

Used Setup:

Askar 130PHQ SN871069 factory inspection date 28.09.2022, delivery date 08.08.2023, Pegasus MFKV2 Focuser, QHY600M (full frame 24x36mm IMX455 sensor) with OAG (ASI290) and QHY Filter wheel, Filter are Astrodon 2" unmounted, M68 camera adaption: Askar M86/M68, BA M68 40mm, TSRotM68 10,5mm and Askar M68/M54 Adapter used, Bin1, Guided, Mount AP Mach1

Imaging sessions:

First Session images 10.08.2023 with environmental temperature ca 14°C. NGC6995 Bat with focuser position around 6 mm out.

Conclusion:

Good optics, for imaging sufficiently well centered, but Green and Blue are a bit of center, almost no tilt, Only at corners of full frame 24x36mm signs of coma and astigmatism. Focuser is stiff, has considerable backlash horizontal 240 steps plus 80steps from Pegasus focuser (1000steps are 1,47mm). The backlash can be compensated by adding 350 steps backlash in the focuser SW (Pegasus Unity).

Stated backfocus values (manual/internet) are incorrect, measured was 163mm from base of M86 thread (Focuser fully retreated) instead of 186mm.

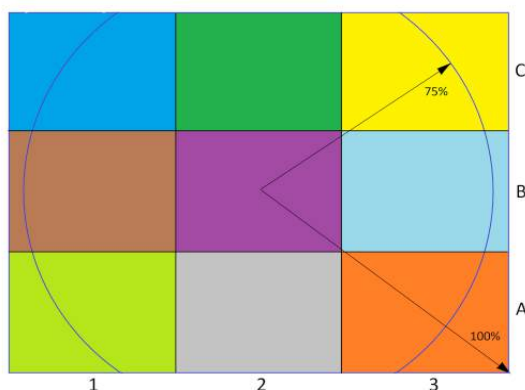
Measured focal length with ASTAP plate solve was 997mm.

Telescope is well suited for full frame camera astrophotos.

Side note: Pegasus MFKV2 focuser has a factor2 better resolution and 50% less backlash than ZWO EAF.

Note:

Explanation ASTAP graphs:(large yellow figures are median HFD value of the respective colored areas, see below and ASTAP SW documentation).



The other graphs are from PixInsight FWHM Eccentricity Script.

First image NGC6995:



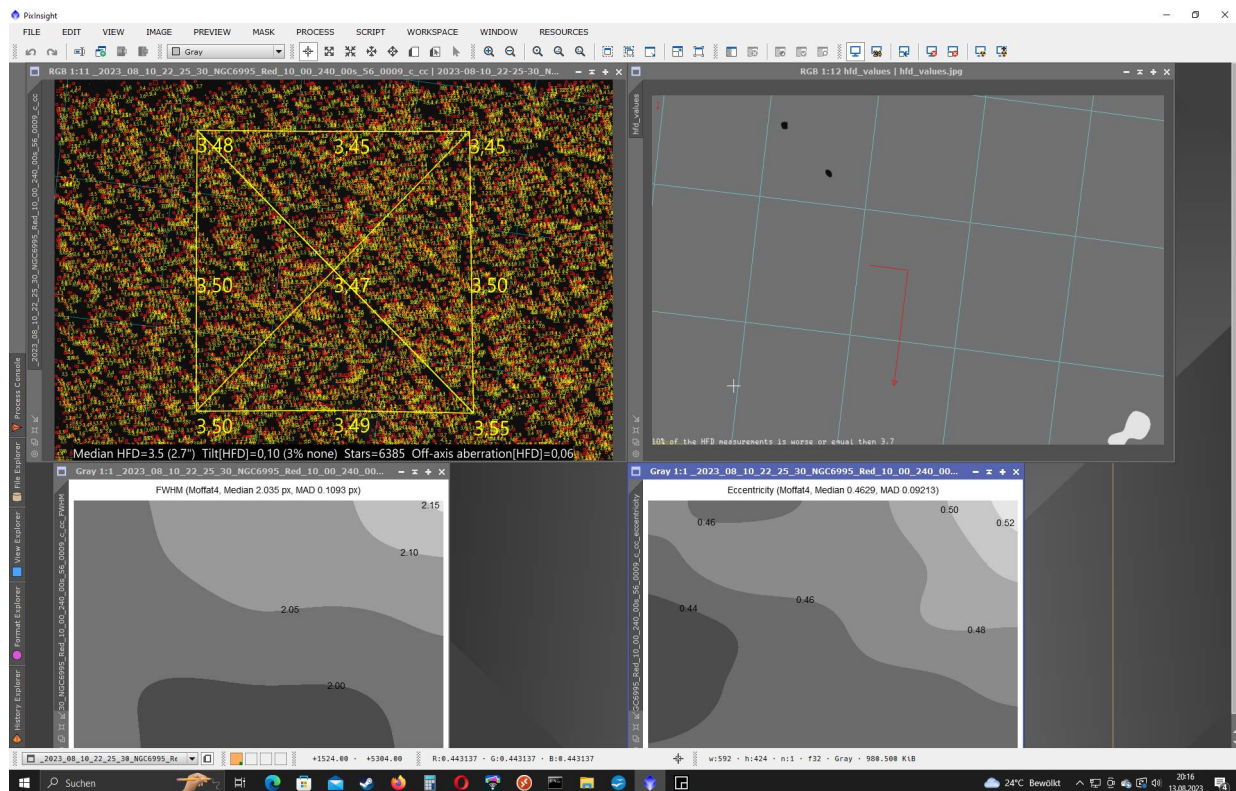
Crop



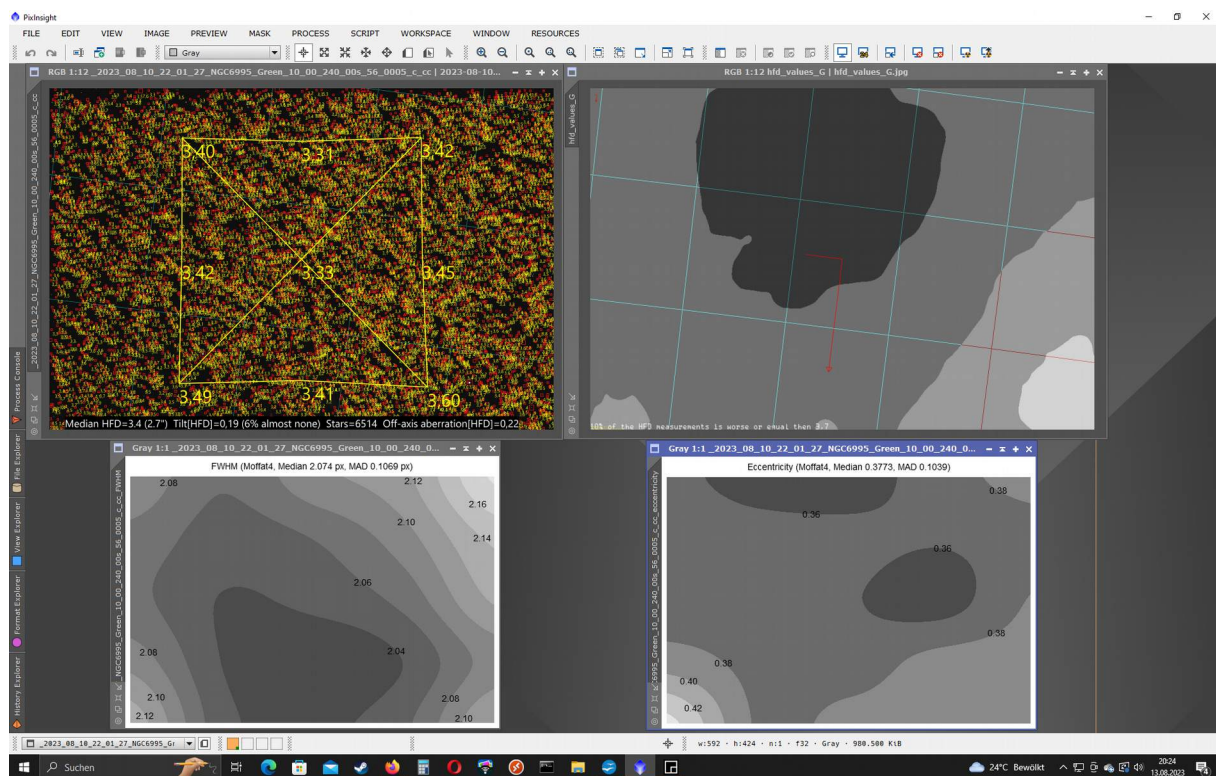
Image corners with slight astigmatism



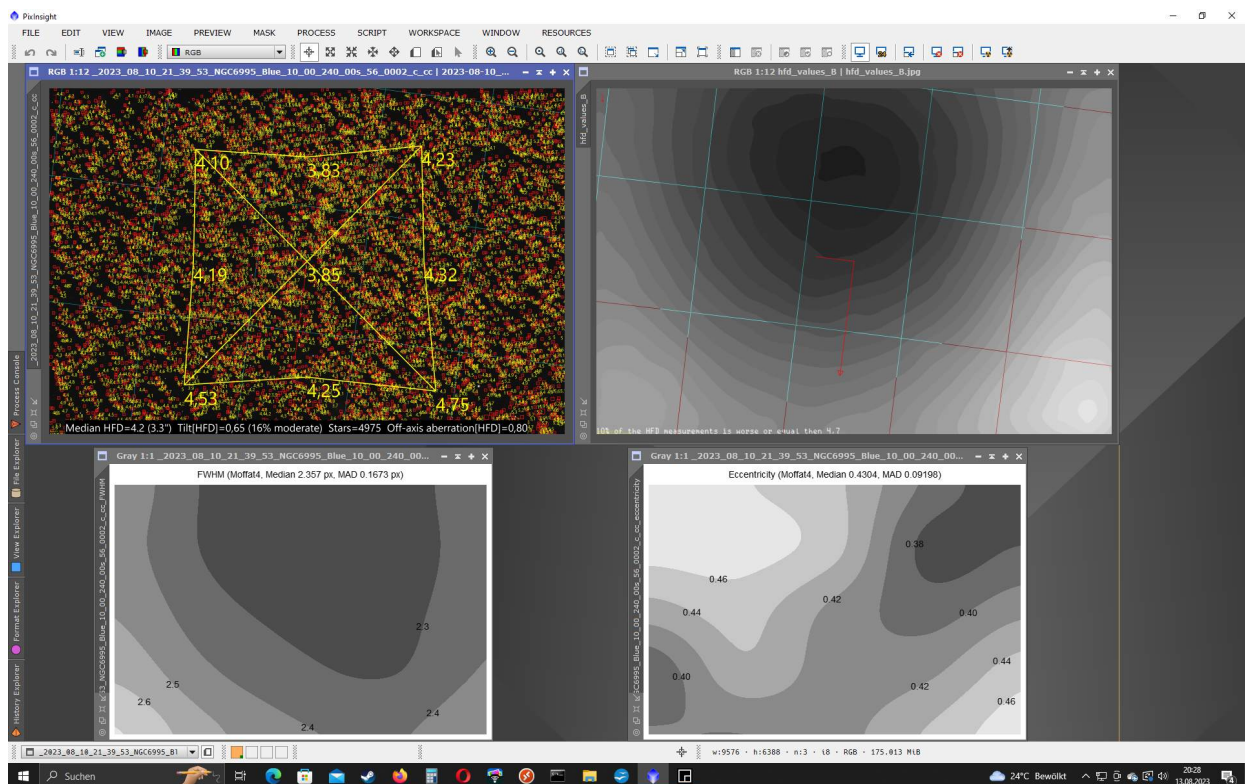
Red almost perfect.



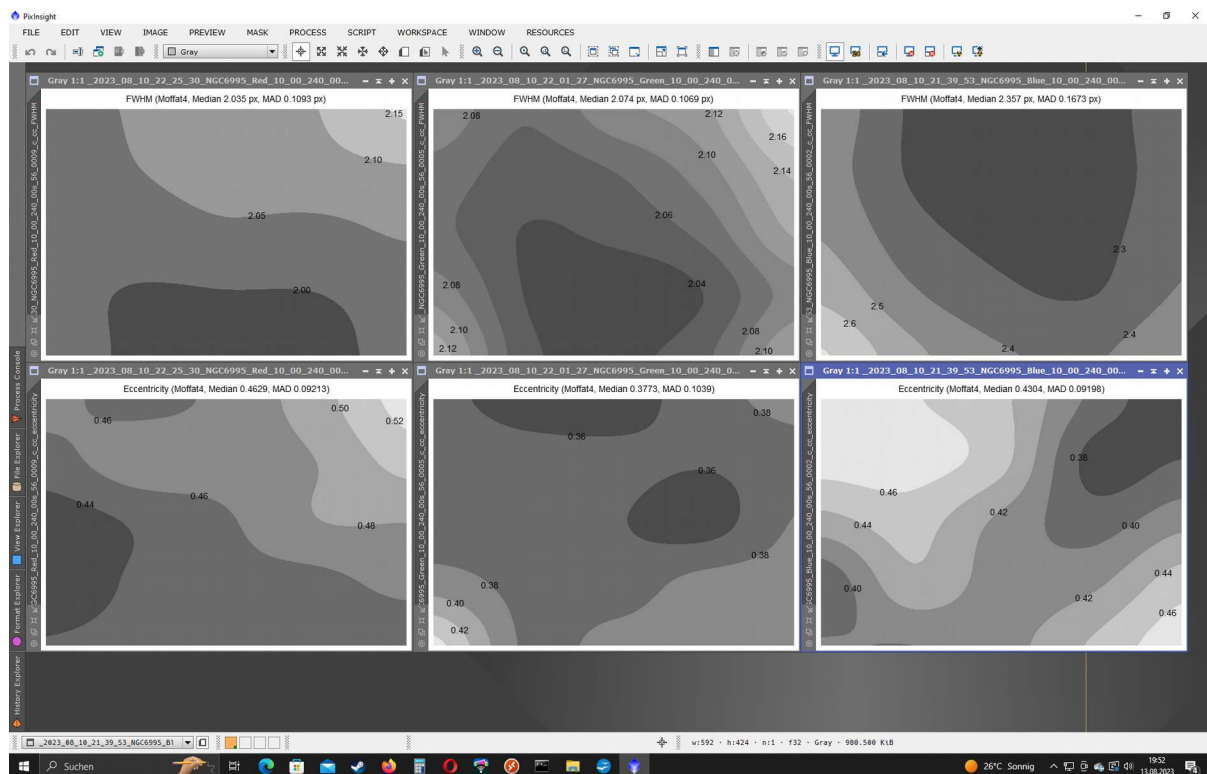
Green slightly decentered



Blue more off center



Same frames only pixinsight analysis:



For comparison

Here is an analysis from images made with my TEC140ED, Riccardi Mod1 Flattener and QHY600M FF. Red is almost perfect. Optic is well centered. Focuser is perfect 3,5" Feather Touch. (Price is more than double of Askar 130PHQ)

TEC140ED is optimized at red/green and in blue there is a little loss in strehl and a small focus shift, which causes blue bloated stars with blue sensitive cameras.

It was focused in Lum and RGB focus was the same as Lum. Focus could be more optimized with separat Focus runs for RGB or with correction factors in NINA SW.

