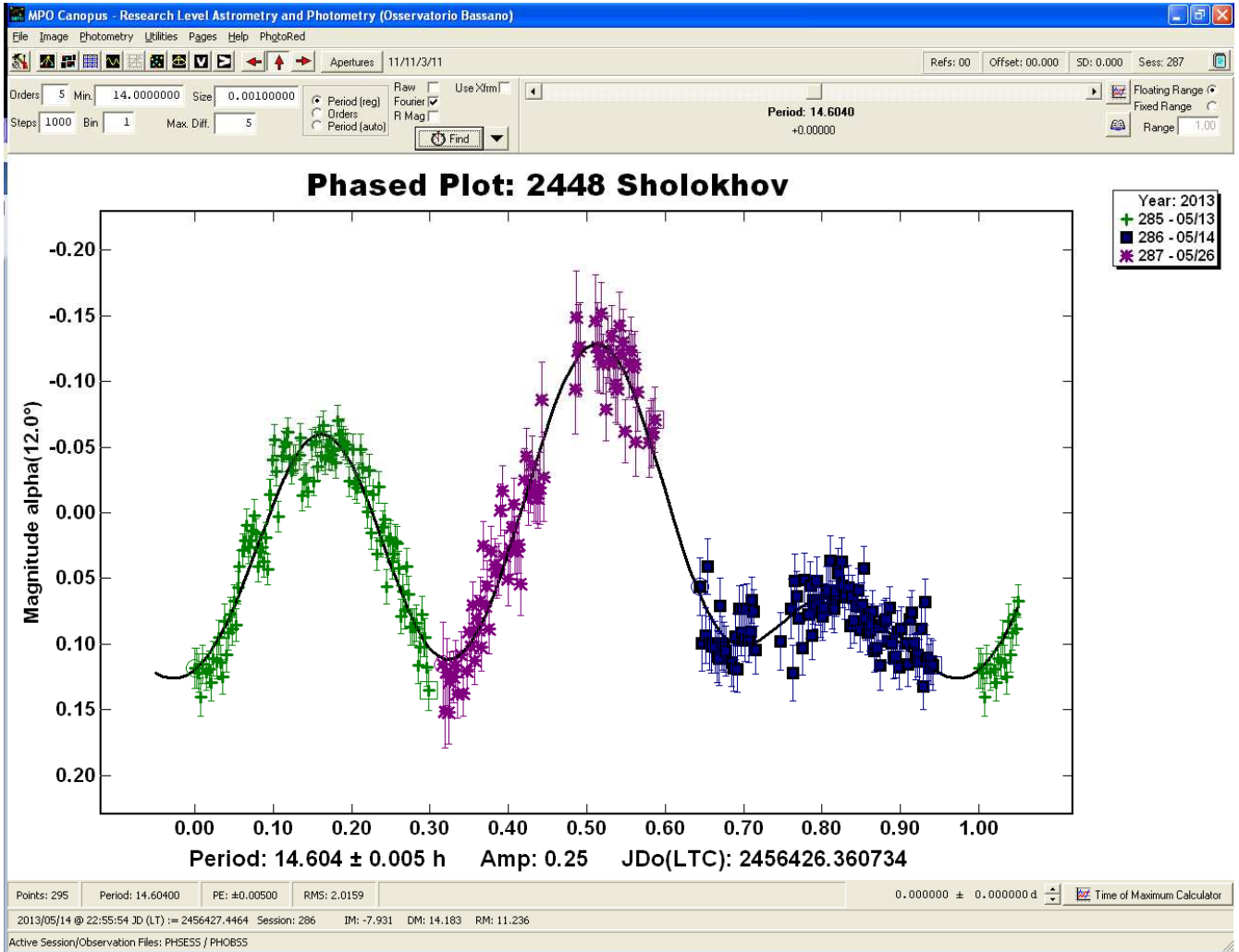
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Jun 2013

2448 Sholokhov rotation time find out

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An analysis in the range between 14.0 and 15.0 hours with step 0.001 shows this phase diagram.



Three modal solution not good.

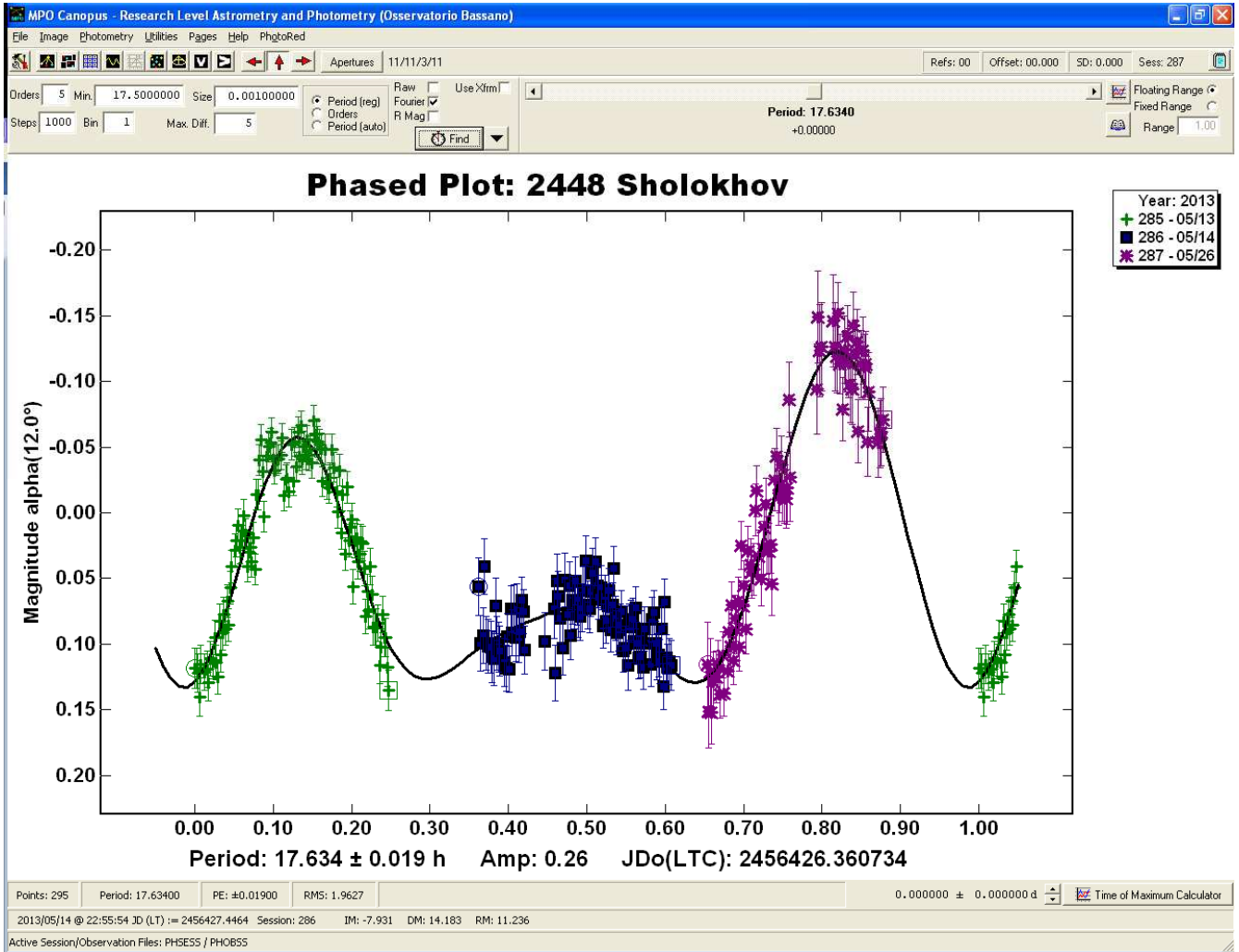
Bassano Bresciano Observatory

Jun 2013

2448 Sholokhov rotation time find out

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An analysis in the range between 17.5 and 18.5 hours with step 0.001 shows this phase diagram.



Three modal solution not good.

First and second solution have a good correlation, the second one is a little bit better and is congruent with previous observation. However analysis is suffering of undersampling. Session 285 and 286 don't show oversampling and have a good catalogue check so we decided to leave delta compensation zero on these.

Sessions 287 delta comp is moved in order to find the RMS minimum search playing around its delta comp.

At the end of this activity session 287 comp sessions is 0.60 Mag

With this phased plot.

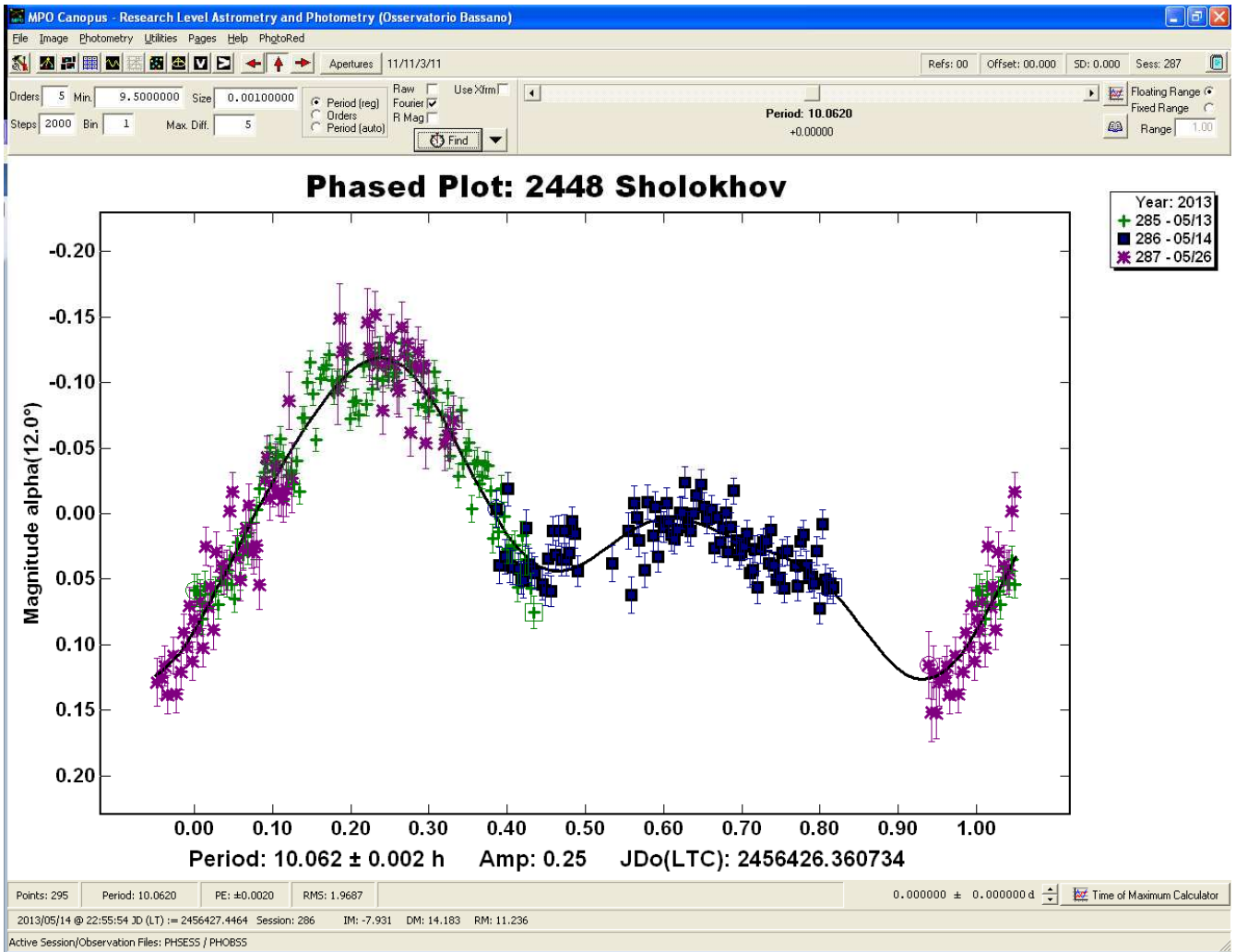


Diagram shows 10.062 hours period.

Conclusion

2448 Sholokhov. It was selected from "Lightcurve Photometry opportunities: 2013 April-June" *Minor Planet Bulletin* 40. With period = 10.065 hours, amplitude 0.63 Mag. and quality code 2+. This period was based on Brian D. Warner observation reported on *Minor Planet Bulletin* 32 January-March. It was been observed for 3 nights covering 13 days span. Amplitude was lower than Warner observation but our observation seems confirm period. A good correlation was be found on period $P = 10.062$ hours with amplitude $A = 0.252 \pm 0.03$ Mag.