

Performance comparison of five cameras

Carles Schnabel IOTA/ES - AAS

Mintron



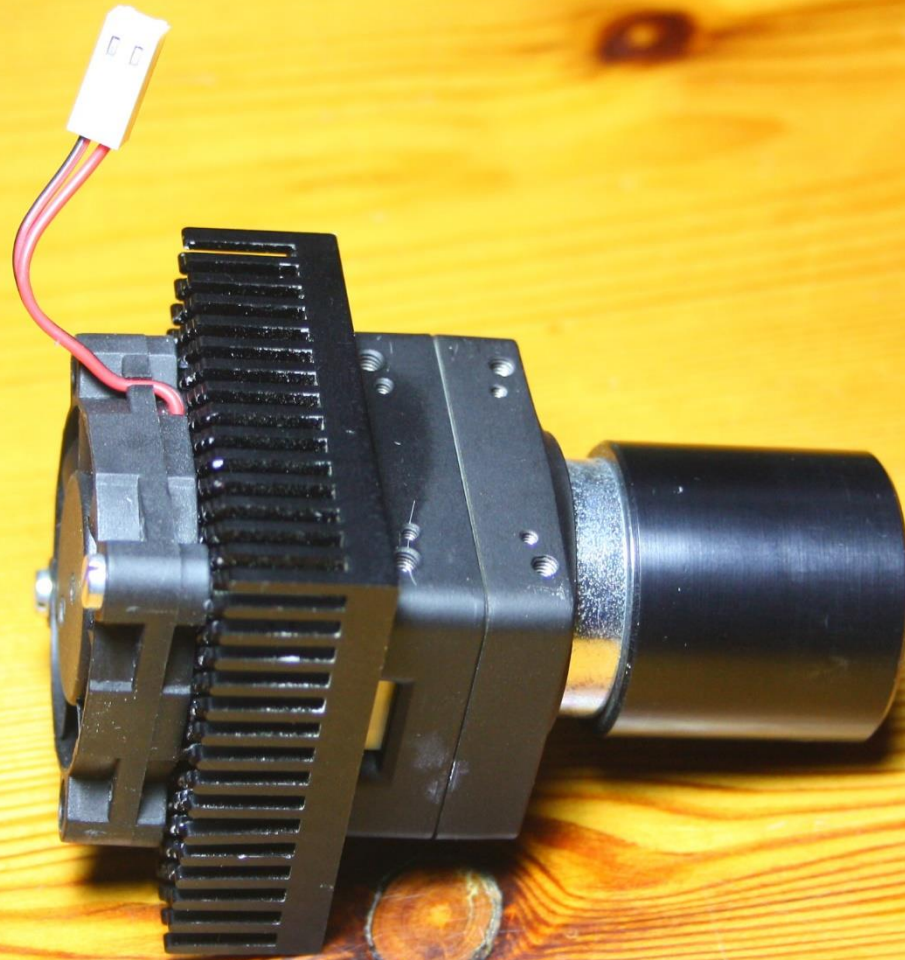
Watec 120 N+



Watec 910HX



PTG



QHY174M-GPS



J2000 AR .: 00h 48m 45s, Dec .: + 56° 25m 41s



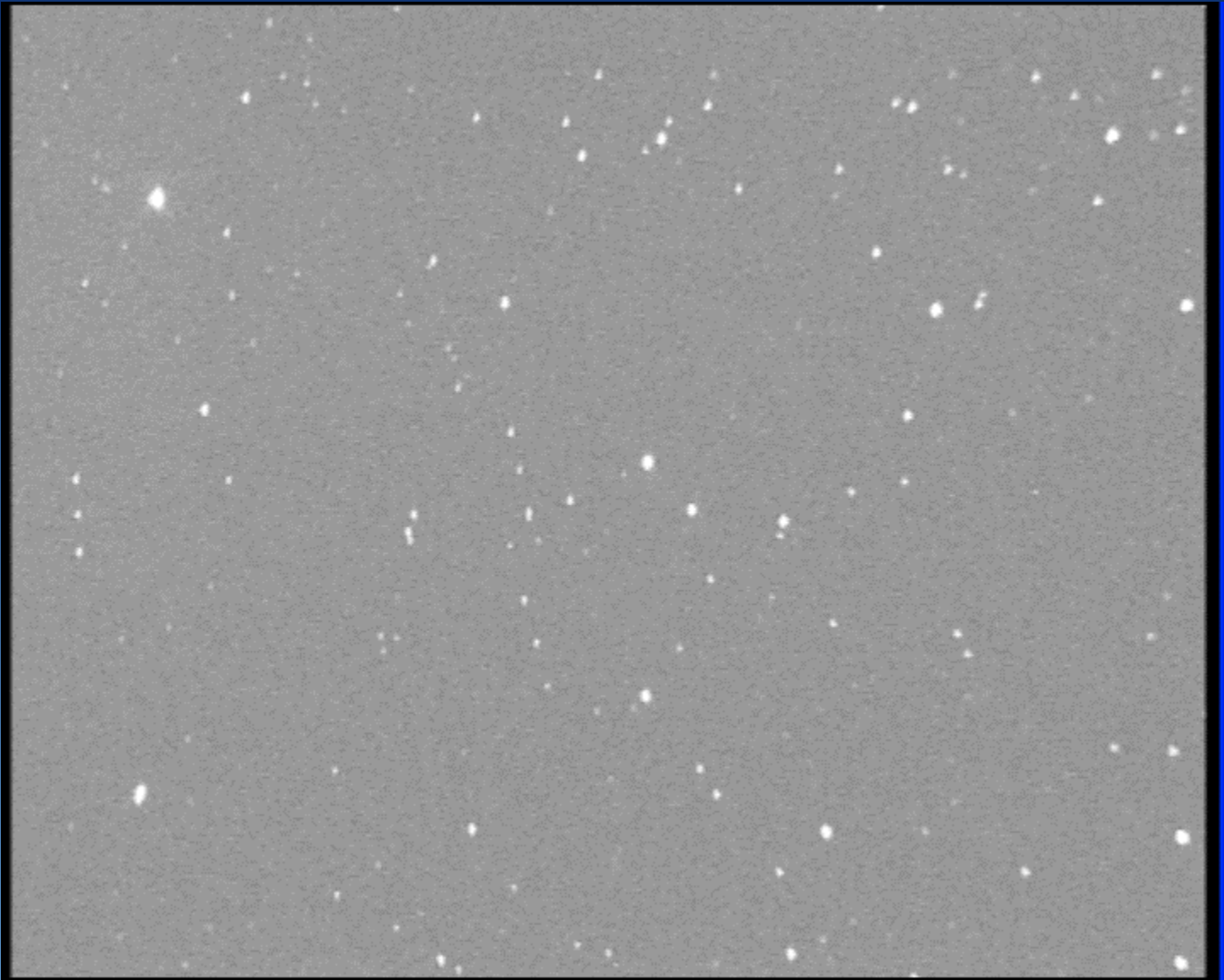
Mintron sense up x128



Watec 120N+ slow 7



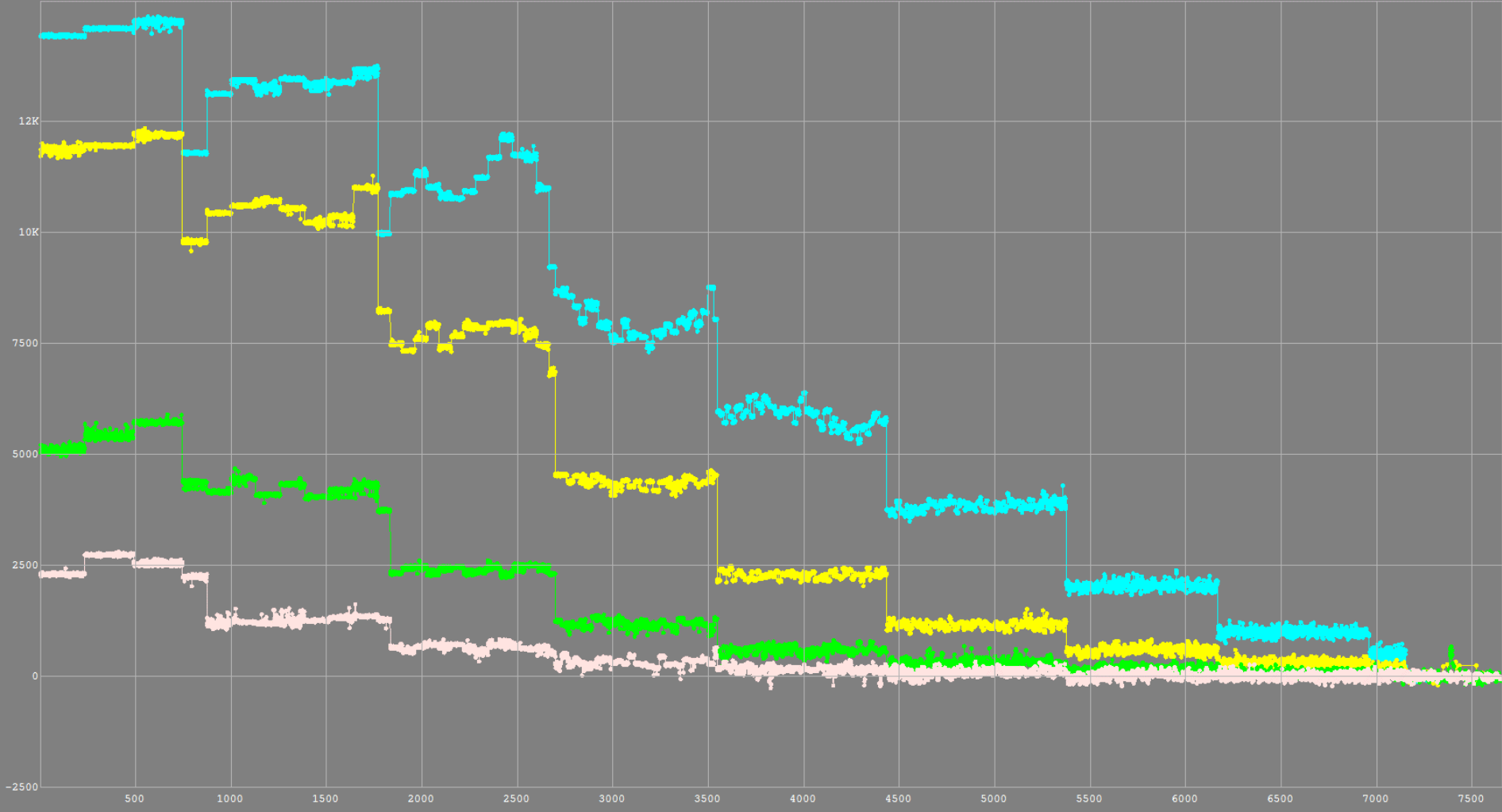
Watec 910 x256



PTG 5.12 sec



Flux watec120N+_lag.lc - Aperture Photometry, Average Background



No frame times entered , AVI

Star	TYC3663-01291-1	3UC293-018041/2	3UC293-018027	3UC293-017953	TYC3663-01291-1	3UC293-018041/2	3UC293-018027	3UC293-017953		
magnitude	10.67	12,4+13,2=12	13.1	14.72	10.67	12,4+13,2=12	13.1	14.72		
with AGC										
Mintron					Watec 120N+			Exp (sec)		
					Slow 9	x	x	x	x	10.24
					Slow 8	x	x	x	x	5.12
x128	x	x	x	x	Slow 7	x	x	x	x	2.56
x64	x	x	x	x	Slow 6	x	x	x	x	1.28
x32	x	x	x	x	Slow 5	x	x	x	x	0.64
x16	x	x	x		Slow 4	x	x	x	x	0.32
x8	x	x	x		Slow 3	x	x	x		0.16
x4	x	x			Slow 2	x	x	x		0.08
x2	x				Slow 1					0.04
off	x				High 1					0.02

without AGC										
Mintron					Watec 120N+					
					Slow 9	x	x			10.24
					Slow 8	x	x			5.12
x128	x	x	x		Slow 7	x	x			2.56
x64	x	x	x		Slow 6	x	x			1.28
x32	x	x			Slow 5	x				0.64
x16	x				Slow 4	x				0.32
x8	x				Slow 3					0.16
x4	x				Slow 2					0.08
x2					Slow 1					0.04
off					High 1					0.02

with AGC										
Watec 910HX					PTG				Exp (sec)	
						x	x	x	x	10.24
x256	x	x	x	x		x	x	x	x	5.12
x128	x	x	x	x		x	x	x	x	2.56
x64	x	x	x	x		x	x	x	x	1.28
x32	x	x	x	x		x	x	x	x	0.64
x16	x	x	x	x		x	x	x	x	0.32
x8	x	x	x	x		x	x	x	x	0.16
x4	x	x	x	x		x	x	x		0.08
x2	x	x	x			x	x	x		0.04
1/50s	x	x				x	x	x		0.02

without AGC										
Watec 910HX					PTG				Exp (sec)	
						x	x	x	x	10.24
x256	x	x	x	x		x	x	x	x	5.12
x128	x	x	x	x		x	x	x	x	2.56
x64	x	x	x	x		x	x	x	x	1.28
x32	x	x	x			x	x	x	x	0.64
x16	x	x				x	x	x	x	0.32
x8	x	x				x	x	x		0.16
x4	x					x	x	x		0.08
x2	x					x				0.04
1/50s						x	x			0.02

	Mintron 12V6HC-EX	Watec 120N+	Watec 910HX	PTG CM3-U3-13S2M	QHY174M-GPS
Detector	CCD	CCD	CCD	CCD	CMOS
Pixel size	8,6 µm x 8,3 µm	8,6 µm x 8,3 µm	8,6 µm x 8,3 µm	3,75 µm x 3,75 µm	5,9 µm x 5,9 µm
Number of pixels	752 x 582	752 x 582	752 x 580	1288 x 964	1920 x 1200
Array size	7,4 mm x 5,95 mm (1/2")	7,4 mm x 5,95 mm (1/2")	7,4 mm x 5,95 mm (1/2")	1/3"	11,3 x 7,0 mm
Output	Composite video	Composite video	Composite video	USB 3.0	USB 3.0
Bits	8	8	8	12	12
Frame rate	25 fps / 50 fips	25 fps / 50 fips	25 fps / 50 fips	21,74 fps	~40 fps
Data	avi file	avi file	avi file	FITS	ser file or FITS images at 12-bits, avi files at 8-bits
Price	380 Eur	600 Eur	469 Eur (discount)	300 Eur	\$1239
Time inserter + video grabber	+250 Eur	+250 Eur	+250 Eur		