D Cooke

CSIRO - DIVISION OF RADIOPHYSICS

# ALLOCATION OF TELESCOPE OBSERVING TIME AT PARKES RADIO OBSERVATORY FOR

# FOURTH QUARTER - 1975

## 1. Duration

The quarter starts at 0800 hours on Tuesday 7 October 1975 and finishes at 0800 hours on Wednesday 24 December 1975. Note that the October Shutdown occurs 7-19 October inclusive, and is followed immediately by the reflector modification program. The 6cm receiver will be installed and tested in the week 27 October - 2 November.

## 2. Receivers

The 6cm receiver will be in action until 0800 hours on Monday 15 December 1975. This means that the cryodyne will have run continuously for more than 1000 hours. As pointed out in the Program Meeting on 12 September 1975 by P.W. Butler, the makers recommend an overhaul of the cryodyne at 6000 hours and it had already run 5200 hours. The equipment will be left to run beyond 6000 hours but observers should note that if a breakdown occurs, then two days may be lost while the overhaul and replacement are effected.

It is expected that the 21cm receiver will remain in position during the Christmas Shutdown and thus be available early in the first quarter, 1976.

## 3. Computer Maintenance and Desk Check

Following much discussion the Computer maintenance period will be 0800 - 1600 hours on Mondays and 0800 - 1400 hours on Tuesdays. The desk check will be made at some time during this period. Time allocated to the Officer-in-Charge will be 0800 - 1300 hours on Wednesdays, Thursdays and Fridays. These arrangements will be reviewed at the end of the quarter.

## 4. Telescope Driving

While the PDP-11 installation is proceeding telescope driving will be carried out by the ten drivers only. If observations extend through meal breaks, then the PDP-11 control will be switched off by the driver as he leaves for his meal and the desk control will be operated by the person underlined in the program. No other person is permitted to take over. A minimum of two persons must be in the tower at all times while the telescope is in use.

## 5. Computer Development Time

Users are reminded that the PDP-9 computer is not intended for the reduction and analysis of data. Computer development time is only allocated for the preparation of observing programs.

The two hours reserved for D.J. Cooke on changeover days applies to every change - not merely to receiver changes.

6. Special Observing Arrangements

(a) The flare star observations on 30 November - 1 December may have to be brought forward or put back one day when the SAS-3 program is known. It is hoped that the 'source survey' observers will receive early advice of the final arrangements.

(b) In the period 15-19 December, J.D. Murray has been allocated 08 -1230 hours each day to carry out experiments on the telescope internal reflections. He may have to remove the 21cm feed on these occasions.

(c) The period 15-21 December is allocated for 21cm line observations on the 18m telescope.

7. Christmas Party

Because there is a welcome for everyone at Parkes to attend the Christmas Party on Friday, 19 December 1975, no drivers will be available from 1640 hours until 0800 hours on the Saturday. Therefore no observations are possible and appropriate allowances have been made in the program. The PDP-9 computer will be available and negotiations for its use could be made through J.D. Murray, the duty astronomer at that time.

8. Times

The times set down in the program are in AEST under normal conditions, but change to Eastern Summer Time when that time is introduced.

9. Completion of an observing night

Observers are expected to have organized their observations so that the telescope control desk, the computers and peripherals will be available for maintenance, testing or use at or before 0800 hours on every week day. Please cooperate on this one.

10. Modification of the Program

Any change to this program must be approved by the secretary, Program Planning Committee. He will notify the Officer-in-Charge and the Station Manager at Parkes.

11. Accommodation

Accommodation at the quarters is available from the night before an observing or installation session starts. Any person whose name has not been listed on the program must first obtain permission from the Group Leader before approaching the administration section for tickets and travel arrangements. It helps to make sure that the adminsitration section has, in fact, advised the Observatory of your arrival time.

12. Time for Meals

| | | | |
|---|---|---|---|
| Breakfast | : | 0730 - 0900 | ) |
| Lunch | : | 1230 | ) |
| Dinner | : | 1745 | ) |

Please use the book in the dining room to let Mrs Harris and staff know whether or not you require a meal.

13. Wind Instructions

Instructions for the operation of the telescope in wind are found on the Notice Board in the Control Room. The action to be taken is the responsibility of the telescope driver.

14. Daytime Driving

If observations are being made on weekdays in the times 0800-1640 hours telescope driving will be performed by the first half driver of the previous night. Observers must make the arrangements to obtain the driver's services.

15. Equipment Performance Survey

As part of an effort to improve operating conditions at the Observatory, the Station Manager has issued a form *EQUIPMENT PERFORMANCE SUMMARY*. In it he asks the observer: performance, time lost and other details of the receiver, cryogenics, correlator, PDP-9, control, mechanical operation and weather. It is in your own interests to fill in the form at the completion of your session.

R.X. McGee
Secretary
Program Planning Committee

26 September 1975

FOURTH QUARTER 1975

| DATE 1974 October | DAY $08^h$-$13^h$ | $13^h$-$24^h$-$08^h$ | Feeds, Focal Plane Requirements Other | Receivers | | LO, Pumps Phase Locks Multipliers | Test Equipment | Data Processing | Computer Program | Installation, Driving Requirements Remarks | Computer Program Development |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Front End | Back End | | | | | | |
| Wed. 1 | | | | | | | | | | | |
| Thur.2 | | | | | | | | | | | |
| Fri. 3 | | THIRD QUARTER | | | | | | | | | |
| Sat. 4 | | | | | | | | | | | |
| Sun. 5 | | | | | | | | | | | |
| Mon. 6 | Holiday | | | | | | | | | | |
| Tues.7 | | | | | | | | | | | |
| Wed. 8 | | | | | | | | | | | |
| Thur. 9 | | OCTOBER | | | | | | | | | |
| Fri. 10 | | | | | | | | | | | |
| Sat. 11 | | | | | | | | | | | |
| Sun. 12 | | | | | | | | | | | |
| Mon. 13 | | SHUT DOWN | | | | | | | | | |
| Tues.14 | | | | | | | | | | | |
| Wed. 15 | | | | | | | | | | | |
| Thur.16 | | | | | | | | | | | |
| Fri. 17 | | | | | | | | | | | |
| Sat. 18 | | | | | | | | | | | |
| Sun. 19 | | | | | | | | | | | |
| Mon. 20 | | | | | | | | | | | |
| Tues.21 | | MODIFICATIONS | | | | | | | | | |
| Wed. 22 | | to 64m | | | | | | | | | SHIMMINS, |
| Thur.23 | | REFLECTOR | | | | | | | | | COOKE |

| DATE 1974 Oct/Nov | DAY $08^h$-$13^h$ | $13^h$-$24^h$-$08^h$ | Feeds, Focal Plane Requirements Other | Receivers: Front End | Receivers: Back End | LO, Pumps Phase Locks Multipliers | Test Equipment | Data Processing | Computer Program | Installation, Driving Requirements Remarks | Computer Program Development |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fri. 24 | | MODIFICATIONS | | | | | | | | | 24 hr/day |
| Sat. 25 | | to 64m | | | | | | | | | |
| Sun. 26 | | REFLECTOR | | | | | | | | | |
| Mon. 27 | | | | | | | | | | | |
| Tues.28 | | | | | | | | | | | HUNT |
| Wed. 29 | | INSTALLATION 6cm | | | | | | | | | + 6cm $R_x$ |
| Thur.30 | | RECEIVER | | | | | | | | | tests |
| Fri. 31 | | COOKE and Staff | | | | | | | | | 24 hr/day |
| Sat. 1 | | | | | | | | | | | |
| Sun. 2 | | | | | | | | | | | |
| Mon. 3 | C/m, d/c | Planetary | 1 HE-6 | 6-c | Continuum | 'usual' | - | PDP-9 | own | | |
| Tues.4 | | Nebulae | | cold load | | | | | | | |
| Wed. 5 | O-i-C | MILNE | | | | | | | | | Not |
| Thur.6 | | $H_2CO$ line | 4.8 GHz feed | 6-ℓ | 'usual' | 2 freq.selecto | | PDP-9 | SPCTRA | | available |
| Fri. 7 | Parkes | observations | | | correlator | IF to feed | - | | (CORLAT) | | for CPD |
| Sat. 8 | GARDNER, | WHITEOAK | Absorber | 10K cal. | | correlator from | | | | | |
| Sun. 9 | | | | | | 4.83, 4.874 GHz | | | | | |
| Mon.10 | C/m, d/c | 5 GHz flux | 2 HE | 6-c at | Continuum | 'normal' | - | PDP-9 | STAKFL | 'usual' | |
| Tues.11 | | Density Scale | | 5.01 GHz | | | | | | | |
| Wed. 12 | O-i-C | SHIMMINS | | cold load | | | | | | | SAVAGE |
| Thur.13 | | Galactic Plane | 2 HE | 6-c, ℓ | Continuum | 'usual' | D.C. CRO | PDP-9 | MAPING | Driving is by | WRIGHT |
| Fri. 14 | Parkes | Survey | linear pol. | cold load | + | 2 LOs to cope | | HP-45 | INDEX | PDP-9 control | BOLTON |
| Sat. 15 | Recombination Lines | | | 5K cal | Correlator | with H109α H110α lines | | | CORCON | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Sun.16 | | (continued) HAYNES | | | | | | | MAPFRM REPLOT SPCTRA SPCIND | | |
| Mon.17 | C/m, d/c | CASWELL, | | | | | | | | | |
| Tues.18 | | SIMONS | | | | | | | | | (HAYNES) |
| Wed. 19 | O-i-C | | | | | | | | | | |
| Thur.20 | | OH-line observations | 13.4 GHz feed | 'Balister Ku-band Special' + 6-c IF | Correlator with 2 working samplers (filters) | X-band Klystron & doubler 18 GHz LO Dymec. IF to feed correlator at 13.441 & 13.434 GHz | | PDP-9 | SPCTRA (CORLAT) | | |
| Fri. 21 | Parkes | BALISTER, | | | | | | | | | |
| Sat. 22 | | GARDNER, KNOWLES | | | | | | | | | |
| Sun. 23 | | WHITEOAK | | | | | | | | | |
| Mon. 24 | C/m, d/c | | | | | | | | | | |
| Tues.25 | | Source Survey | 6 'close noddy feed' ( 10' sep.) | 6-c | 'usual' | - | - | PDP-9, HOUSTON PLOTTER, OFFLINE T/T | own | 'full driving' | BUTLER |
| Wed. 26 | O-i-C | $-65^o < \delta < -45^o$ | | | | | | | | | |
| Thur.27 | | + 2 selected areas + | | | | | | | | | |
| Fri. 28 | Parkes | pointing tests | | | | | | | | | |
| Sat. 29 | WRIGHT, SAVAGE, BOLTON | | *[NB - Flare Star period may have to come forward or go back by one day] | | | | | | | | |
| *Sun. 30 | Flare Stars (SAS-3) | | Same | 6-c | | | | PDP-9 | NODDY STAKFL | | |
| Mon. 1 | C/m, d/c | SLEE, MAGUN | | | | | | | | | |
| Tues. 2 | | WRIGHT et al (continued) | | | | | | | | | |
| Wed. 3 | O-i-C | Dish evaluation | 17m K-band 37m K-band feeds | 1.35-ℓ Switch for ref. beam + 6-c IF | Correlator | H-P Synth, Dymec Synch, H-P Klystron supply, X-13 etc., Schl. Synth, Lab. H-P Synth ( 0-1.3 GHz) 6cm ϕlock | - | PDP-9 | SPCTRA STAKFL FIT POINTX | All times driving | Not available for CPD |
| Thur. 4 | | at 1.35 cm | | | | | | | | | |
| Fri. 5 | Parkes | YABSLEY, | | | | | | | | | |
| Sat. 6 | | BATCHELOR, WELLINGTON, | | | | | | | | | |
| Sun. 7 | | CASWELL, HAYNES, GOSS, WRIGHT BALISTER | | | | | | | | | |

| DATE 1974 Dec. | DAY $08^h$-$13^h$ | $13^h$-$24^h$-$08^h$ | Feeds, Focal Plane Requirements Other | Receivers: Front End | Receivers: Back End | LO, Pumps Phase Locks Multipliers | Test Equipment | Data Processing | Computer Program | Installation, Driving Requirements Remarks | Computer Program Development |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mon. 8 | C/m, d/c | Investigation galactic $H_2O$ | 37m K-band | 1.35 ℓ ref. beam switch + 6c IF | Correlator 2 x 10 MHz 4 quadrants new aux. IF | As above | | PDP-9 | SPCTRA | All times driving | |
| Tues.9 | | | | | | | | | | | HAYNES |
| Wed.10 | O-i-C | CASWELL, HAYNES, | | | | | | | | | |
| Thur.11 | | BATCHELOR, | | | | | | | | | |
| Fri.12 | Parkes | WELLINGTON, | | | | | | | | | |
| Sat.13 | | BALISTER | | | | | | | | | |
| Sun.14 | | | | | | | | | | | |
| Mon.15 | C/m, d/c | Inter-Magellanic Cloud Region | 21 Absorber | 21-ℓ filter for 1420 MHz | Correlator + 18 cm b/e | - | L-band sweeper | PDP-9 | SPCTRA | + ↑ 18 metre telescope with 21cm Mk.II $R_x$ + RIDL system | |
| * Tue.16 | | | | | | | | | | | SAVAGE |
| * Wed.17 | O-i-C | MATHEWSON | | | | | | | | SCHWARZ | WRIGHT |
| * Thur.18 | | MURRAY | | | | | | | | MATHEWSON | |
| * Fri.19 | Parkes | 1640 No observations | * Telescope Internal Reflections 08 → 1230 hours each day - MURRAY | | | | Reflectometer Sweeper, CRO | Polaroid camera & film | | MURRAY ↓ | BOLTON |
| Sat.20 | HI in Southern Galaxies | | 21 absorber | 21-ℓ 1370 → 1425 MHz | Correlator 2 IFs (20 MHz total band) | 'standard + 2 frequency selector' | - | PDP-9 | SPCTRA | | |
| Sun.21 | | | | | | | | | | | |
| Mon.22 | C/m, d/c | GOSS, MEBOLD | | | | | | | | | |
| Tue.23 | | VAN WOERDEN | | | | | | | | | |
| Wed.24 | O-i-C | E N D of Q U A R T E R | | | | | | | | | |
| | | XMAS SHUT-DOWN (MERRY CHRISTMAS) | | | | | | | | | |