

## QGIS Application - Bug report #21121

### Hillshade Layer Style wrong if OpenCL acceleration is enabled

2019-01-29 07:00 PM - luca bellani

<b>Status:</b> Closed	
<b>Priority:</b> Normal	
<b>Assignee:</b> Alessandro Pasotti	
<b>Category:</b> Rasters	
<b>Affected QGIS version:</b> 3.5(master)	<b>Regression?:</b> No
<b>Operating System:</b> Windows 10 64 bit v. 1809	<b>Easy fix?:</b> No
<b>Pull Request or Patch applied:</b> Yes	<b>Resolution:</b>
<b>Crashes QGIS or corrupts data:</b> No	<b>Copied to github as #:</b> 28939
<b>Description</b>	
<p>Hello. I noticed that with certain DEM (not all), QGIS 3.4.4 generates a display problem in the "hillshade" style. Only in the layer style, because the GDAL geo-process works perfectly.</p>	

#### Associated revisions

##### Revision 1aef9cfa - 2019-02-02 10:53 AM - Alessandro Pasotti

[opencl] Fix hillshade renderer with 16bit rasters

Fixes #21121

#### History

##### #1 - 2019-01-29 07:01 PM - luca bellani

- File dem\_prueba.tif added

##### #2 - 2019-01-29 07:28 PM - Alessandro Pasotti

- Status changed from Open to Feedback
- Assignee set to Alessandro Pasotti
- Operating System changed from Windows 10 64 bit v. 1809 to Any
- Priority changed from High to Normal
- Affected QGIS version changed from 3.4.4 to 3.5(master)

I think it's a know issue and there is not much we can do, did you try to adjust the "Resampling" parameters in the renderer configuration?

##### #3 - 2019-01-29 09:36 PM - luca bellani

Salve. What is strange to me, is that in QGIS 2.18 it does not give any problem. And it seems to be something random. In QGIS 3.4.4, I loaded the DEM again, and adjust the "Resampling" parameters "bilinear", and now all is ok.

##### #4 - 2019-01-29 10:04 PM - Alessandro Pasotti

I think it depends on the zoom level too.

##### #5 - 2019-01-30 11:21 AM - Giovanni Manghi

Alessandro Pasotti wrote:

| I think it's a know issue and there is not much we can do, did you try to adjust the "Resampling" parameters in the renderer configuration?

closing then?

**#6 - 2019-01-30 05:53 PM - luca bellani**

- File *comparacion.png* added
- File *DEM\_prova2.rar* added

I have reviewed other DEMs that gave me problems, and as can be seen in the comparative image, the problem is presented in QGIS 3, not in QGIS 2. I have already completely manipulated the resampling options, but it is not solved.

It's funny that it's a bug, but only in the new version of QGIS.

Annex also another DEM, so that they can prove it.

Thanks for the support.

**#7 - 2019-01-30 05:57 PM - Alessandro Pasotti**

Out of curiosity: are you using OpenCL acceleration? If yes can you try to disable it?

**#8 - 2019-01-30 08:56 PM - luca bellani**

Yes! That's the reason!

Deactivating OpenGL and always putting the resampling in "bilinear" is displayed correctly.

Thank you!

**#9 - 2019-01-30 10:27 PM - Giovanni Manghi**

- Subject changed from *Error Hillshade Layer Style* to *Hillshade Layer Style wrong if OpenCL acceleration is enabled*
- Status changed from *Feedback to Open*
- Operating System deleted (Any)

**#10 - 2019-01-31 09:27 PM - Alessandro Pasotti**

Luca, can you please make a quick test with OpenCL activated and tell me if it works with the sampling bilinear option or if it does not?

If it does not work, can you please have a look to the QGIS messages (small icon at the bottom right) in the OpenCL section?

Also, please paste a picture of the OpenCL tab in your settings or copy-paste the information about your OpenCL device.

**#11 - 2019-02-01 04:43 PM - luca bellani**

- File *1.PNG* added
- File *3.PNG* added

I did the tests. When you activate OpenCl, even if you change the type of resampling, it is displayed incorrectly.

In the message window, I do not see the OpenCl tab, I do not know if I have something wrong installed. Annex images.

Thank you

**#12 - 2019-02-02 10:58 AM - Alessandro Pasotti**

- Status changed from Open to In Progress
- Category changed from Symbology to Rasters
- Pull Request or Patch supplied changed from No to Yes

PR <https://github.com/qgis/QGIS/pull/9070>

I'd like you to test if this patch solves your issue (with OpenCL activated).

**#13 - 2019-02-04 12:16 PM - Alessandro Pasotti**

- Status changed from In Progress to Closed
- % Done changed from 0 to 100

Applied in changeset commit:qgis|1aef9cfa491c6de60f8c700c3705a57c735f9442.

**Files**

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2.PNG	204 KB	2019-01-29	luca bellani
dem_prueba.tif	20.6 KB	2019-01-29	luca bellani
comparacion.png	540 KB	2019-01-30	luca bellani
DEM_prova2.rar	169 KB	2019-01-30	luca bellani
1.PNG	19.1 KB	2019-02-01	luca bellani
3.PNG	81 KB	2019-02-01	luca bellani