

## 3.6 m Triplet Adapter: Tests on the Telescope

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The first test installation of the triplet adapter on the 3.6 m telescope took place on La Silla in September 1979.

During this period we obtained a number of focus plates and a few test photos from which a large amount of information was derived about the optical quality and the mechanical and electrical performances, cf. the illustration on page 34.

The results were good: the optical quality is inside the specifications. No problems were found regarding stability and reproducibility of the electro-mechanical functions. The automatic filter and plate changer behaved well despite some problems we had before, during the tests in Geneva.

The problems encountered at this first trial on the telescope were:

(a) The mechanical interface of the adapter to the telescope did not fit.

(b) The range of the axial movement of the knife edge had to be displaced.

(c) The TV camera used for manual guiding was not reliable at low temperatures.

(d) A new version of the 3.6 m telescope control programme, more flexible and more suitable for the integration of the triplet adapter programme and for future implementation, had to be installed.

In order to solve these problems and to offer the triplet adapter for the period 25 (1 April–1 October 1980), a new series of tests is planned for the end of November 1979.

During this second test period we intend to do:

(a) The final alignment of optics (blue and red).

(b) The tests of the guide probe, to determine the values for the use of the "Foucault method".

(c) The determination of the light attenuation in relation to film material, filters and exposure time for the spot sensitometer.

(d) The determination of limiting magnitude.

(e) The tests for ghost images.

Documentation about the triplet adapter will be available at the ESO Libraries in Geneva and on La Silla:

I. General description and specifications: from November 1979;

II. Operations Manual: from February 1980;

III. Maintenance Manual: from May 1980.

## Brave New World?

To observe with a telescope is not exactly what it has been. Not so long ago, the astronomer worked next to the telescope, pushed the buttons, watched the sky through the dome slit and entertained the night assistant with his personal repertoire of songs, frequently ranging from the tragedy of *Tosca* to the invocative expressions of "Let it be, let it be" or even later masterpieces.

Nowadays, however, in the Age of Automation, the "observer" sits in a brightly lit room, somewhere in the telescope building (he is not quite sure where), and punches the keys of a computer console. He does not know where the telescope is (it may be in space) nor has he any idea of how it looks like. He only worries about the 1/2 night that has been allocated by the Observing Programmes Committee for his observations and whether the telescope and the weather will permit him to obtain the data he has been waiting for during the past year with so much expectation.

The present trend is towards even more automation, even better efficiency, etc. What will it be like, 5 years from now? Always ahead of its time, THE MESSENGER has obtained a listing of a future file in the central ESO/La Silla computer system which is reproduced in facsimile here and illustrated by Karen Saxby. For convenience of the reader, the central computer is indicated by a dash (-) and the observing astronomer with (:).

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MESS T=00004 IS ON CR04934 USING 00006 BLKS R=0047
0001 **** LOG DUMP FILE: 3.6/133/1984/JEDERMANN
0002 ****
0003 - GOOD EVENING AND WELCOME TO THE 3.6 M.
0004 - IS THIS YOUR FIRST RUN?
0005 : NO
0006 - WE SHALL CHECK THAT. WHAT IS YOUR NAME?
0007 : J. EDERMANN
0008 - INSTITUTE?
0009 : ASTROPHYSICAL INSTITUTE, ANYTOWN.
0010 - OK. YOU WERE HERE ON 123/1983, OK?
0011 : WELL, ER...
0012 - YOUR RECORD SAYS THAT YOU LOST 23.7 MIN DUE
0013 TO WRONG COORDINATES, DID YOU PREPARE
0014 YOUR OBSERVATIONS BETTER THIS TIME ?
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0015 : PROMISE
0016 - OK. WE SHALL SEE... NOW GIVE YOUR ENTRY
0017 : CODE NUMBER.
0018 : OPC/X2398.42859YZ
0019 - CHECKING. JUST A MOMENT.
0020 : OK. ACCESS AUTHORIZED BY OPC. PROCEED.
0021 : PRIME, CASS. OR CODE FOCUS?
0022 : CASS.
0023 - OK. AVAILABLE INSTRUMENT?
0024 : IDS ON B&C SPECTROGRAPH.
0025 - ARE YOU SURE YOU WANT THIS INSTRUMENT?
0026 : SURE.
0027 - ARE YOU REALLY SURE?
0028 : YES, DEFINITELY.
0029 - SORRY. I WOULD RECOMMEND TO TAKE THE
0030 B&C SPECTROGRAPH.
0031 : WHY?
0032 - NO ANSWER.
0033 : BUT WHY I ASKED FOR THE OTHER!!
0034 - OK. TEMPORARY TROUBLES WITH B&C.
0035 : THEN CALL THE REPAIR UNIT.
0036 - REJECTED. THE CARIOCA GAME IS STILL ON.
0037 : I SEE. BRING IN THE OTHER SPECTROGRAPH.
0038 - OK. CASS MIRROR IN. B&C IN. IDS ON. OK.
0039 - DONE. OBJECT?
0040 : NGC 8056.
0041 - COORDINATES 23:55:56 -78:23.5 (1984.4)
0042 - SORRY. IMPOSSIBLE OBJECT. REJECTED.
0043 : WHY?
0044 - ALREADY OBSERVED WITH THIS INSTRUMENT.
0045 : WHO DID THAT!!!!
0046 - CLASSIFIED INFORMATION. NOT AVAILABLE.
0047 : OK. TAKE NGC 8056.
0048 - COORDINATES 23:56:55 -89:55:45 (1984.4)
0049 - SORRY. OUT OF RANGE (ZENITH DISTANCE 60:21W)
0050 : OH, PLEASE!!!!
0051 - OK. BUT ONLY THIS ONE!
0052 : PROMISE.
0053 - GO TO OBJECT. OPEN HATCH. MOVE DOME. ACQUIRE
0054 OBJECT. SURROUNDING CONFIGURATION CHECKED
0055 : OK. CENTER IN SLIT. AUTOGUIDER ON. START
0056 INTEGRATION. NOW. TIME 01:23:55.4 ET.
0057 - OBSERVATION STARTED. INSERT COMMENTS.
0058 : NGC8056. Z.D. IS COMPUTER RESPONSIBILITY.
0059 - THAT IS NOT FAIR. YOU ASKED ME.
0060 : OK. ASTRONOMERS RESPONSIBILITY.
0061 (PAUSE)
0062 - OBSERVATION STOP.
0063 : WHAT!! WHY?
0064 - ENOUGH PHOTONS RECEIVED. SIGNAL/NOISE = 7.89
0065 : BUT I WANT TO BE SURE... PLEASE!!
0066 - REQUEST REJECTED. WASTE OF VALUABLE TELESCOPE
0067 TIME. NEXT OBJECT?
0068 : NGC 8056.
0069 - REJECTED. ALREADY OBSERVED WITH THIS
0070 CONFIGURATION.
0071 : WHO?
0072 - SORRY. CLASSIFIED INFORMATION.
0073 : OK. I GIVE UP. LET US GO TO THE NEXT OBJECT
0074 : NGC 8057.
0075 - WHAT ABOUT THE NEW SUPERNOVA IN NGC 3333? I
0076 THINK THE OPC ALLOWED MINOR DEVIATIONS FROM
0077 YOUR ORIGINAL PROGRAMME?
0078 : YES. BUT...
0079 - I WOULD LIKE TO SEE WHAT IT LOOKS LIKE.
0080 : IAU CIRCULAR 5123; TRANSFER DATA.
0081 : MOVE TELESCOPE. MOVE DOME. ACQUIRE.
0082 : OBSERVATION START. SPECTRAL DISPLAY ON.
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0083 : I AM GOING TO WRITE TO THE DIRECTOR GENERAL!!  
 0084 (PAUSE)  
 0085 - HEY, THAT IS NOT BAD! LOOK AT THOSE LINES!!  
 0086 - FEXXIV AT V = 16789.45643 KMS  
 0087 : WHAA!!  
 0088 - YOU SEE THAT I WAS RIGHT? PHOTOMETRY?  
 0089 : SURE!  
 0090 - INTEGRATION STOP, D&E OFF, PHOTOMETER ON,  
 0091 INTEGRATE, STOP, PICTURE?  
 0092 : WELL EP...  
 0093 - OK, PHOTOMETER OFF, CASS MIRROR OUT, PRIME  
 0094 FOCUS MIRROR IN, TRIPLET ACTIVATE, LOAD  
 0095 CCD, INTEGRATE, TRANSFER ARRAY TO DISC,  
 0096 DISPLAY.  
 0097 : WHERE IS THE SUPERNOVA? THERE ARE SO MANY  
 0098 STARS IN THAT PICTURE...  
 0099 - HERE AT THE ARROW,  
 0100 : OH, YEAH I SUPPOSE SO,  
 0101 WHICH JOURNAL?  
 0102 : WHAT DO YOU MEAN??  
 0103 - AAA, AP, J., A.J., M.N. OR ESO MESSENGER,  
 0104 : I KNOW THOSE, BUT WHAT DO YOU MEAN?  
 0105 - WHICH ONE DO YOU WANT FOR THE PUBLICATION?  
 0106 : THAT IS NOT YOUR BUSINESS,  
 0107 - SPECTRUM TRANSFORMED TO INTENSITY, WAVELENGTH  
 0108 SCALE CALIBRATED, NO. OF LINES IDENTIFIED: 87

0109 EQUIVALENT WIDTHS FOUND, LINE RATIOS COMPUTED,  
 0110 TEMPERATURE, PRESSURE, ABUNDANCIES OK,  
 0111 PHOTOMETRY OK, COLOURS TRANSFORMED TO STANDARD  
 0112 SYSTEM, 3 SATELLITE TRAILS AND 1 COMET CLEANED  
 0113 FROM THE DIRECT PICTURE, ABSTRACT, INTRODUCTION,  
 0114 OBSERVATIONS, DISCUSSION, CONCLUSION OK, ANY  
 0115 SPECIAL WISHES FOR TITLE AND ACKNOWLEDGEMENTS?  
 0116 : HOW DO YOU DARE!!  
 0117 - OK, TITLE: SUPERNOVA IN NGC 3333,  
 0118 ACKNOWLEDGEMENTS: ESO CENTRAL COMPUTER,  
 0119 TRANSMITTED TO: (AAA) COMPUTER,  
 0120 : WHERE IS THE PANIC BUTTON?  
 0121 - I AM NOT GOING TO TELL YOU,  
 0122 NEGATIVE REPLY FROM (AAA), STYLE TOO DRY,  
 0123 CALL EDIT-PROC, MORE POESY PLEASE, THANKS,  
 0124 TRANSMITTED TO: (MESSENGER) COMPUTER,  
 0125 : WELL, PERHAPS IN THIS CASE... PLEASE SHOW ME  
 0126 THE MANUSCRIPT, SO THAT I CA  
 0127 - SORRY TO CUT IN, BUT PAPER NOW ACCEPTED BY  
 0128 (MESSENGER), CONGRATULATIONS, NEXT OBJECT?  
 0129 : I#####  
 0130 (SUBSEQUENT DIALOGUE DELETED BY INTERNAL  
 0131 CENSORING PROGRAMME AFTER CROSS-REFERENCE  
 0132 WITH FILE "BADWORDS")  
 0133 \*\*\*\*  
 0134 \*\*\*\* END OF LOG DUMP FILE 3.6/133/1984/JEDERMANN

