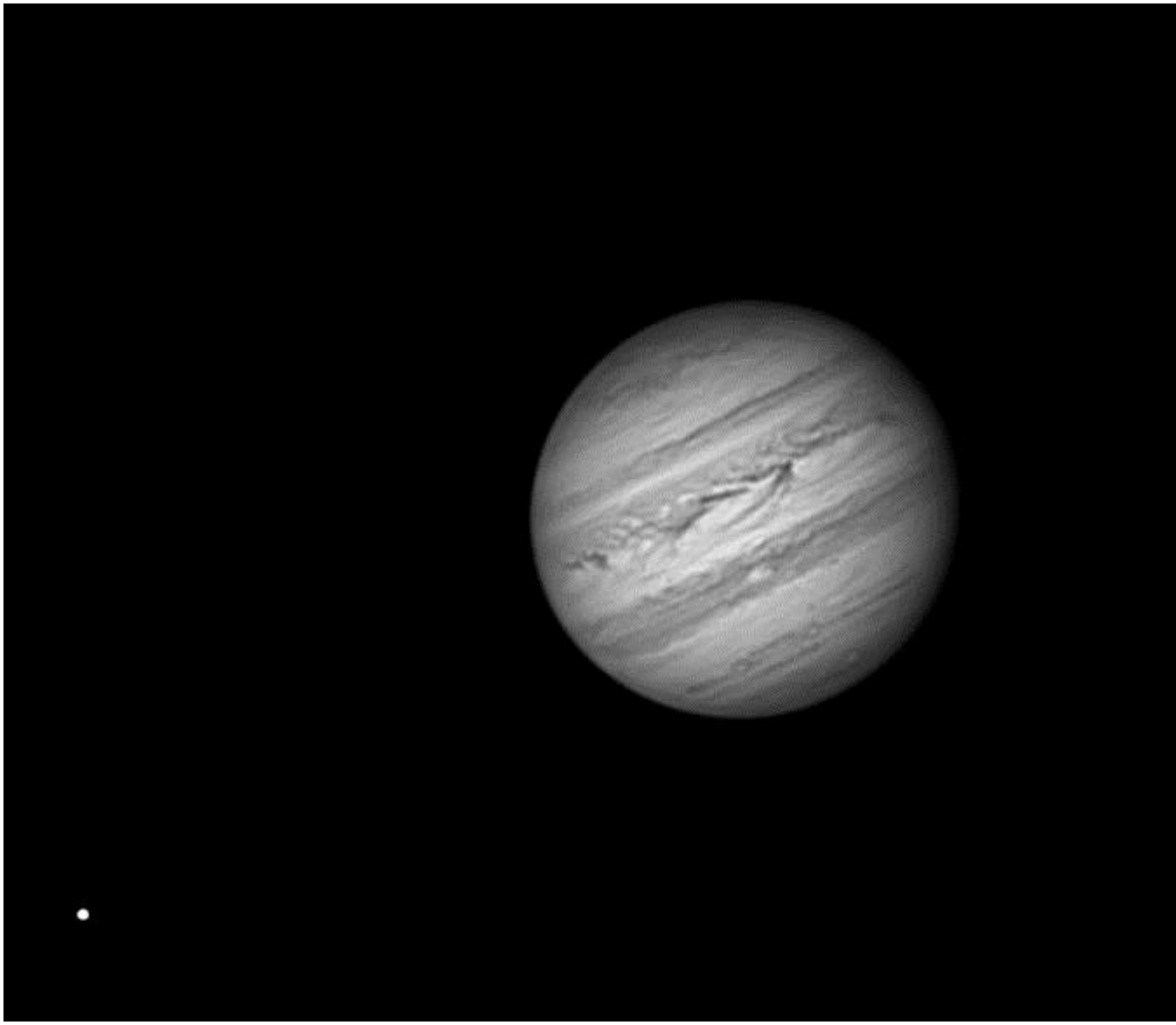
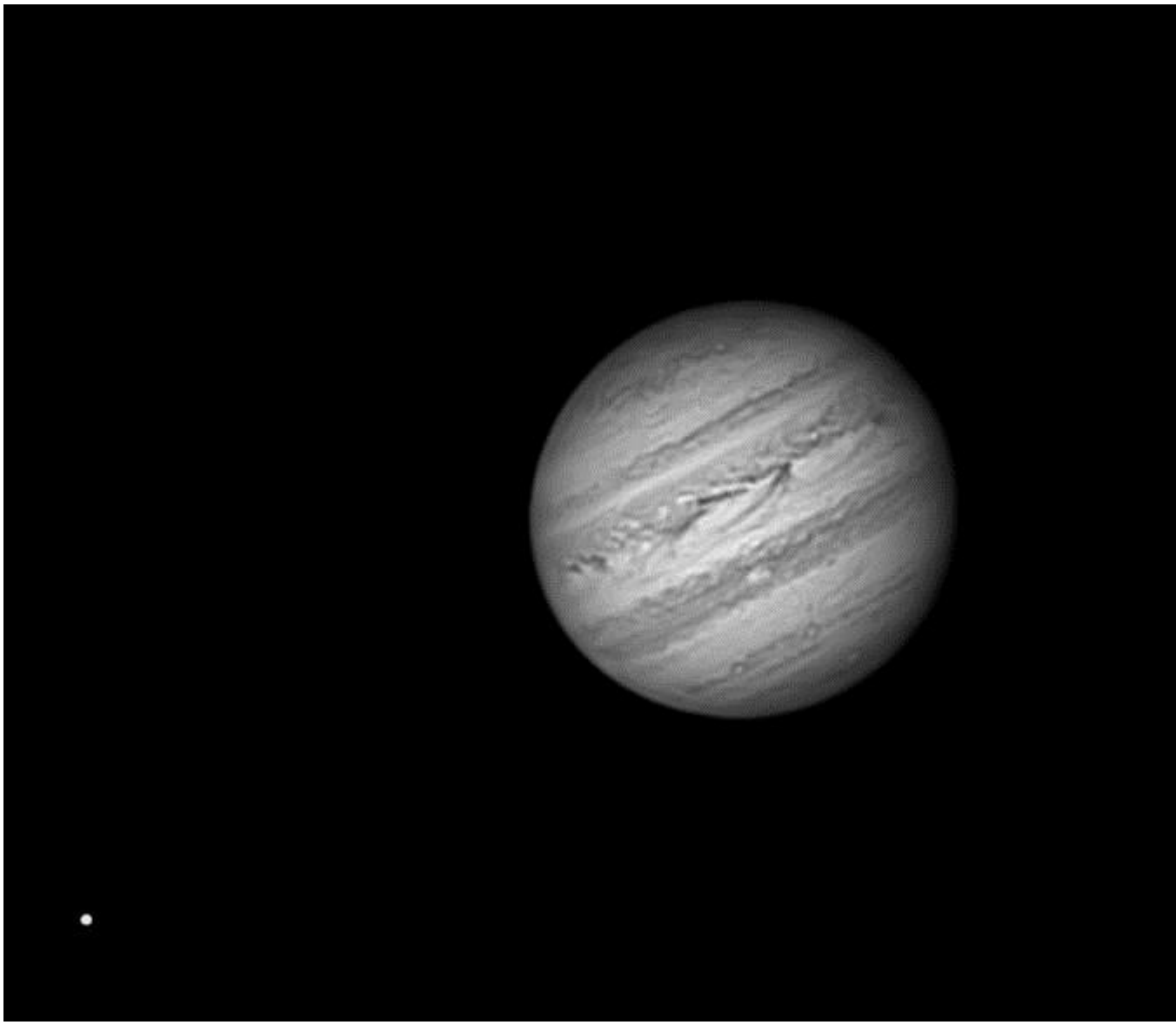
Posted 07 September 2012 - 06:34 AM

Using the version 10 of winjupos (thank you Grischa) I did a test on a 10 minutes IR capture. My setup is AltAz so there is field rotation too. This version actually offers the possibility to correct the field rotation. And based on what I got, it works!

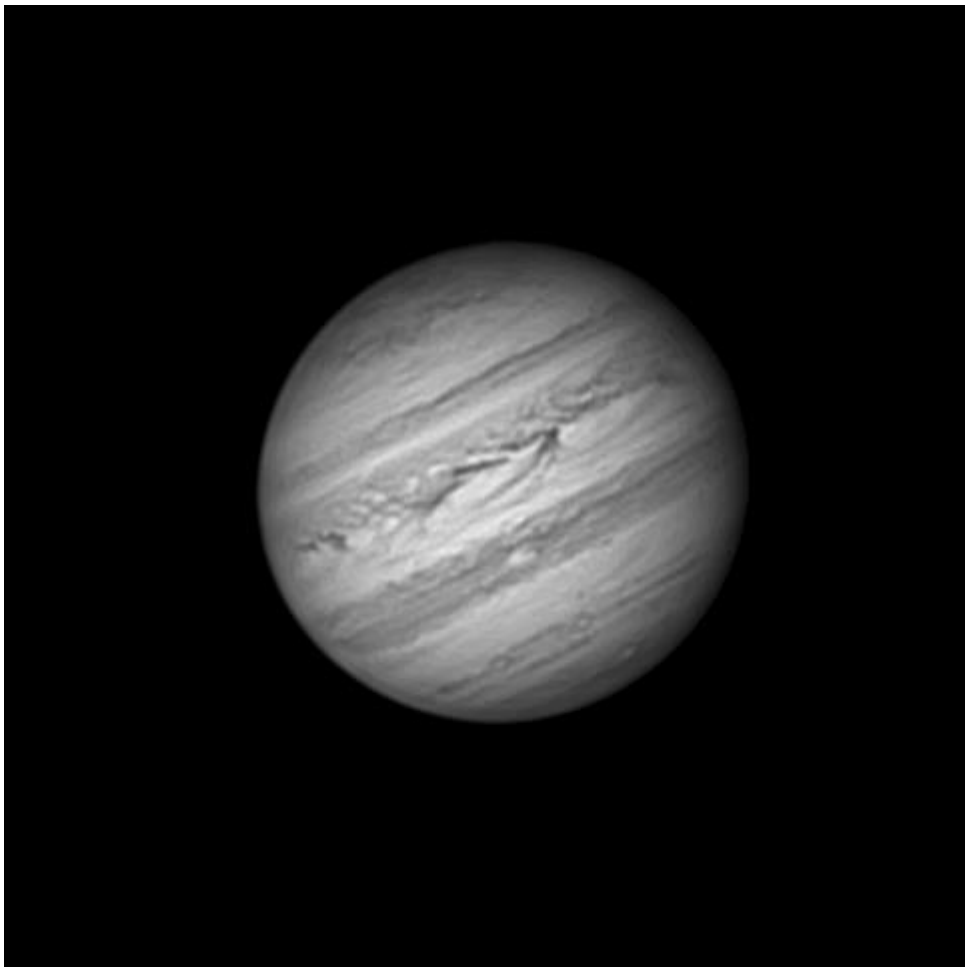
Normal stack (autostakkert) without derotation.



Derotation with altAz correction, then stacking with Autostakkert.



Animation of the two globes. Note how Autostakkert maintained some coherence even over 10 minutes (great software!), but moved the surface detail.



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#2 MvZ

MvZ

Surveyor 1

-
-
- Posts: 1745
- Joined: 03 Apr 2007
- Loc: The Netherlands

Posted 07 September 2012 - 07:00 AM

This shows pretty much what I expect of such a recording when using AS!2 alone. The center of Jupiter remains more or less the same (but shifted) in 10 minutes, so it is able to track that, also because the field rotation is smallest there. But towards the edges it becomes more difficult to track features. Especially the field rotation effect is largest there.

And still there are no seems visible

But this seems like a very interesting recording for testing and generating new algorithms in AS!2 especially for alt/az mounts. Would you be willing to share this video with me (and possible also a video of a larger surface, a lunar video perhaps?).

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#3 flava

flava

Vostok 1

- 

topic starter

- Posts: 148
- Joined: 30 Jul 2009

Posted 07 September 2012 - 07:12 AM

No problem, I can send you the video (it is about 600Mo zipped) and make you a 1280x2014 10 minutes or more lunar video. It'll be bigger though. I'll send you my email by MP so you tell me where to upload the file.

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#4 bunyon

bunyon

Soyuz

- ★★★★★
- 
- Posts: 3691
- Joined: 23 Oct 2010
- Loc: Winston-Salem, NC

Posted 07 September 2012 - 12:01 PM

Emil,
I could send you some alt/az video if you need, as well.

I imaged this morning before reading this thread so limited myself to 100s captures. Here is a gif of two frames, original and derotated. Not much difference over this short time span.

Attached Files

- 5408297-derotation-animation.gif 139.35KB 32 downloads

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#5 MvZ

MvZ

Surveyor 1

- ★★★★★

- 
- Posts: 1745
- Joined: 03 Apr 2007
- Loc: The Netherlands

Posted 07 September 2012 - 02:35 PM

Sure, that would be nice.

I don't see any difference in details in your recording Paul. The derotated is a bit smoother, but that is to be expected if most frames are interpolated. It's likely only going to be a problem with longer recordings (or when combining R, G and B stacks).

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#6 Space Cowboy

Space Cowboy

Apollo

- 
- 
- Posts: 1381
- Joined: 30 May 2010
- Loc: Cheshire, UK

Posted 07 September 2012 - 03:26 PM

Thats a fantastic example of the de-rotation effect. I'm surprised how well the 10 min straight image has come out but the animation clearly shows how the finest detail is smeared.

I too use alt/az.

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#7 MvZ

MvZ

Surveyor 1

- 
- Posts: 1745
- Joined: 03 Apr 2007
- Loc: The Netherlands

Posted 07 September 2012 - 03:35 PM

Just to make sure here; there are actually two kinds of derotation involved here.

- physical rotation of the planet
- field rotation (alt/az mount instead of EQ mount)

And WinJupos deals with both, right?

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#8 flava

flava

Vostok 1

-

- 

  topic starter

- Posts: 148
- Joined: 30 Jul 2009

Posted 07 September 2012 - 04:36 PM

Yes. Actually the field derotation is new, just from the version 10 which dates from last week I think.
In my animation you can see the field rotation over 10 minutes, it's not huge but it's there.

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#9 MvZ

MvZ

Surveyor 1

- 
- Posts: 1745
- Joined: 03 Apr 2007
- Loc: The Netherlands

Posted 07 September 2012 - 05:07 PM

Ah ok, thanks. I just had a quick look at the 10min recorded file, and indeed the influence of normal rotation appears to be much more visible than that of field rotation.

How fast is WinJUPOS derotation actually (roughly compared to processing in AS!2)?

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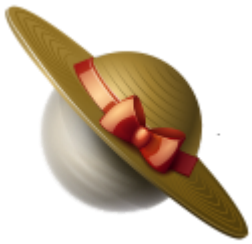
#10 PiotrM

PiotrM

Soyuz

- 
- 
- Posts: 3531
- Joined: 03 Jan 2010
- Loc: Poland

Posted 07 September 2012 - 05:19 PM

Rather quite long.

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#11 bunyon

bunyon

Soyuz

- 
- 
- Posts: 3691
- Joined: 23 Oct 2010

- Loc: Winston-Salem, NC

Posted 07 September 2012 - 07:52 PM

Yeah, it's slow, Emil. I don't see much difference in mine either but it was a poor subject for this test. Only 100s capture and Jupiter was near the meridian where field rotation is minimized. I definitely plan to test it on longer videos. But I read this thread as I was running AS2 on the morning avis and thought I had to give it a try.

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#12 KpS

KpS

Vostok 1

- 
- 
- Posts: 121
- Joined: 07 Nov 2009
- Loc: Prague, Czech Republic

Posted 08 September 2012 - 04:54 AM

Very interesting results important especially for large dobsonians with autotracking. The speed of the field rotation is at its maximum near the meridian and zero at the horizon (without refraction).

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#13 olivdeso

olivdeso

Messenger

- 
-
- Posts: 458
- Joined: 20 Feb 2011
- Loc: Fluctuat nec mergitur

Posted 08 September 2012 - 09:02 AM

excelent work. This will help me in choosing my next planetary scope. Plrobably a big dob.

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