Measuring Neglected Double Stars with an Altaz Telescope: Report for 2011

Lucian Curelaru

Brasov, Romania
lucian.curelaru@gmail.com

Abstract: This article presents a set of neglected double star measurements obtained with an altaz telescope. The method used is similar with one presented in a previous article [1].

Measuring setups and methods

I present here some neglected measurements made using same instruments (first setup only) and methods as presented in our last year report [1] . The only change I've made is that the Nexstar 6 SE telescope was replaced by a CPC 800 Celestron telescope. The rest of the setup, the methods and corrections applied remained unchanged. The new telescope has a 2000mm focal length enlarged with a 2.5x barlow to 5000mm. This will give a final pixel size of 0.250213 arcseconds. A few objects were measured without using the barlow with a pixel size of 0.61639

I used double stars STF 2272, STF 2727, and HN28 for calibration with the barlow lens. I used STF 422, STF 1196, and STF 1066 for calibration without the barlow.

Resulted measurements

Using the described instruments and methods, I measured 16 neglected double stars. The results are presented in Table 1. Also, I measured 3 other objects which are not neglected, but they were in the close neighborhood or in the same field with target objects. These measurements are presented in Table 2.The magnitudes in the tables were taken from the WDS catalog.

Conclusion

This is the second measuring project using alt-az setups and planetary cameras.

I also measured some double stars which are not neglected and were measured recently by other observers. These stars are similar to the other objects I've measured from magnitude point of view but also from separation. These measurements, being close to the previous measurements, show that the methods and instruments used are proper for this type of job.

References

1. Lucian Curelaru, Florin Marc : Measuring Neglected Double Stars with Two Alt-Az Telescopes, Journal of Double Star Observations, Vol. 7 No.2 , Pages 99-103, 2011.

Measuring Neglected Double Stars with an Altaz Telescope: Report for 2011

Table 1: Measurements of Neglected Double Stars.

Name	RA+DEC	Mags	PA	Sep	Date	N	Notes
BU 140	19169-1058	7.00, 10.40	311.6	47.69	2011.603	1	1
ES 220	23208+6225	8.13, 11.10	84.3	35.99	2011.628	1	1
FOX 256	21084-1454	8.30, 11.60	281.2	15.78	2011.598	1	1
HJ 1651	21288+4809	10.48, 11.20	343.2	11.52	2011.639	1	1,3
HJ 863	18349-0317	10.92, 10.80	257.6	10.67	2011.636	1	1
HJ 876	19082+0859	7.68, 10.80	348.6	29.47	2011.557	1	1
HO 564AC	18025+2619	7.08, 11.00	59.5	137.50	2011.401	1	1,4
J 1658	18500-1826	8.44, 11.20	63.5	8.68	2011.619	1	1
POU3553	18479+2422	10.68, 12.00	2.2	4.64	2011.622	1	1
SLE 371	21134+3404	9.55, 9.70	282.7	12.67	2011.633	1	1
H6 69AB	02094+2556	4.99, 8.01	35.7	92.56	2011.661	1	1
PLQ 48AB-C	01274+0658	8.50, 11.40	28.4	57.12	2011.674	1	1
FOX 117AC	01282+3441	9.70, 11.00	67.7	62.85	2011.658	1	2
BUP 24	01422-1753	7.45, 12.00	283.2	140.07	2011.674	1	2
J 3041BC	20010+0853	11.00, 11.00	132.2	14.67	2011.658	1	2
J 3041AB	20010+0853	11.00, 11.00	104.2	3.82	2011.658	1	2

Table 2: Measurements of Un-neglected Stars.

Name	RA+DEC	Mags	PA	Sep	Date	N	Notes
STF1640	12243+6348	8.57, 10.70	243.2	36.82	2011.633	1	1
H6 69AC	02094+2556	5.02, 7.97	278.6	104.6	2011.661	1	1
HO 8AB	01282+3441	9.70, 10.30	252.7	4.04	2011.658	1	2

Table Notes:

1. Measurements performed using barlow
2. Measurements performed without barlow
3. The PA difference comparing with last measurement is big. Still my PA is very close to the first measured PA. Moreover, on survey images the PA is also close to my measurements.
4. There is a big difference on separation comparing the WDS data. However, this component matches the PA and magnitude, so I presume it is the correct one.