

FTTS	нг	lls•1			
HDU1	-	SIMPLE	=		
HDU1		BITPIX	-		
HDU1	-	NAXIS	=		
HDU1	-	NAXIS1	=		
HDU1	-	NAXIS2	=		
HDU1	-	NAXIS3	=		
HDU1	-	EXTEND	=		
HDU1	-	BSCALE	=		
HDU1	-	BZER0	=		
HDU1	-	DATE	=	2020-02-	
HDU1	-	SOFTWARE	=	'Astro Pi	
HDU1	-	VERSION	=	1.075	
HDU1	-	INTEGRAT	=	Integrat	
HDU1	-	CFAIMAGE	=	'no	
HDU1	-	GAIN	=		
HDU1	-	EXPTIME	=		
HDUI	-	BG-1	=	5,88/0E	
HDUI	-	BG-2	=	5,8600E	
HDUI		BG-3	_	5,8960E	
	-	SCALE-1	=	3,14295	
	_	SCALE-2	_	2,09435	
	_	NOTSE_1	_	2,34420	
	_	NOTSE_2	_	0 70055	
HDU1	_	NOTSE-2	_	9,7003E	
HDU1	_	SNR-1	_	7,2821E	
HDU1	_	SNR-2	_	9.3191E	
HDU1	_	SNR-3	=	6.8598E	
HDU1	_	NUMFRAME	=		
HDU1	-	N0TE-1	=	'NR = Noi	
HDU1	-	N0TE-2	=	'medNR =	
HDU1	-	N0TE-3	-	'refNR =	
HDU1	-	N0TE-4	=	'ideal no	
HDU1	-	N0TE-5	=	'the real	
HDU1	-	NOTE-6	=	'the effe	
HDU1		N0TE-7	=	'dispersi	
HDU1	-	N0TE-8	=	because	
HDU1	-	medNR-1	=	4,3408E	
HDU1	-	medNR-2	=	4,3846E	
HDU1		medNR-3	=	4,4264E	
HDU1	-	refNR-1	=	4,3428E	
HDU1	-	refNR-2	=	4,4105E	
HDUI	-	retnk-3	=	4,456/E	
HDU1	-	1dNR-1	-	1,6882E	
HDUI	-	idNR-2	=	1,6882E	
	-	10NK-3	=	1,0882E	
HDU1	-	rative-1	_	2,3/130	
	_	ratND_2	_	2,59720	
	2	medFNR_1	_	2,0220E	
	_	medFNR-2	_	1,5077E	
HDU1	_	medENR-3	=	1,5701E	
HDU1		refENR-1	=	2.0158E	
HDU1	_	refENR-2	=	' 1.5314E	
HDU1	-	refENR-3	=	' 1,5433E	
HDU1	-	END			
		2		2 E	





file name frame select \checkmark Light 1 ../Aubette jan20/St-avg-8550.0s-WC_1_3.0_none-_x_1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-MBB5.fits 0,000 4

				Astro Pixel Processo	or ve
LICENS	SE CFG HDD 267GB openGL4			<pre>orientation</pre>	s
#CPU	16 using 15 threads APP 0%			s-WC_1_3.0_nonex_1.0_1.0_1	bdr_
RAM AP	P 2592/20480 OS 22670/32768	HDU1 - SIMPLE =	4		
		HDU1 - BITPIX = HDU1 - NAXIS =	1		
		HDU1 - NAXIS1 = HDU1 - NAXIS2 =			
•••	mes/SSD1To/ASTROPH0T0	HDU1 - NAXIS3 = HDU1 - EXTEND =			0.78/0
3) A	WALYSE STARS 4) REGISTER	HDU1 - BSCALE = HDU1 - BZER0 =			
0) RAW	/FITS 1) LOAD 2) CALIBRATE	HDU1 - DATE = $2020-02-$			
5) NOR	MALIZE 6) INTEGRATE 9) TOOLS	HDU1 - VERSION = $'1.075$			
		HDU1 - INTEGRAT= 'Integrat HDU1 - CFAIMAGE= 'no			
		HDU1 – GAIN = HDU1 – EXPTIME =			
		HDU1 - BG-1 = $5,8870E$ HDU1 - BG-2 = $5,8600E$			
		HDU1 $-$ BG -3 = ' 5,8960E			
		HDUI - SCALE-I = $3,1429E$ HDUI - SCALE-2 = $2,0945E$		and the second	
		HDU1 - SCALE-3 = ' 2,3442E HDU1 - NOISE-1 = ' 1,2241E			
		HDU1 - N0ISE-2 = ' 9,7005E HDU1 - N0ISE-3 = ' 1,1375E			
	batch modify	HDU1 - SNR-1 = $^{\prime}$ 7,2821E HDU1 - SNR-2 = $^{\prime}$ 9,3191E			
	bacch modify	HDU1 - SNR-3 = $^{\circ}$ 6,8598E			
	batch rotate/resize	HDU1 - NOTE - 1 = 'NR = Noi			
	correct vignetting	HDU1 - NOTE-3 = 'refNR =			
		HDU1 - NOTE-4 = 'ideal no HDU1 - NOTE-5 = 'the real			
	remove light pollution 😕	HDU1 - NOTE-6 = 'the effe HDU1 - NOTE-7 = 'dispersi			
	calibrate background	HDU1 - NOTE-8 = 'because HDU1 - medNR-1 = ' 4,3408E			
		HDU1 - medNR-2 = $4,3846E$ HDU1 - medNR-3 = $4,4264E$			
	calibrate star colors	HDU1 - refNR-1 = $4,3428E$ HDU1 - refNR-2 = $4,4105E$			
	combine RGB	HDU1 - refNR-3 = $4,4105$ HDU1 - refNR-3 = $4,4567$ E			
		HDU1 - IdNR-1 = 1,6882E HDU1 - IdNR-2 = 1,6882E			
	HSL selective color	HDU1 - idNR-3 = ' 1,6882E HDU1 - ratNR-1 = ' 2,5713E			
		HDU1 - ratNR-2 = ' 2,5972E HDU1 - ratNR-3 = ' 2,6220E			
		HDU1 - medENR-1= ' 2,0184E			
		HDU1 - medENR-3= ' 1,5201E			
		HDU1 - refENR-2= ' 1,5314E			
		HDU1 - refENR-3= ' 1,5433E HDU1 - END			
A T					
select	frame file name				150
✓	Light 1/Aubette jan20/St-avg-	8550.0s-WC_1_3.0_nonex_1.0_1	.0_b	dr_hat-full-qua-add-sc_BWMV_nor-NI-RE-MBB5.fits	0

IS0/

entation 🔄 scale to fit linear(l)

1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-NBB5.fits

-



Aller dans l'onglet 9) TOOLS



Cliquer sur « remove light pollution »

				State State
	A Contract of the	大学的 学校员。		
		115 6 225		
		Margaria - 1	Contractory and	
			这些时代的 是是	
A STATE OF A STATE OF A STATE OF A STATE				States and a second

—					
/gain	exposure (s)	time shot	#stars & star density	background & dispersion	SNR & noise
,000	8550	N/A	-	-	-





FITS	HC	DUs: 1			
HDU1	-	SIMPLE	=		4
HDU1		BITPIX	-		÷
HDU1	-	NAXIS	=		
HDU1	-	NAXIS1	=		
HDU1	-	NAXIS2	=		
HDU1	-	NAXIS3	=		
HDU1	-	EXTEND	=		
HDU1	-	BSCALE	=		
HDUI	_	BZERU	=	12620-02-	
	_	CAETMAD	-	2020-02-	
	_	VERSTON	-	1 075	
HDU1	_	INTEGRAI	- -	'Integrat	
HDU1	_	CFAIMAGE		'no	
HDU1	_	GAIN	=		
HDU1	-	EXPTIME	=		
HDU1	-	BG-1	=	' 5,8870E	
HDU1	-	BG-2	=	' 5,8600E	
HDU1		BG-3	=	' 5,8960E	
HDU1	-	SCALE-1	=	' 3,1429E	
HDU1	-	SCALE-2	=	' 2,0945E	
HDU1	-	SCALE-3	=	' 2,3442E	
HDU1	-	NOISE-1	=	' 1,2241E	
HDU1	-	NOTSE-2	=	9,7005E	
HDU1	-	NOISE-3	=	1,1375E	
HDU1	-	SNR-1	=	7,2821E	
HDU1	-	SNR-2	=	• 9,3191E	
HDU1	-	SNR-3	.=	· 6,8598E	
HDUI	-	NUMERAMI	-		
HDU1	_	NOTE-1	-	medNR -	
	_	NOTE-2	-	rofNP -	n
HDU1	_	NOTE-4	Ξ.	'ideal no	U
HDU1	_	NOTE-5	_	'the real	
HDU1	-	NOTE-6	=	'the effe	
HDU1		NOTE-7	=	'dispersi	
HDU1	-	N0TE-8	=	'because	
HDU1	-	medNR-1	=	4,3408E	
HDU1	-	medNR-2	=	' 4,3846E	
HDU1		medNR-3	=	' 4,4264E	
HDU1	-	refNR-1	=	' 4,3428E	
HDU1	-	refNR-2	=	4,4105E	
HDU1	-	refNR-3	=	4,4567E	
HDU1	-	idNR-1	=	1,6882 E	
HDU1	-	idNR-2	=	1,6882E	
HDU1	-	1dNR-3	=	1,6882E	
HDUI	-	ratNR-1	=	· 2,5/13E	
HDUI	-	ratNK-2	=	2,59/2E	
HDUI	-	ration 1	=	· 2,6220E	
	_	medENR-1	L=)_	2,01040	
HDUI	2	medENR_3	2-	1,50776	
HDU1	_	refFNR-1)- =	' 2.0158E	
HDU1	_	refENR-2	2=	' 1.5314E	
HDU1	_	refENR-3	3=	' 1.5433E	
HDU1	-	END		-,	
1				7.F	



orientation _____scale to fit linear(l)

s-WC_1_3.0_none-_x_1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-NBB5.fits

Placer des rectangles dans les zones de fond de ciel

Cliquer sur « calculate »





FITS	н	DUs: 1			
HDU1	-	SIMPLE	=		4
HDU1		BITPIX	-		÷
HDU1	-	NAXIS	=		
HDU1	-	NAXIS1	=		
HDU1	-	NAXIS2	=		
HDU1	-	NAXIS3	=		
HDUI	_		Ξ		
	_	B7ER0	=		
HDU1	_	DATE	=	2020-02-	
HDU1	-	SOFTWARE	=	'Astro Pi	
HDU1	-	VERSION	=	'1.075	
HDU1	-	INTEGRAT	Γ=	'Integrat	
HDU1	-	CFAIMAGE	=	'no	
HDU1	-	GAIN	=		
HDU1	-	EXPTIME	=	1 5 00705	
HDUT	_	BG-1 BG-2	=	5 8600E	
HDU1	_	BG-3	-	5,8960E	
HDU1	_	SCALE-1	=	' 3.1429E	
HDU1	-	SCALE-2	=	' 2,0945E	
HDU1	-	SCALE-3	=	' 2,3442E	
HDU1	-	N0ISE-1	=	' 1,2241E	
HDU1	-	NOISE-2	=	9,7005E	
HDU1	-	NOISE-3	=	1,1375E	
HDU1	-	SNR-1	=	• 7,2821E	
	_	SNR-2	=	9,3191C	
HDU1	2		-	0,03900	
HDU1	_	NOTE-1	1	'NE = Noi	
HDU1	-	NOTE-2	=	'medNR =	
HDU1	-	N0TE-3	-	'refNR =	1
HDU1	-	N0TE-4	=	'ideal no	U
HDU1	-	N0TE-5	=	'the real	
HDU1	-	NOTE-6	=	the effe	
HDU1		NOTE O	=	'dispersi	
	2	medNR_1	-	' 4 3408F	
HDU1	_	medNR-2	=	' 4.3846E	
HDU1		medNR-3	=	4,4264E	
HDU1	-	refNR-1	=	' 4,3428E	
HDU1	-	refNR-2	=	' 4,4105E	
HDU1	-	refNR-3	=	' 4,4567E	
HDU1	-	idNR-1	Ξ	1,6882E	
HDU1	-	1dNR-2	=	· 1,6882E	
	2	ratNR_1	2	1,0002C	
HDU1	_	ratNR-2	=	2,5972E	
HDU1	_	ratNR-3	_	' 2,6220E	
HDU1	-	medENR-1	l=	' 2,0184E	
HDU1	-	medENR-2	2=	' 1,5077E	
HDU1	-	medENR-3	3=	' 1,5201E	
HDU1		refENR-1	l=	2,0158E	
HDU1	-	refENR-2	2=	· 1,5314E	
	-	FND	s =	1,04330	
•)			





Le 1er calcul peut donner des rectangles jaunes ou rouges. On peut les supprimer en cliquant sur les boutons « remove »

Placer des rectangles supplémentaires dans les zones mal corrigées (plus sombres par exemple)

Si le dernier rectangle tracé n'est pas bon, on peut l'effacer par ce bouton, et remonter en arrière. Attention, on ne peut pas choisir le rectangle à effacer. C'est forcément dans l'ordre récursif de traçage.

Show corrected image permet de voir les gradients

Cliquer à chaque fois sur CALCULATE

Sauver l'image finale









	Astro Pixel Processor version 1.079 © Aries Productions	
LICENSE CFG HDD 267GB openGL4	orientation scale to fit linear(l)	
#CPU 16 using 15 threads APP 0%	ZOOM: 17,36% - 6002x4007 32bits - X:01763 Y:04007 R:0,025000 G:0,025000 B:0,025000	
CAM ADD 2729 (20492 AC 22150 (22769	FITS HDUS: 1	
MAN AFF 2720720400 03 23130732708	HDU1 - SIMPLE = HDU1 - BITPIX =	
	HDU1 - NAXIS = HDU1 - NAXIS1 =	
mes/SSD1To/ASTR0PH0TO	HDU1 - NAXIS2 = HDU1 - NAXIS3 = HDU1 - EXTEND =	100 M M M
3) ANALYSE STARS 4) REGISTER	HDU1 - BSCALE = HDU1 - BZERO =	
0) RAW/FITS 1) LOAD 2) CALIBRATE 5) NORMALIZE 6) INTEGRATE 9) TOOLS	HDU1 - DATE = '2020-05- HDU1 - DATE-OBS= 'N/A HDU1 - SOETHARE- 'Astro Ri	
	HDU1 - VERSION = '1.079 HDU1 - FRAME = '0ther/Pr	
	HDU1 - INSTRUME= 'notAvail HDU1 - CFAIMAGE= 'no	
	HDU1 - EXPTIME = HDU1 - GAIN =	
	HDU1 - AD-PED = HDU1 - CBG-1 = 0.0056853	
	HDU1 - CBG-2 = 0.0056853 HDU1 - CBG-3 = 0.0056853	
	HDOI - END	
batch modify		
Detti modily		
batch rotate/resize		
correct vignetting		
remove light pollution		
calibrate background		
calibrate star colors		
combine RGB		
HSL splastive color		
		1.083.892
select frame file name Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image: Constraint of the select Image	/St-avg-8550.0s-WC_1_3.0_nonex_1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-MBB5.fits 0,000 8550 N/A	n SNR &
✓ Other/Processed 1/St-avg-8550.0s	s-WC_1_3.0_nonex_1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-MBB5-lpc-cbg.fits 0,000 8550 N/A	

mes/SSD1To/ASTR0PH0T0	HDU1 - NAXIS3 =							
	HDU1 - BSCALE =							
0) RAW/FITS 1) LOAD 2) CALIBRATE	HDU1 - BZERO = HDU1 - DATE = '2020-05-							
5) NORMALIZE 6) INTEGRATE 9) TOOLS	HDU1 - DATE-OBS= 'N/A HDU1 - SOFTWARE= 'Astro Pi							
	HDU1 - VERSION = $'1.079$ HDU1 - ERAME = 10 ther/Pr							
	HDU1 - INSTRUME= 'notAvail		Contra Andreas					
	HDU1 - CFAIMAGE= 'no HDU1 - EXPTIME =							
	HDU1 - GAIN = HDU1 - AD-PED =							
	HDU1 - CBG - 1 = 0.0056853 HDU1 - CBG - 2 = 0.0056853							
	HDU1 - CBG-3 = 0.0056853							
	HDU1 - END							
batch modify								
batch satato/sociao	n							
batch rotate/resize								
correct vignetting								
remove light pollution								
calibrate background								
calibrate star colors								
combine RGB								
HSL selective color								
				ARE SERVICE	なないないないない			
A 7			_					
lect frame file name				IS0/gain	exposure (s)	time shot	#stars & star density	background & dispersion SNR &
✓ Light 1/Aubette jan20	<pre>//St-avg-8550.0s-WC_1_3.0_nonex_ ls-WC_1_3_0_nonex_1_0_1_0_bdc_bc</pre>	1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_n t-full-qua-add-sc_BVMV_nor-NI_PE_MER5	or-NI-RE-MBB5.fits	0,000	8550	N/A	-	-
C Other (Frocesseu 1 1.75t-avg-0550.0			cpc-cbgr11c3	0,000	0550	N/A		



Cliquer sur « calibrage background »





		ľ
FITS	HDUs: 1	L
HDU1	- SIMPLE =	
HDU1	- BITPIX =	
HDU1	- NAXIS =	L
HDU1	- NAXIS1 =	
HDU1	- NAXIS2 =	L
HDU1	- NAXIS3 =	L
HDU1	– EXTEND =	L
HDU1	– BSCALE =	L
HDU1	– BZER0 =	
HDU1	- DATE = '2020-05-	L
HDU1	- DATE-OBS= 'N/A	L
HDU1	- SOFTWARE= 'Astro Pi	
HDU1	- VERSION = '1.079	L
HDU1	<pre>- FRAME = 'Other/Pr</pre>	L
HDU1	- INSTRUME= 'notAvail	
HDU1	– CFAIMAGE= 'no	L
HDU1	– EXPTIME =	L
HDU1	- GAIN =	L
HDU1	– AD–PED =	L
HDU1	- CBG-1 = 0.0056853	
HDU1	- CBG-2 = 0.0056853	
HDU1	- CBG-3 = 0.0056853	
HDU1	- END	L
		L
		L



Placer des rectangles dans les zones de fond de ciel











LICENSE CFG HDD 267GB openGL4
#CPU 16 using 15 threads APP 0%
OS 8%
RAM APP 2728/20480 OS 23207/32768
mes/SSD1To/ASTROPH0T0
3) ANALYSE STARS 4) REGISTER
0) RAW/FITS 1) LOAD 2) CALIBRATE 5) NORMALIZE 6) INTEGRATE 9) TOOLS
STRUCTREIZE OF INTEGRATE ST TODES
batch modify
batch rotate/resize
correct vignetting
remove light pollution
calibrate background
calibrate star colors 🚺
combine RGB
HSL selective color

如此是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是
'2020-05- 'N/A 'Astro Pi '1.079 'Other/Pr 'notAvail 'no 0.0056853 0.0056853 0.0056853
SIMPLE BITPIX NAXIS NAXISI NAXISI NAXISI NAXISI NAXISI NAXISI BSCALE BZER0 DATE DATE-OB SOFTWAR VERSION FRAME INSTRUM CFAIMAG EXPTIME GAIN AD-PED CBG-1 CBG-2 CBG-3 END

A ¥		
select	frame	file name
v	Light 1	/Aubette jan20/St-avg-8550.0s-WC_1_3.0_nonex_1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-MBB5.fit
v	Other/Processed 1	/St-avg-8550.0s-WC_1_3.0_nonex_1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-MBB5-lpc-cbg.fits
4		

orientation _ scale to fit linear(l)

.0_none-_x_1.0_1.0_bdr_hat-full-qua-add-sc_BWMV_nor-NI-RE-MBB5-lpc-cbg.fits

T



Cliquer sur « calibrage star colors »











*** ***