

OBSERVING LOG

Observing dates: 1992 Feb 27

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Operator:

Instrumentation: T61C 1024²

Tape:

[illegible]

Looking at I 7469

Checking the 12 mag star to see which image is clearest

12 mag	col	row	e	FWHM	
4	745	363	.115	3.95	
3	790	361	.021	4.88	
2	830	366	.088	4.24	* round + smaller
1	878	366	.156	4.28	

B coord of 2nd image (2nd from the south)
~715 737

In B 7468

12 mag star	col	row	e	FWHM	
Nmost	4	750	366	.152	5.60
	3	795	368	.050	4.85 *
Smost	2	841	368	.167	5.63
(onchip)	1	887	370	.120	5.92

B #3 at 680 741

2nd I frame 7470

	col	row	e	FWHM
1				
2				
3				
4				

SATURATED 20 s exposure

Best B looks like at 715 736 B #2 (2nd from the South most)

Chances Almost resolved.

Total B ADU = 210 K

Playing w/ subtracting a PSF - need to bias subtract

EXPOSURE keyword is 60s for B B quads. Records last (?) exposure, not cumulative.

I exposure times

7469	10s	15:56	sky = 9K	max = 36K
7470	20s	16:00	sky = 18K	max = 36K 44K

So expose I at 10s and before twilight

EXTRACT A CHARON from 7470 2nd I frame

- ① Get the bias. According to Alan, col 1065-1086, row 1-78

```
> imstat plutoI.7470[1065:1086, 1:78]
```

→ mean 6104 ± 5.553 min 6091 max 6118

Bias level 6104

- ② subtract bias from Pluto frame

> $\text{image} + \text{photoI.7470} - 6104 \text{ photoI.bias.7470}$
 operand 1 operator operand 2 result +

- ③ read in the two - no, three - I dome flats 7478 - 7420 7471 - 7473

~~2 rfits C007478.fits 1 flat I.7478~~

> r fits c@07471.fits | flat I.7471

7		"			"	72	"	1			"	.74	72
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"					73	1			"	74	73
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- ④ average the three flats

FIRST check eqn: $\text{option} = \text{average}$

> imcombine	flat*	flatI.avg	option = option = average	scale = no
	input list	output	↑ or sum median, etc.	

- ⑤ bias subtract flat field

```
> imstat flatI, avg[1065:1096, 1:78]
```

$$\text{mean} = 6116 \pm 12.61$$
$$> \text{imarith flatI.avg} - 6116 \text{ flatI.avg.bias}$$

- ⑥ Divide by flat field

in com in divide parameters constant = 0 what to use in case of divide by zero

rescale = norescale (or numerator - scale so result has same mean as numerator?)

> ximdivide	plutoI.bias.7470	flatI.avg.bias	plutoI.flat.7470
	num	denom	result

>	"			"				"	photo I. flat 2.7470 rescale = numerator
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The background is flatter, but has a dark star-like shape ^N_E which could be the shutter?

