Verkippung

Beispiel: QHY268M und ein 0,73x Korrektor

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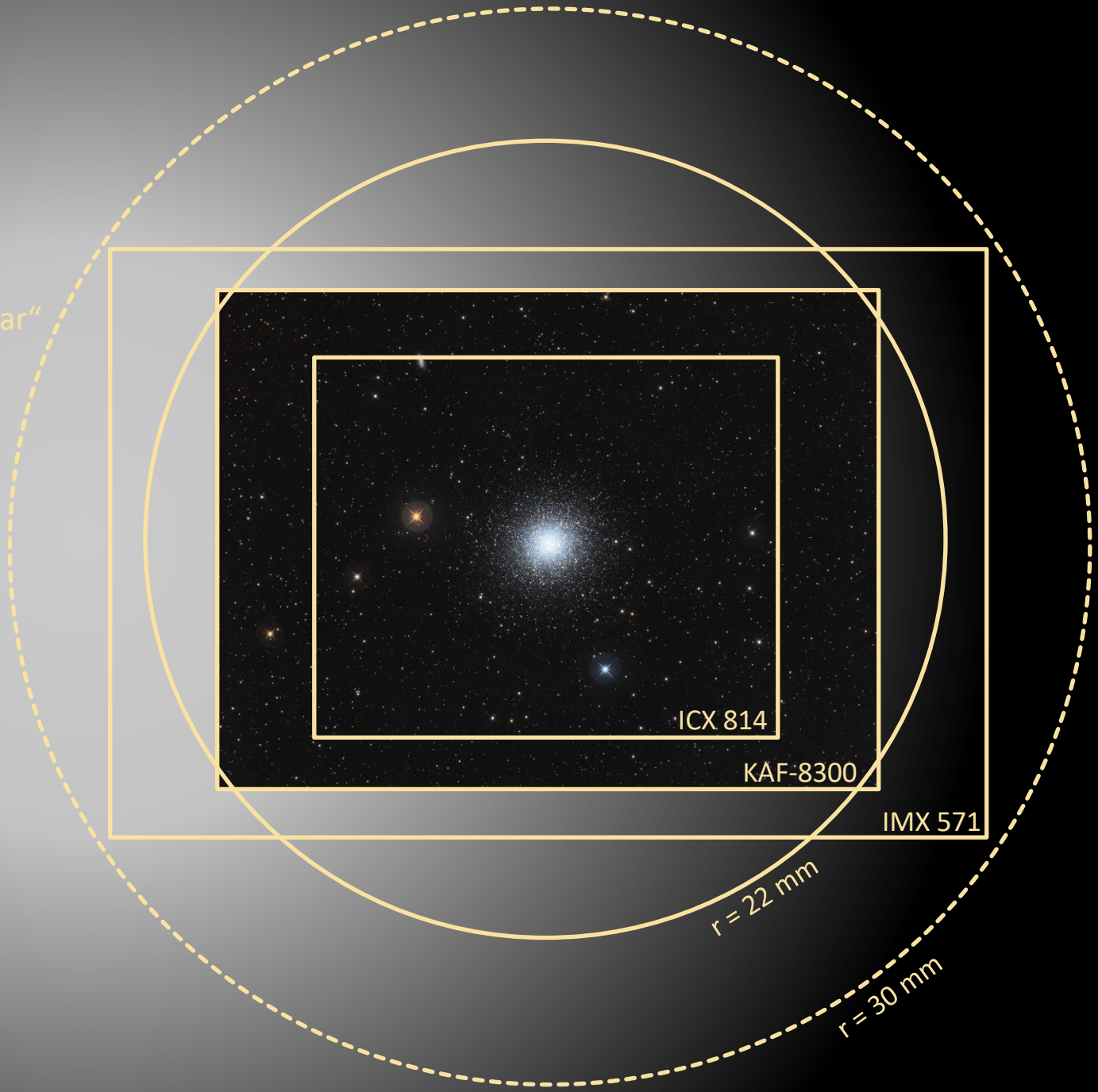
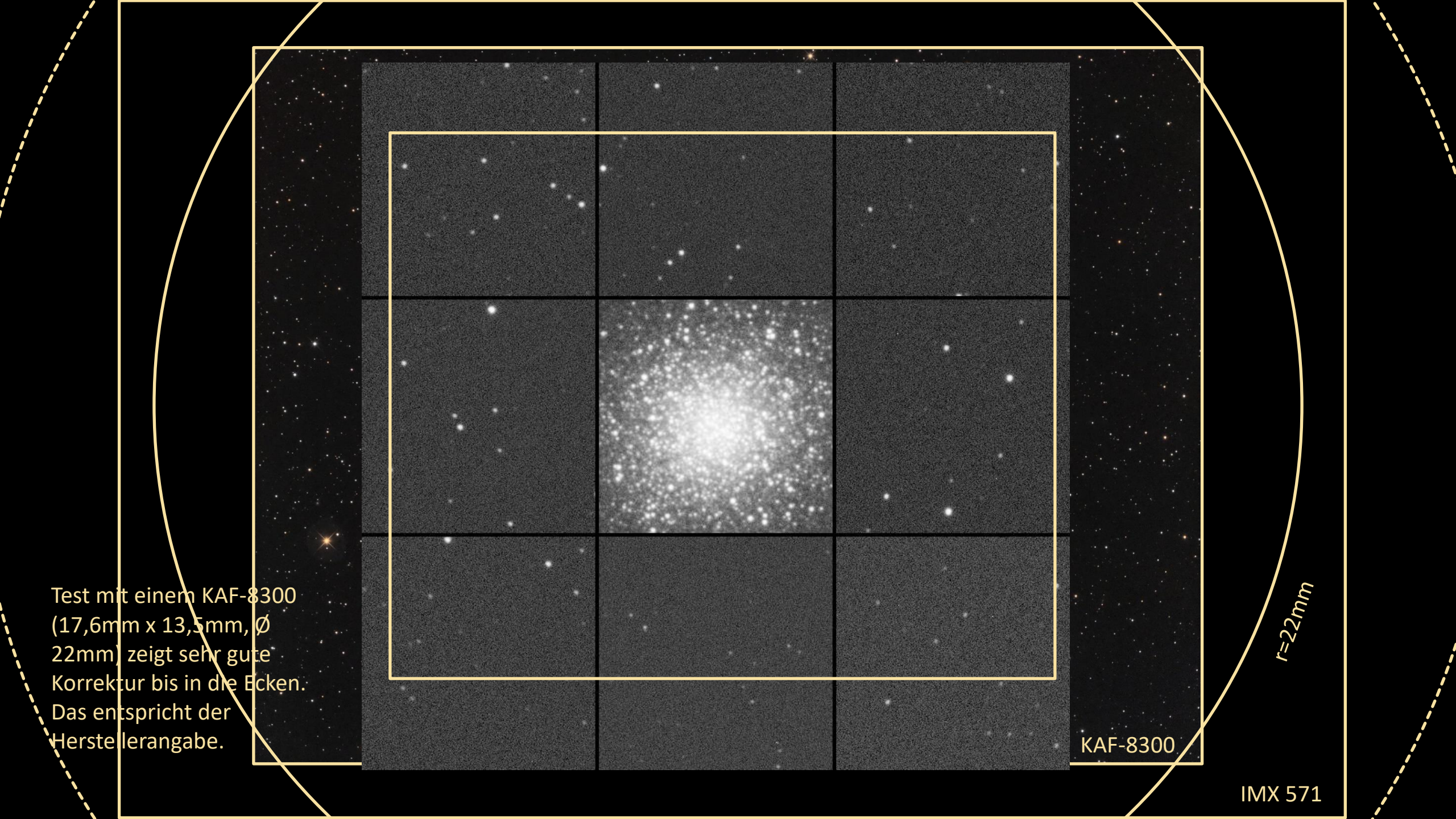
Korrektor: korrigiertes Bildfeld

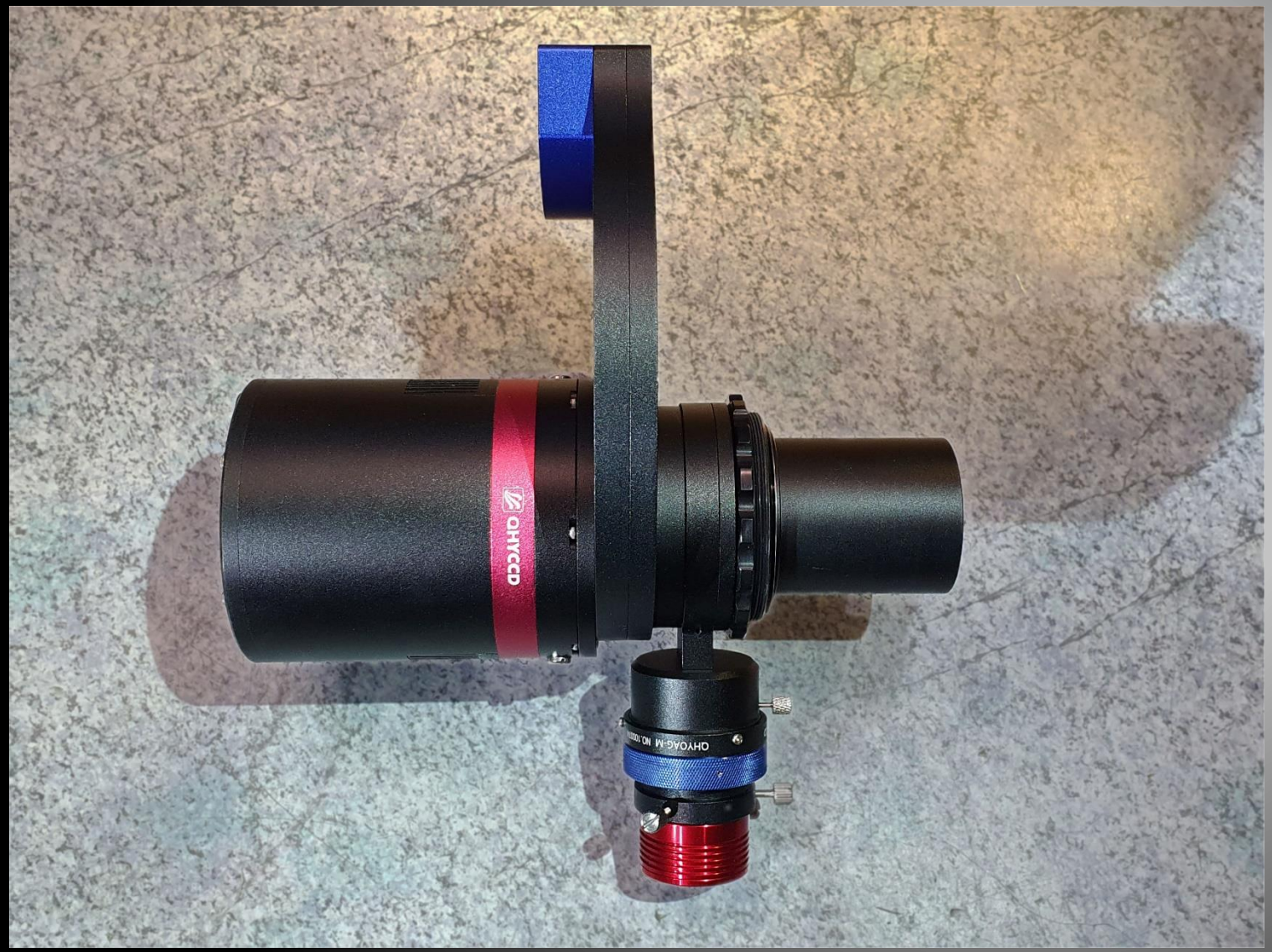
- TSKorrr2. Nachbau des 2“ ASA-Korrektors 0,73x?
- „korrigiert ein Bildfeld von 22mm“ … „bis 30mm brauchbar“
- bisher mit Sony ICX 814 (12,5mm x 10mm), Ø 16mm
- am 10“ f/4 Newton damit theoretisch f/2,8





Test mit einem KAF-8300 (17,6mm x 13,5mm, Ø 22mm) zeigt sehr gute Korrektur bis in die Ecken. Das entspricht der Herstellerangabe.

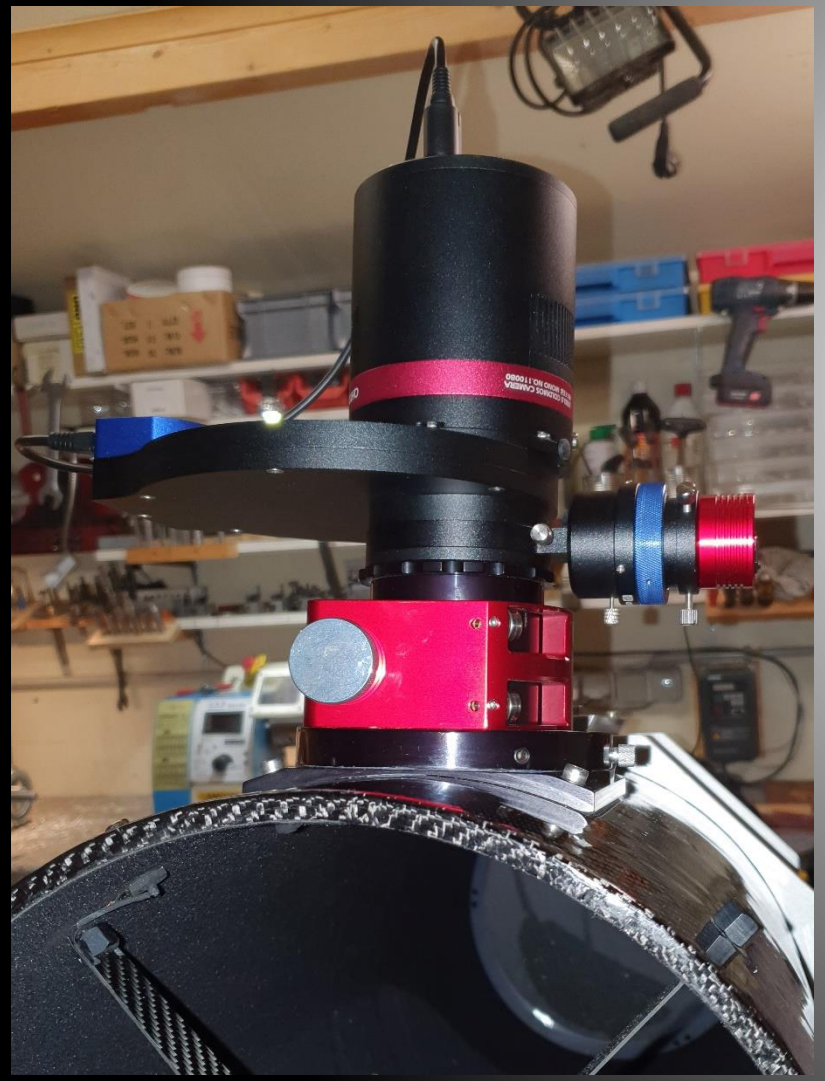
QHY268M-PH



- Sony IMX 571, mono, 3,76µm
- etwa APS-C: 23,5mm x 15,7mm, Ø 28mm
- ASI2600MM, ToupTek in diversen Modifikationen (TS, Teleskop Austria, u.v.a.m.)

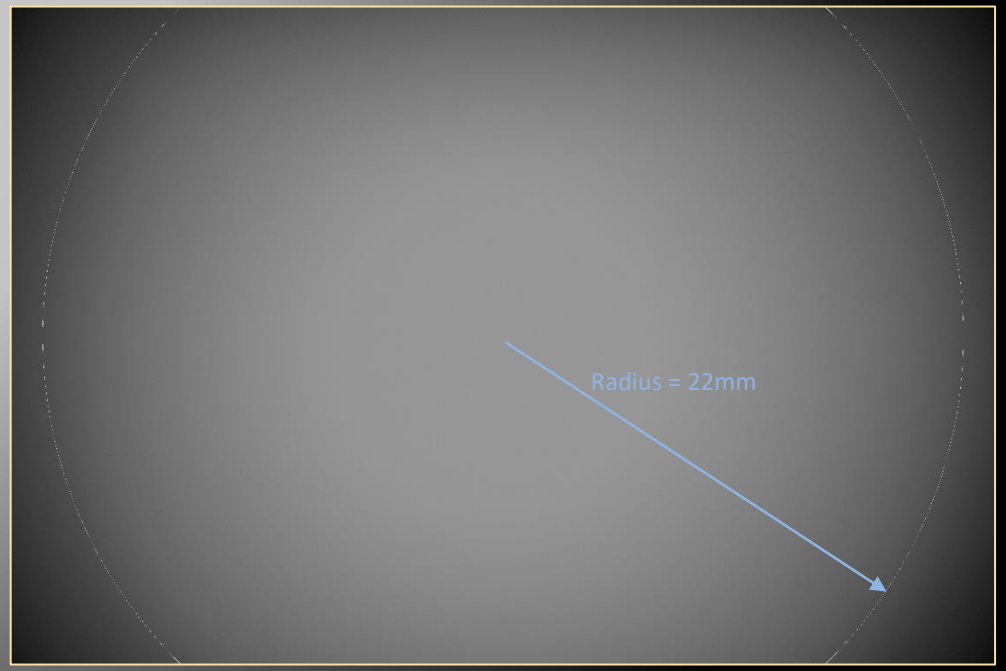
Pos.	Element	Weg / mm
1	QHY268M PH	12,50
2	QHY CFW3-M-US	17,00
3	Distanzstück	10,00
4	QHY OAG-M	10,00
5	M48 Output	5,00
6	1/3 Dicke Filter	-0,66
7	Passscheibe 0,2mm	0,20
8	Kameraadapter	12,80
	Summe	66,84
	TS2Korr	**66,85**

Korrektor: Ausleuchtung am 10“ Newton



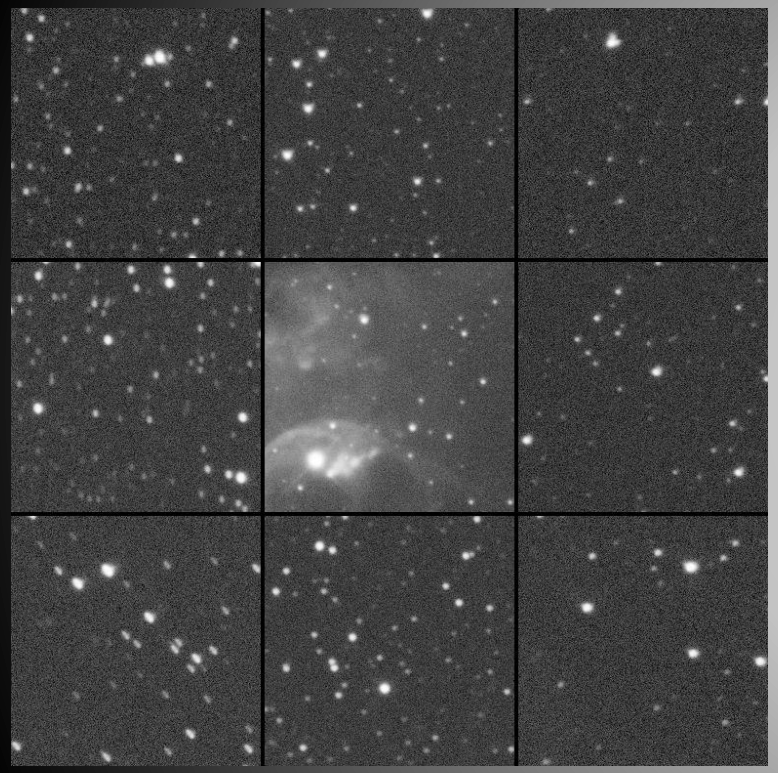
- lt. Hersteller korrigiert der TSKorrr2 ein Bildfeld von 22mm
- damit keine Aussage zur Ausleuchtfähigkeit
- volles Chipformat 23,5 mm x 15,7 mm (6352 x 4176)
- Messwert der Ausleuchtung in den Ecken: ca 50%:

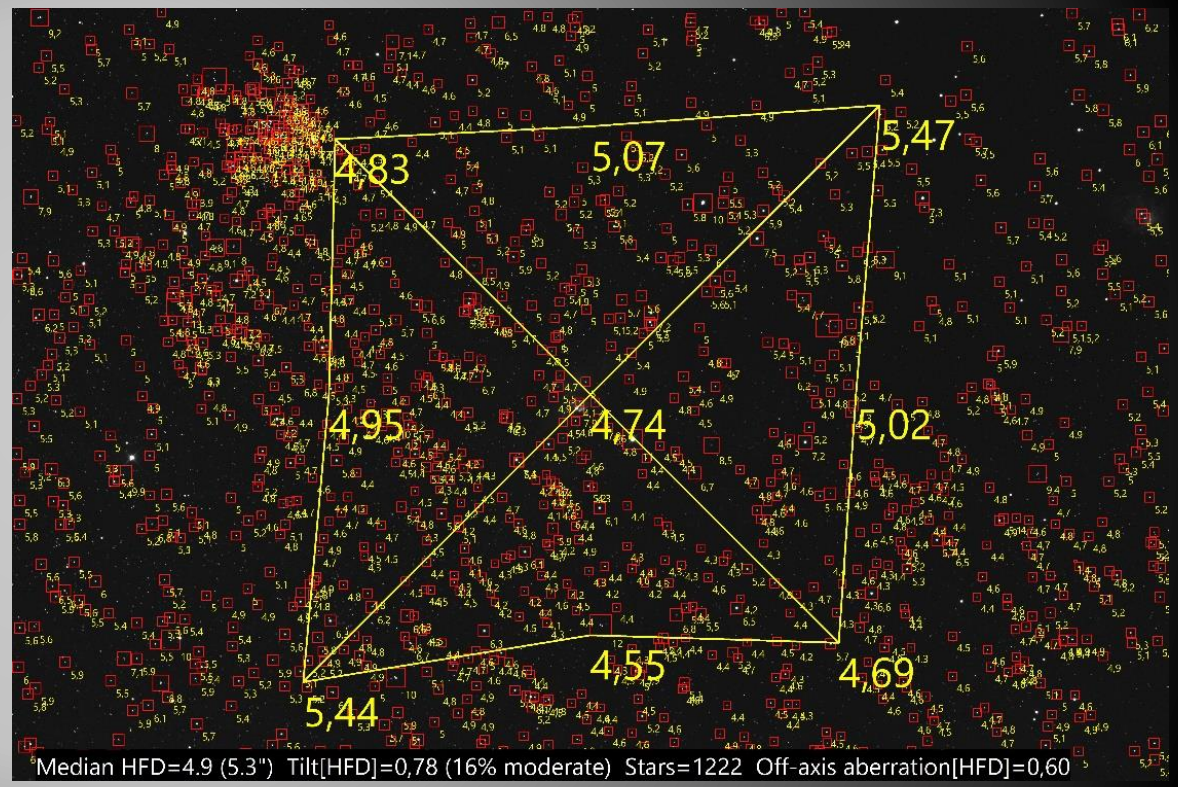
$$2.5 \log \frac{E_1}{E_2} = {}^{3}/_{4} \text{ mag}$$



Abbildungsqualität

Verkippung (Tilt)?





ICX814
KAF-8300
IMX571
r=22mm

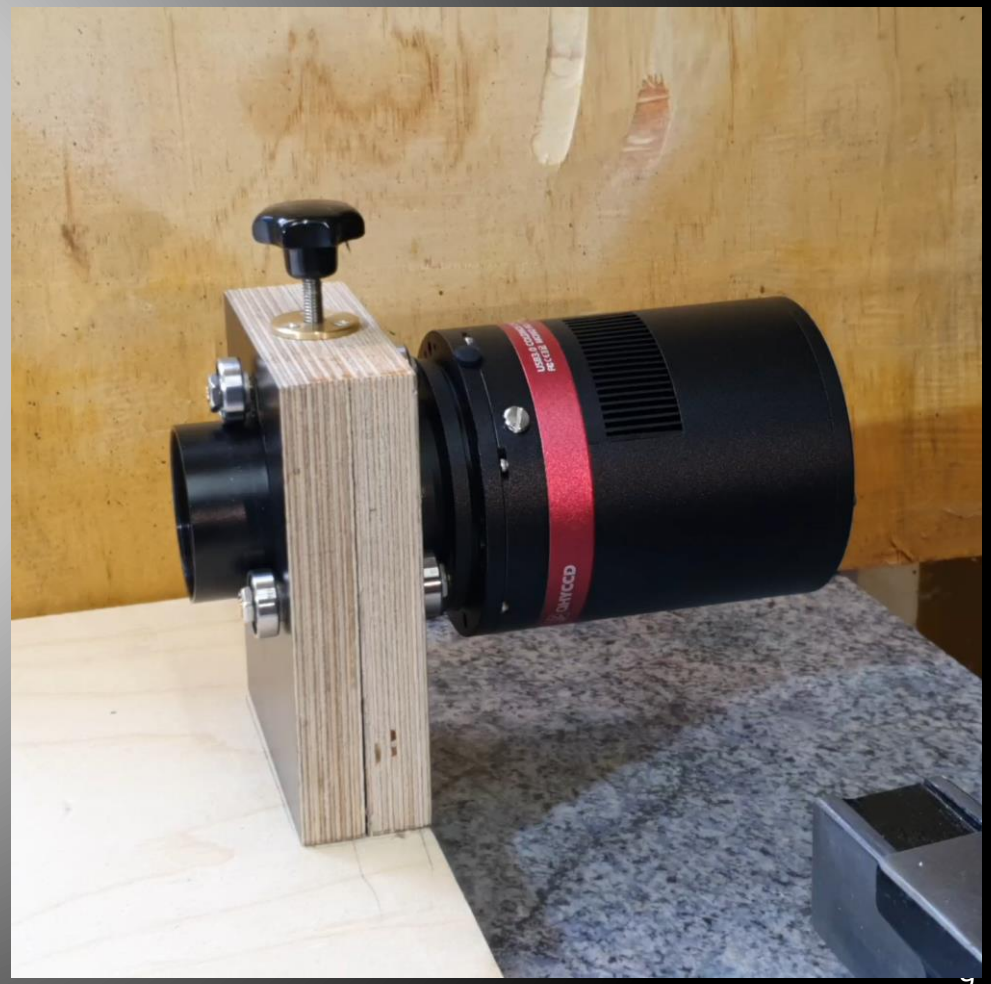
Tilting Unit ….

www.gerdneumann.net

www.teleskop-express.com

www.baader-plantarium.com

Orthogonalitätsprüfung der Chiplage



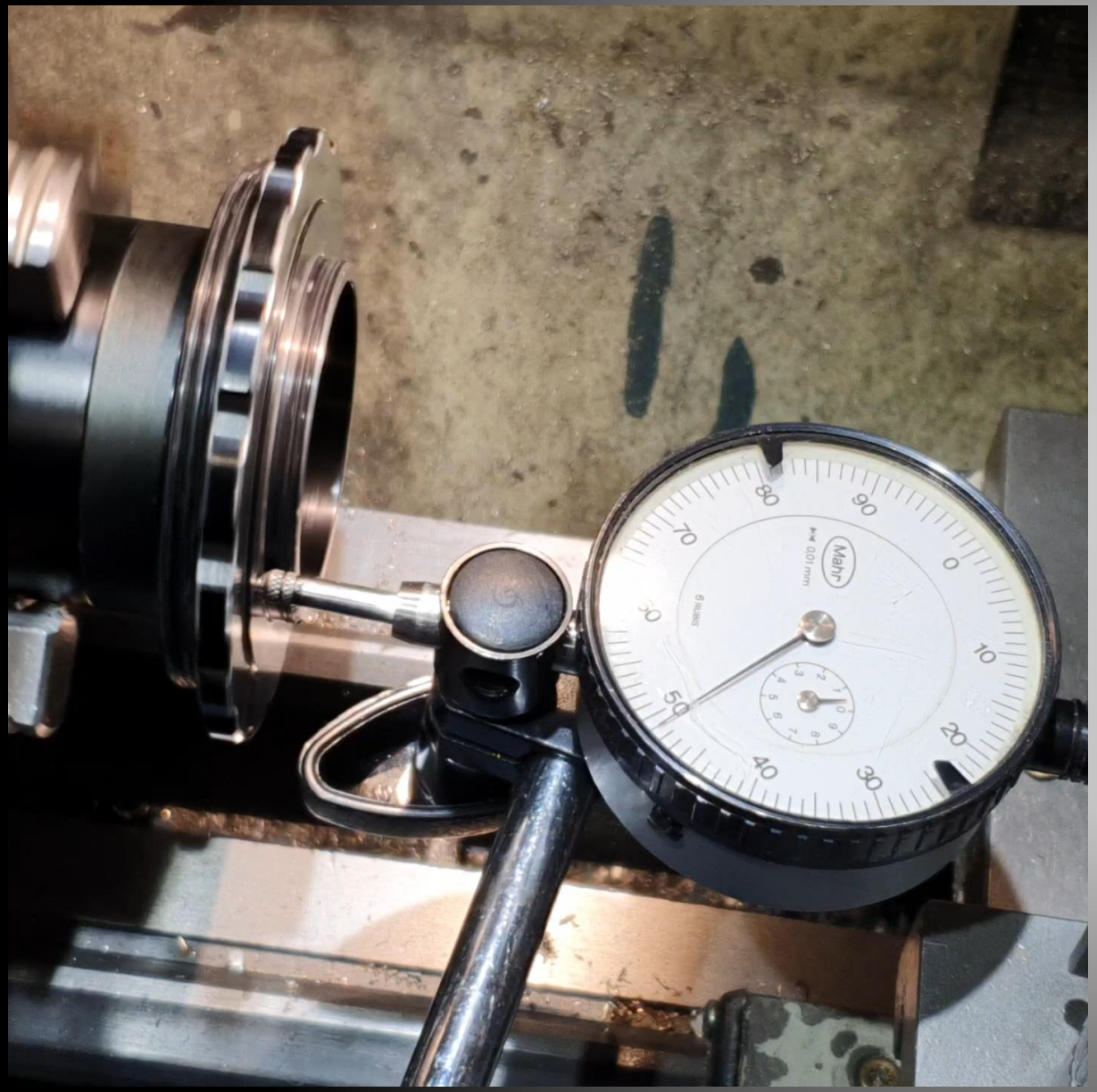
Quelle: https://www.sxccd.com/support/maintenance-information/aligning-the-ccd-in-an-sxvr-camera/

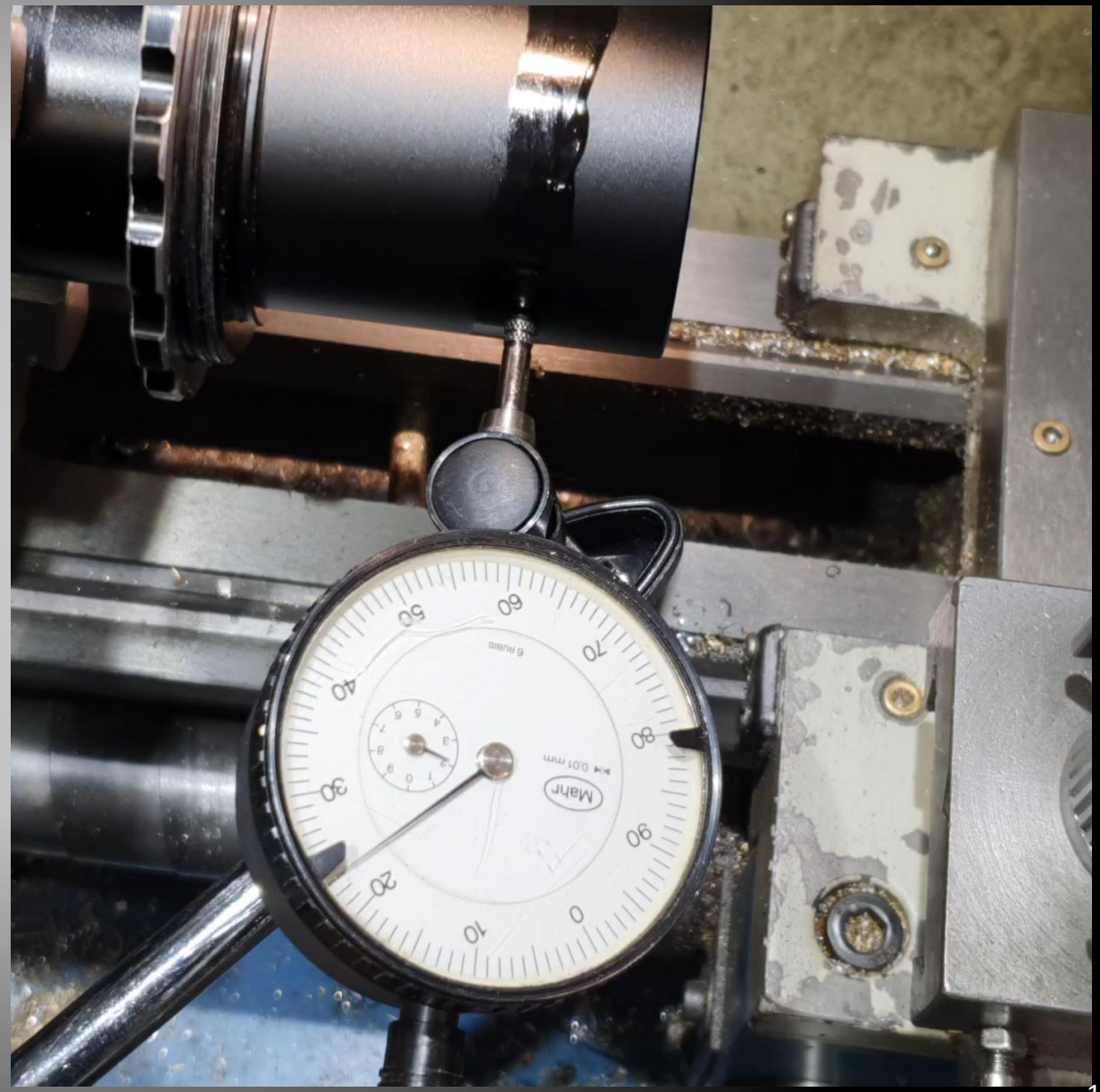
Ungefährer Orthogonalitätsfehler:

$$\tan\vartheta = \frac{1\ \mathrm{mm}}{800\ \mathrm{mm}} \Rightarrow \Theta \approx 0{,}072°$$

Daraus resultierende Fehlposition e des Chips in den Bildecken bei einer Diagonale d:

$$e = \frac{d}{2}\tan\vartheta \approx 0{,}017\ \mathrm{mm} = 17\ \mu\mathrm{m}$$

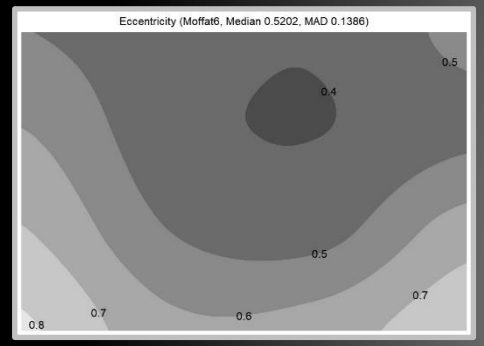

Mahr
0,01 mm

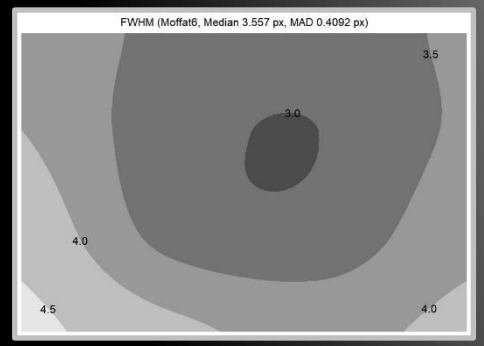

Mahr
0,01 mm

Exzentrizitäten und Halbwertsbreiten

Justageproblem?

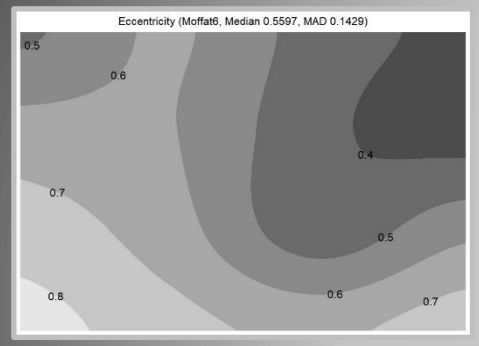
Δ= 0.0 mm

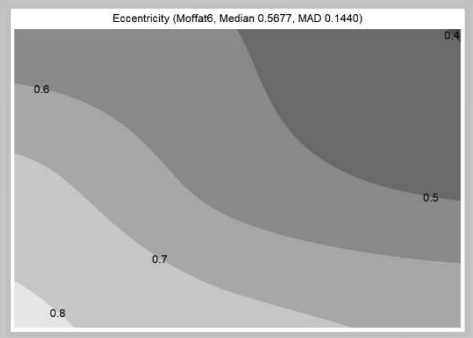


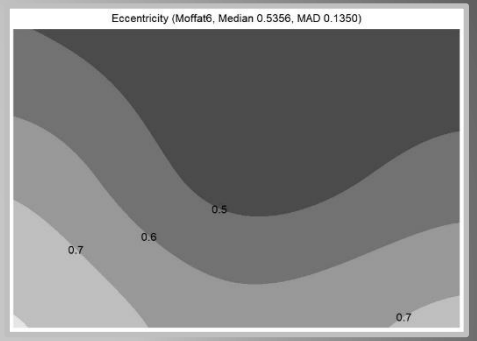


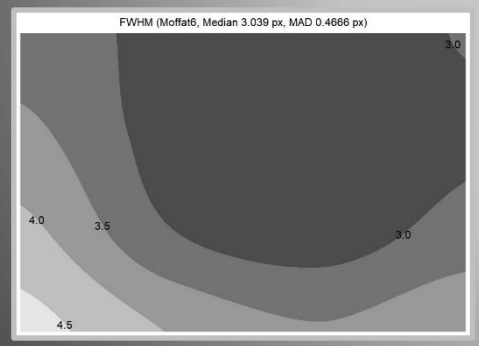
Fokus: 2602

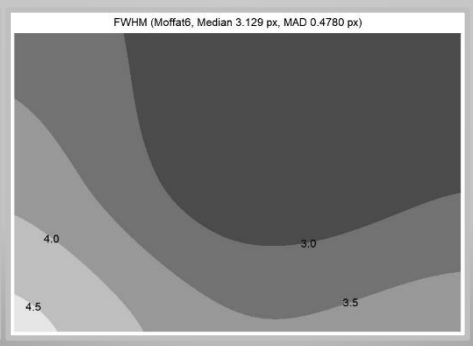
Δ= 0.2 mm

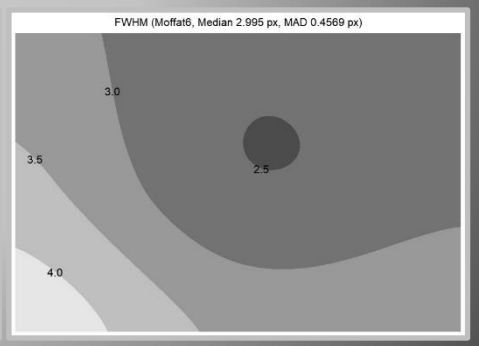






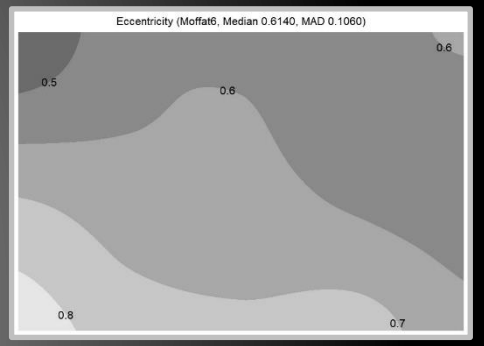


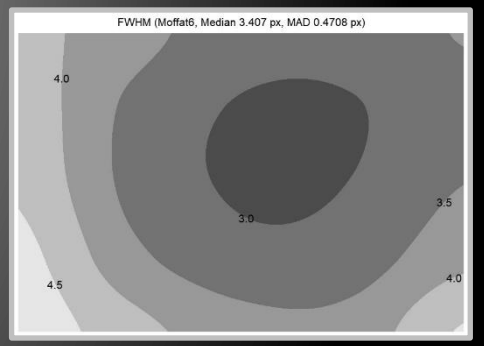




Fokus: 2582

Δ= 0.4 mm





Fokus: 2536

1 step: 4.064 µm
49 steps: 0.2 mm

Folien dieses Vortrages als Download:
photonenfangen.de/download/

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