

HISTORY OF THE PROJECT

In 1969 the Science Research Council (SRC) set up a Northern Hemisphere Review Committee (NHRC) to make recommendations about British astronomical work in the northern hemisphere. The first meeting of the NHRC was held on 1969 January 28; the fourteenth and last meeting was held in 1970 September. The report produced by the NHRC was not published, but a number of its recommendations were put into effect. One of these was that simultaneous tests should be made of sites in Italy, Spain and Tenerife in connexion with the establishment of a proposed new British optical astronomical observing facility (usually referred to as the Northern Hemisphere Observatory or NHO). This recommendation was considered and accepted by the Astronomy Policy and Grants Committee (APGC) at its meeting on 1970 May 19. Work to implement this recommendation was begun at the two Royal Observatories.

In the early part of 1970 Dr. M.J. Smyth of Edinburgh University Astronomy Department had happened to meet Dr. M.F. Walker of Lick Observatory, California, in London. They discussed the equipment desirable for site testing and Dr. Smyth wrote a note about this; it is included in this Handbook as Annex 1. The proposals implicit in this note were accepted by the NHRC and the APGC and during the summer of 1970 the Instrumentation Division at the Royal Observatory, Edinburgh, assembled three sets of instruments for use at site testing stations: meteorological instruments were purchased; Polaris Trail Telescopes and Night Sky Photometers were made.

On his return in the summer of 1970 to the Royal Greenwich Observatory from detached duty at the Royal Observatory, Cape of Good Hope, South Africa, Mr. J.B. Alexander became Project Leader and began studies of meteorological data and of site testing observations made recently by other groups (French, German, etc.) He wrote a paper at the beginning of 1971 giving his proposals for site testing; it is included in this Handbook as Annex 2.

In 1971 March and April Mr. Alexander visited Spain and the Canary Islands. When responsibility for the Project ceased to be a joint responsibility of the two Royal Observatories Mr. Alexander resigned from the Project and on 1971 April 20 the present writer (Mr. B. McInnes) took over from him as Project Leader. A detailed budget for the Project was worked out and included in a paper written by the Astronomer Royal for Scotland for a meeting of the APGC held in 1971 May; it is included in this Handbook as Annex 3.

To continue the work which had been begun by the NHRC the SRC set up a Northern Hemisphere Observatory Planning Committee. This met first on 1971 July 23 and still meets regularly.

The later history of the Project is given in various memoranda: see Handbook Section 1.07.

TEAM ORGANISATION

Each team is a unit consisting of a Team Leader with one or more assistants. As far as the Project is concerned, the Team Leader is senior to the others but it is hoped that he will never need to use that fact to fulfil his responsibilities. Where problems arise, they should be tackled (and hopefully solved) by amicable discussion.

The team's station will be more like an expeditionary camp than an office with fixed hours but the Team Leader will devise a duty roster for his station, in consultation with his team, so that the work is shared equitably between the team members. Because of the character of the work, duty shifts may have to be longer than the normal eight or nine hours, and spells of duty may have to be longer than the normal five days of the working week.

Many off-duty periods will have to be spent at the station but they should be treated as real breaks from responsibility for the team member concerned. (This is not to say that an off-duty team member should refuse to lend a hand to someone who is on duty if he is asked to do so or if he sees the need for his assistance.)

The Team Leader is responsible to the Project Leader for all aspects of the running of his station, including the welfare of his team. It is expected, however, that he may delegate certain aspects of the work. This may well be true of care and maintenance of particular items of equipment.

CLOTHING

Each station will be provided with a number of "extreme cold weather" suits, consisting of overall trousers and an overall jacket. These suits will be made available to observers as necessary but will be regarded as station property.

Another small item of station property will be builder's gloves, for protection when handling rocks, etc., and these should be worn when rough work is being done.

Other items are to be purchased by each observer (to be regarded as his personal property after two months' use), as listed below. Costs will be refunded (on production of vouchers), with a limit for each item as indicated.

- (1) A pair of strong working boots (up to £8)
- (2) A pair of "Spanish fell walking" boots (up to £3)
- (3) Two or more pairs of good quality woollen socks (up to £2 total)
- (4) Two pairs of jeans (up to £6 total)
- (5) A pair of fine leather gloves, suitable for use with instruments (up to £7)

If any of these items wear out during the observer's tour of duty they may be replaced at the Project's expense (subject to the Project Leader's approval).

All other necessary clothing is to be supplied by the observer. The following notes may be useful.

Some of the overall jackets have hoods but most observers find it good to have a balaclava helmet or something similar to protect the ears from the wind.

During the day the sunlight can be very strong and most people find a pair of sunglasses to be necessary. A straw hat or other similar protection is also advisable.

Clothing required for day wear is as for any warm country: cotton shirts are better than nylon. On windy days and at night a warm pullover will be necessary.

COORDINATES OF SITES

The word "site" has been used in the Project for the location (or proposed location) of a Polaris Trail Telescope (PTT) mounting. It is thought that astronomical seeing may differ significantly between positions as little as 100 metres apart, and a site is therefore regarded as being the area within 50 metres, or less, of the PTT mounting. The word "station" has been used in the Project for the area over which it is expected that there will be no significant differences of meteorological factors (cloud cover, air temperature, relative humidity, etc.) The list of coordinates which follows gives latitude, longitude and height for the Project's sites; ground level at the Polaris Trail Telescope mounting has been taken as the measured point. The values have been obtained from maps (of various ages) and the accuracies of these values are not known.

Coordinates of sites (including proposed sites)

- 1 (a) Monte dei Morte, Castelgrande, Italy
40°48'36"N 15°29'01"E 1251 metres (4104 feet)
- 1 (b) Il Passo, Castelgrande, Italy
40°48'04"N 15°24'49"E 1142 metres (3747 feet)
- 2 (a) Calar Alto, Almeria, Spain
37°13'19"N 2°34'12"W 2165 metres (7103 feet)
- 2 (b) Padilla, Almeria, Spain
37°15'11"N 2°46'39"W 2060 metres (6758 feet)
- 3 Izaña, Tenerife, Canary Islands
28°17'50"N 16°30'30"W 2391 metres (7844 feet)
- 4 Fuente Nueva, La Palma, Canary Islands
28°45'10"N 17°52'07"W 2366 metres (7762 feet)
- 5 Pico del Teide, Tenerife, Canary Islands
28°10'00"N 16°38'30"W 3718 metres (12198 feet)
- 6 Monte Liso da Fonte, Fogo, Cape Verde Islands
14°57'00"N 24°24'00"W 2700 metres (8858 feet)
- 7 (a) Observatory Ridge, Mauna Kea, Hawaii
19°49'35"N 155°28'18"W 4200 metres (13780 feet)
- 7 (b) North-west Cone, Mauna Kea, Hawaii
19°49'47"N 155°28'38"W 4156 metres (13635 feet)
- 7 (c) Puu Poliahu, Mauna Kea, Hawaii
19°49'26"N 155°29'02"W 4155 metres (13631 feet)
- 7 (d) 13 North, Mauna Kea, Hawaii
19°

- 8 (a) Pico Ruivo, Madeira
32°45'19"N 16°56'20"W 1862 metres (6109 feet)
- 8 (b) Encumeada Alta, Madeira
32°45'34"N 16°55'46"W 1784 metres (5853 feet)