

1971

Apr. 23 (PM) Tom + Mary Cragg rotated dome in each direction - O.K. One shutter door coming apart + is open to wind blown elements. Took chart inventory to order needed "b" charts.

May 22 Ford, Cragg, L. Hazel. Good sky, seeing fair, no -23 wind, Temp.  $40^{\circ}$ . Estimates: FD = 11; TC = 12; Hazel = 12. Obs'g from 10 PM till dawn, lite 4:15 AM PDST May 23. Damaged shutter in precarious condition, very difficult to close shutters completely. First obs'g and chart check on 110706 U Cit.

May 23. Ford, Cragg, L. Hazel. Good sky + seeing, -24 light wind but not troublesome. Temp.  $48^{\circ}$  -  $45^{\circ}$ . Chart checks on new Hazel charts + others. At end of obs'g (dawn lite) 4:20 AM PDST, TC + LEH unable to close damaged shutter, had to leave it open about 1 foot. Estimates: FD = 18; TC = 21; LEH = 21.

May 24/25. Ford, L. Hazel. Sky excellent, seeing good, some wind but not too bad to work. Estimates: FD = 19; LEH = 15. Temp.  $54^{\circ}$  -  $50^{\circ}$ . Chart chs, new Hazel + other charts. Able to use only about 60% of total shutter opening, due to damaged + jammed shutter. Again unable to close shutters completely at end of obs'g, 03:50 AM PDST May 25.

May 26. 6:30 - 8 PM PDST, Ford + Hazel. Too windy to observe, moved dome to best pos'n to resist strong S. winds. Shutter still stuck open about 1 foot, so far no damage to

22

1971

May 26 (continued) Done contents, but entire dome + shutters shaking badly in high wind gusts, estimated 40-50 mph. Temp.  $46^{\circ}$ .  
Returned to W/W house, 8:15 PM PDST.

May 29 Cragg, Ford, Hazel. 8:30 PM PDST until  
-Bo 3:45 AM. High winds, fog rolling over Blue Ridge interrupting obs'g. Temp  $38^{\circ}$ ,  $36^{\circ}$ , obs'g difficult. Floor wet from previous rain + snow May 27-29. Seeing poor. Obsns: TAC = 14, LEH = 14; CAF = 11. Dome shutter still stuck open.

May 30-31 Cragg, Ford, Hazel. 9 PM PDST until midnight. High wind gusts, increasing w/ poor seeing, stopped obsns. Estimates: FD = 5; TAC = 6; LEH = 6. Same dome conditions as on May 29-30. Temp  $42^{\circ}$ - $40^{\circ}$ . Returned to W/W house 00:15 AM PDST May 31.

June 5 Ford, + two men from Joe Meluso Const'n Co. - to repair damaged shutter track box. Arrived 10 AM PDST. Beautiful sunny morning, no wind. Men arrived 11 AM, put up scaffolding to do job. Finally finished, track box in place, both shutters working OK - 3:30 PM. A helluva job! - but things are once more working at least temporarily. Returned to W/W house after sweeping up in dome - 4:20 PM. Closed dome - for first time in 3 weeks.

1971

June  
23-24

Cragg used telescope from dusk to dawn. Windy all night, seeing variable, transparency very good. Temperature started at 70°F.

Obtained 63 estimates, 51 of which were sanctum (faintest was Y Del at 17(1)).

Shutters easier to close than open; everything seemed to work quite well. Southernmost field was R Tel at -47°.

July 8 - August 8 - Ford Obs. lived in by 2 amateur astronomers from Mahwah, N.J. - testing patented cooled-emulsion camera by 19 year old Bill Williams. Elliot

Hart Ford did work with his 12" f/6.8. Ford 18" never used - All photographic work done with 10" Cove f/7. Camera proved successful on night of July 19.

Camera later on Mt. Wilson 60 inch. Most exposures listed below by suggestion of Larry Bornhurst.

	CAMERA	FILM	EXPOSURE
JULY 16	50mm Praktica	High Speed Ektar	20 min - Sagittarius
	"	Super Ansco chrome	20 min - "
	"	"	5 min - M31
JULY 18	10 inch f/7	Super Ansco	30 sec. - M8
	"	"	1 min - M8
	135 mm f/4	"	20 min - M31

24  
1971

	CAMERA	FILM	EXPOSURE
JULY 19	10 inch f/7	cut Tri-X	30 min - ambient - M8
	"	"	" COLD - M8
	50mm f/4	Super Ansco	30 min - Sagittarius
	"	"	30 min - Scutum
	10 inch f/7	cut Tri-X	30 min - ambient - M31
	"	"	" COLD - M31
	50mm f/4	Super Ansco	30 min - M31
JULY 21	50mm f/4	High Speed Ektar	1 hour - Cygnus
	35mm f/3.5	Ansco	1 hour - Circumpolar
JULY 23	35mm f/3.5	Ansco	1 hour - Scutum
JULY 28	35mm f/3.5	High Speed Ektar	30 min - NGC 7293
	"	"	55 min - Summer Tri.
JULY 30	10 inch f/7	cut Tri-X	30 min - ambient - M31
	"	"	" COLD - M31
AUG. 1	10 inch f/7	cut Tri-X	30 min - ambient - M31
	"	"	" COLD - M31
	"	"	" " "
AUG. 2	10 inch f/7	cut Tri-X	20 min - ambient - Veil
	"	"	" COLD - Veil
AUG. 3	10 inch f/7	cut Plus-X	30 min - ambient - M31
	"	"	" COLD - M31
	135mm f/4	INFRARED	- 30 min - M31

My work entirely successful! - Much, Much  
Thanks to owners of obs., especially Clinton Ford  
and Larry Borshorst. Owners of obs. great contributors  
to amateur astronomy. —  
Bill Willans

1971

Aug 17-18

Cragg used telescope on variables. Total estimates were 49 (32 sanctum). Wind bad all night but not so severe to work. Smog & poor transparency at start but improved during night. Temp. 70°F all night. Dome failed to work in counter clockwise rotation but worked fine clockwise. This caused considerable slowing of work. Trouble traced to the fact that all three motors work clockwise but only the NE one works counter clockwise! When closing down later in AM no dome rotation in any direction possible so dome had to be left in last observing position. Also one of the guides on the ladder to the observing platform is coming apart rendering it difficult to put ladder in storage position for moving platform. Also we have a broken dolly wheel on the chart file dolly. Aside from the above, we're in great shape!

Sept. 17-18

Ford, w/ guest Edward Pease. Found obs'y cleaned + left in excellent condition by Messrs. Williams + Hartford. Also electrical equipment re-conditioned by Bornhurst during past month. Total est.'s of variables = 16 (8 sanctums). Temp. 60°, light wind, seeing poor, transparency good.

Sept. ~~17~~ 18-19.

About 35 guests, members of Riverside Astro. Club. Cragg opened dome, Carpenter + Ford operated telescope. Obs'g of "spectacular" objects only, as follows:

M20	Aquarius	21 <sup>h</sup> 31 <sup>m</sup>	-1°
M72-73	"	21 <sup>h</sup> 01 <sup>m</sup>	-1-35'
HIV 18	Andromeda	23-23	+42-12

26  
1971

Dumbell Neb, Vulpecula	19-57 +22-35
53 I Pegasus	22-35 +15-30
152 I Aries	02-07 +11
112 I "	01-55 +18-30
Saturn	
Mars.	

Sept. 19-20. Ford. Obs'd total of 14 variables (4 sanctums), concentrating on chart checks. Temp. 52°, transparency good, seeing fair, light wind (no trouble). Closed dome 01:00 AM PDST Sept. 20.

~~Sept. 20-21. Ford. Obs'd total of 21 variables~~  
Sept. 21-22. Ford. Obs'd total of 12 variables (5 sanctums). Temp. 54°, no wind, transparency good, seeing fair. Only 1 of 2 shutters operating after wheel tire came off on no. 1. Closed dome 00:30 PDST Sept. 22.

Sept. 22-23 Ford. Obs'd total = 17 variables (10 sanctums). Good sky, no wind, Temp. 52°. Observing stopped by failure of dome motors and all other electric power in the dome, ca. 11:30 PM PDST. Closed dome 00:15 AM PDST Sept. 23.

Sept. 23, 2-4 PM, Ford. Inspected + tried to fix electrical trouble. No success. Put up wall brackets in living space, for AM-FM

1971

27

radio.

Sept. 24 2:45-4:00 PM. Ford + Bornhurst. B. repaired electrical trouble and installed new wheel in dome shutter no. 1.  
8:00-8:20 PM. Ford. Too windy to open dome. Returned to W/W.

Sept. 25 Ford + Carpenter. Crescent moon, setting. Increasing wind, troublesome. Temp.  $43^{\circ}$ , seeing poor, transparency OK. Obs'd total of 7 vars., all chart checks including 3 sanctums. Closed dome 01:00 AM PDST Sept. 26.

Sept. 26, Ford + Carpenter. Crescent moon, setting. Light wind, Temp.  $44^{\circ}$ , seeing poor, Obs'd total of 14 vars., all chart checks including 4 sanctums. Closed dome 01:30 AM PDST Sept. 27.

Sept 27 Ford. 1st qtr. moon, up but setting 1 hr. after starting to observe. Also light clouds which cleared. Temp.  $42^{\circ}$ . Total vars. obs'd = 18 including 9 sanctums. Light winds, no problem. Seeing fair to poor. Closed dome 02:40 AM PDST Sept. 28.

Nov 22-3 Cragg used telescope all night on variables. Wind variable all night - just strong enough to be obnoxious and screw up the seeing. Seeing 2-1, transparency good all night, temp  $42-36$ . Obtained 134 estimates (56 in Orion Nebula) including 57 sanctums. Could see 17.0 when seeing started down. Slip circle still giving trouble occasionally. Shutter door just scrapes edge of L-iron stored on roof when dome in the north.