

EXTRACT FROM

A Personal History of the
Royal Greenwich Observatory
at Herstmonceux Castle
1948 – 1990

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APPENDIX C. STAFF STRUCTURE AND CONDITIONS OF SERVICE

C.1 The staff of RGO before the move

C.1.1 The staff in 1946

When the decision was taken in 1946 to move the Observatory from Greenwich to Herstmonceux Castle, the departments of the Observatory were scattered in various parts of the country. The war-damaged buildings at Greenwich had been only partly repaired, and the principal telescopes could not be used, although the Airy transit circle was used (see section 2.5.1), meteorological observations were recorded each day and daily photographs of the Sun were taken when it was possible to do so. The Astronomer Royal and the administrative staff had returned to Greenwich from Abinger Hammer in July 1945; the secondary time-service at Edinburgh had been closed at the end of January 1945. [RAR 46,24] The Time Department (headed by H M Smith) was still based at Abinger, the Chronometer Department (headed by G W Rickett) was at Bradford-on-Avon and H.M. Nautical Almanac Office (NAO) (headed by D H Sadler) was at Bath. The non-industrial staff in post on 30 April 1946 were listed in the AR's report to the Board of Visitors.

Dr R d'E Atkinson and Dr W R Hulme, who were graded as Chief Assistants, were loaned to other departments of the Admiralty during the war; D H Sadler, the third Chief Assistant continued in post as Superintendent of the NAO, but was also given responsibility for the operational work of the Admiralty Computing Service (ACS). Atkinson returned on 1946 June 6, but Hulme resigned. Dr A Hunter, Assistant, had returned on 1945 November 1, but three Junior Assistants (B R Leaton, R H Tucker and G A Harding (NAO)) were still 'on active service'.

The staff of the Observatory retained their traditional gradings although the new grades of the Scientific Civil Service had been introduced in many other establishments. In the AR's Report to the Board of the Visitors the 'Observatory Staff' were listed separately from the 'Nautical Almanac Office Staff'. The grades and numbers (OS + NAO) of the scientific and technical staff (70 in total) were:

Chief Assistant (2 + 1), Assistant (6 + 1), Junior Assistant (Higher Grade) (9 + 5), Junior Assistant (12 + 6), Clerical Assistant (2 + 2), Temporary Clerk Grade II (3 + 3), and Temporary Clerk Grade III (9 + 5).

Staff in the last three grades were employed primarily on computational work and had earlier been known as 'computers'. [See article by E G Martin in CR 51, May & June] There were also the Head of the (Chronometer) Repair Shop and one Laboratory Assistant.

In general, the Chief Assistants were recruited externally (and most stayed only a few years) and were well qualified. On the other hand, many of the Assistants and Junior Assistants (Higher Grade), some of whom were in charge of departments, were promoted internally from the lower grades. As a consequence, the number of graduates was small. [2/6 + 1/1 and 1/9 + 2/5, respectively]

The administrative staff (9 in total) were headed by the 'Secretary and Cashier', then H G Barker; he was supported by 2 Departmental Clerical Officers, one Temporary Shorthand Typist and two Temporary Typists, while in the NAO there were a 'Junior Assistant as Secretary' and a 'Clerk-Shorthand-Typist'. There was a Hostel

Warden at Abinger. In addition there were 33 industrial staff, who were not named individually in the report.

The regrading of the staff had barely started at the time of the AR's report in 1948, and was still not quite complete at the time of the report in 1949. The 1948 report stated:

“Mr. W. M. Witchell, Assistant, retired on April 26 after nearly 54 years' unbroken service. This constitutes a record for the Royal Observatory, and is all the more remarkable in that during his whole service Mr. Witchell was never absent on sick leave.”

The following year it was reported that:

“Mr. P. J. Melotte, Principal Scientific Officer, retired on October 31 after 53 years 2 months unbroken service. This is only six months less than the record service of Mr Witchell, who retired last year.”

Mr. Melotte had previously been graded as an Assistant; he had discovered the eighth satellite of Jupiter in 1908.

The third retirement after long service was that of R. T. Cullen in 1950 after 49 years; he had been head of the Meridian Department from 1934.

These retirements may be said to mark the break from the 19th century. The many new appointments that took place in 1948 and 1949 heralded the major changes that were to take place during the second half of the 20th century.

C.1.2 The new structure of the Scientific Civil Service

Up to this time each department of government had its own systems of grading for staff engaged on scientific work; I believe that some of the grades and pay scales in the Observatory were unique. There was also a wide variety of grades for engineering and technical work. Consequently, there were many anomalies and the negotiation of pay and conditions was a protracted and bureaucratic process. The concept of a Scientific Civil Service was introduced in 1946 to overcome, or at least alleviate, these problems. The structure that was introduced involved three classes, each made up of several grades; these classes were based largely on academic qualifications at entry. Staff normally worked their way up the class into which they were recruited, but class-to-class promotion was possible for those who gained additional qualifications or were otherwise able to show that they were capable of working at the levels that were appropriate to the other class. The latter proved to be particularly difficult and led to many cases where staff were doing very similar work but were in different classes - sometimes the pay was similar, but anomalies were not uncommon.

The 'senior' class was the 'Scientific Officer' class, for which the normal minimum entry requirement was a good honours degree. The main grades were Scientific Officer (SO), Senior Scientific Officer (SSO) and Principal Scientific Officer (PSO), which was the 'career grade' that all SOs were expected to reach. Above that were Senior Principal Scientific Officer (SPSO), Deputy Chief Scientific Officer (DCSO) and Chief Scientific Officer (CSO) that were normally associated with the supervision and management of larger and larger groups of scientific staff. In broad terms, those in grades SO to PSO carried out the research, while the SPSOs and above were expected to manage the research. The SO-class was the scientific equivalent of the Administrative class of the general civil service.

The bulk of the scientific work was carried out by the 'Experimental Officer' class, which was the equivalent of the Executive class in the general civil service. The main grades were Assistant Experimental Officer (AEO), Experimental Officer (EO), and Senior Experimental Officer (SEO); there was also a grade of Chief Experimental Officer (CEO), but posts at this grade were rare. The normal minimum entry level was at Higher Schools Certificate level (later A-level), but most later recruits were at degree level.

Support was provided by the 'Scientific Assistant' class, for which the normal minimum entry level was at General Schools Certificate level (later O-level). The only promotion in the class from the grade of Scientific Assistant (SA) was to Senior Scientific Assistant (SSA); possibly because it was expected that most SAs would either gain higher qualifications and move to AEO or would leave. The RGO staff lists give the grade as 'Assistant (Scientific)', but 'Scientific Assistant' was normally used.

As far as I can recall there was only one class for 'Professional and Technical Officers' (PTO), and this covered an enormous variety of types of work.

The assimilation of the staff of the Observatory proved to be a long drawn out process as many of the older staff who were in responsible posts did not have the qualifications appropriate to that level. In looking to the future, the AR clearly wanted the 'approved complement' to contain an appropriate number of posts in the three classes; in particular he would have wanted the head-of-department level to be graded at PSO level, but two of the current holders of these positions did not match the expectations for the grade. The situation was probably even more difficult in the EO class as, apart from Richards and Scott in the NAO, none of those that were assimilated as SEOs or EOs had a degree.

The first person in the RGO to be graded on the new scheme was John Pope. He was initially graded as an 'Assistant (Temporary)', but he obtained a BSc by part-time study and applied directly to the Civil Service Commission for an established position by entering an open competition; he was successful and so in the 1947 staff list he is shown as an AEO, above the Junior Assistants. The following year he is still the only member of the EO class, but he is shown below the Junior Assistants, and even below the Assistants (Temporary)! Of the three with this grading, one (Barocas) had a PhD, one (Miss Penny) had a BSc, and one (Wellgate) had no recognised qualification. By 1949, the Junior Assistants had become Experimental Officers, while Barocas had become a Temporary EO and Wellgate had become a Temporary SSO; Miss Penny was still in the same grade, but had lost her BSc and was listed above the AEOs! During the following year Miss Penny was transferred to the grade of Temporary EO and had regained her degree.

The greatest anomaly of all was that the AR was graded as Chief Scientific Officer at the upper level (A). This meant that he was three grades above his Chief Assistants who were graded as SPSOs. The grade probably represented Spencer Jones' personal standing and the honour associated with the title of Astronomer Royal, but it was out of line with the level of responsibility as indicated by the normal civil service standards of the number of staff and the size of the budget for which the holder of the post was responsible. This was to become significant later.

The Report of the Royal Commission on the Civil Service 1953-55 made a large number of detailed recommendations about the pay scales for the various classes, but not about the structure itself. It also made many recommendations about hours, leave and other conditions.

There was, however, another major change in the grading system as a result of the Fulton report of 1968, which recommended a unified grading structure for the Civil Service. In the event three groups were formed for the administrative, scientific and 'works' staff. The three scientific classes were amalgamated into a single series of grades: ASO, SO, HSO, SSO, PSO, SPSO, DCSO and CSO. Grade skipping was possible, but was rare, although well-qualified scientists moved more quickly through the grades. There was a similar change for engineering and technical staff, who were then graded below 'principal level' in a numbered series of grades of Professional and Technical Officers (PTO).

.Some years later (198?) the various senior grades were amalgamated into a single series of numbered grades so that, for example, PSO and PPTO became grade 7, SPSO and Supt. Eng. became grade 6, etc.

C.2 General staff conditions

The staff referred to in section C.1 were non-industrial civil servants and their conditions of service were markedly different from those of the 'industrial staff' who carried out the 'blue-collar' jobs. The 'white-collar' staff had better pay and pension arrangements; they worked shorter hours and the higher grades, at least, had more annual leave. There were probably other differences in such matters as sick leave and time-off for dental appointments. There were separate 'complements' for the two types of staff. The complement, which was set by the Admiralty, specified the maximum number of employees in each grade, or group of grades.

The industrial staff on the complement of the Observatory included the craftsmen in the engineering workshop and in the chronometer workshop, as well as messengers, watchmen, cleaners, stokers, gardeners and foresters. At first, there was a separate canteen for industrial staff, but even after it had been abolished very few of them used the main canteen for hot lunches as they preferred to bring sandwiches, which they ate in their restroom in the Works Pound (or in the gardeners' shed).

In addition, in the early years at Herstmonceux much of the basic work for the buildings and grounds was carried out by men of the Works Unit, which was based at Chatham, although some of the men were probably recruited locally for a few years. The work on the external fabric of the Castle was carried by staff of the Department for Ancient Monuments. The major new buildings themselves were built by independent contractors. I must admit that I have no knowledge of the detailed arrangements for this work. Eventually, some of these men, such as the electricians, were transferred to the complement of the RGO.

Within the non-industrial staff there was also a contrast between established and non-established service. At that time only the former counted towards a pension, although there was a long-running national campaign to change this arrangement. Most staff were recruited into temporary positions and then became 'established' after a fairly short period of satisfactory service. Usually, as in my case, the establishment was backdated to the date of the original appointment, but there were a few apparent anomalies. For example, Phillip Gething was recruited, with a PhD, at roughly the same time as Patrick Wayman and myself, but was still listed as a Temporary Scientific Officer over three years later; not surprisingly he left, and had a successful career at GCHQ.

Many of the junior staff who were recruited at Herstmonceux came from the neighbouring towns, especially Eastbourne and Bexhill, and villages. Most of them

were teen-age girls, who became Scientific or Clerical Assistants or typists. A few became Assistant Experimental Officers or Clerical Officers, but in general the recruits for these and higher grades were from other parts of the country.

By the time that I joined the RGO, the policy seemed to be that staff could stay on in a 'disestablished' capacity after 60, normally in a lower grade, but not beyond the age of 65. (The rules for industrial staff were presumably different, with the normal retirement age being 65, when they would be entitled to the state retirement pension. Jack Pike, the forester stayed on beyond 65, but he may have been an exception to the normal rule.) The reversion to a lower grade meant that a younger member of the staff could be promoted to the original grade as the number of staff of each grade was normally fixed. The promotion did not always occur in the same department as the retirement. Sometimes two grades were treated as one for the purpose of complementing, so that promotion from the lower to the higher grade (e.g., from S.O. to S.S.O.) did not depend on their being a vacancy in the complement at the higher level.

In the AR's reports up to 1956 the staff lists show the grades but not the departments in which the staff worked. The report for 1957 gives only the changes in the staff — promotions and those who had joined or left; it merely gives the total number of industrial staff. The report for 1958 gives a full listing by grade and department. This practice continued up to the last such report for 1964 before the Board of Visitors was disbanded by the Science Research Council. The subsequent annual reports that were published in the *Quarterly Journal of the Royal Astronomical Society* do not contain staff lists. Full staff lists are then not available until 1974 when Dr. Hunter introduced full reports that were published independently by the Observatory. The last such list was for 1979 September 30. As far as I am aware there are no later full staff lists except those for 1985 August 31 and 1987 September 30, which were published in the reports for 1980/1985 and 1985/1987, respectively.

There is a group photograph of the staff at Cambridge in 1996, but the caption lists only names and some staff were not present.

C.3 The Whitley Councils and trade union activities

See appendix G.9 for some references.

C.3.1 Whitley Councils to 1965

As civil servants our conditions of service were laid down very precisely in regulations at national, Admiralty, Observatory and office levels. These regulations were the result of negotiations between the 'Official Side' (OS) and the 'Staff Side' (SS), which contained representatives of the trade unions that represented the staff concerned, at various levels of the 'Whitley Councils', which were named after the chairman of the committee which recommended them in about 1917. The changes in the Admiralty regulations and other announcements were made in series of printed 'booklets' that were issued regularly. The contained lists of appointments, promotions and retirements came out in a duplicated series known as the Navy List (?).

The Civil Service was generally regarded as a 'good employer' and at this time staff were positively encouraged to join the appropriate trade union. Scientific and technical staff joined the 'Association of Astronomers', which was rather a misleading name for the local branch of the Institution of Professional Civil Servants. Well over 90% of the eligible staff were members of the Association. The AR was not only a

member, but he was also chairman of the Association when I joined the RGO. This was fine when the Association was seeking improvements at a national level, but it was inappropriate for negotiations on local matters. Most of the administrative staff were members of the CPSA (Clerical and Public Servants Association ?).

The Association of Astronomers used to hold its annual general meeting in the Chapel during normal working hours. This concession was granted because of the isolation of the site, which meant that most staff could normally only get home on the official transport at the end of the working day. I believe that staff from Greenwich and Abinger were encouraged to attend and that it was sometimes possible for them to arrange duty visits to Herstmonceux around the time of the AGM. I recall very little of the detail of the early meetings; the 'Chamberlain-Rickerby case' seemed to be a perennial item on the agenda. The secretary at the time was E G Martin of the Greenwich staff.

Negotiations about local matters, such as housing, transport arrangements, and so on were carried out through the Local Whitley Council. This consisted of the 'Official Side' (in particular, the AR, the Chief Assistants and the Observatory Secretary, Mr Barker) and the 'Staff Side', which was made up of representatives of each of the non-industrial trade unions. Similar, but separate, arrangements applied to the industrial staff. The notes in later sections usually refer to non-industrial staff only.

As has been mentioned in section 3.1.2.4, Woolley expanded the concept of staff-scrutiny of the annual reports on staff.

C.3.2 Trade Union activities from 1965

The change of control from the Admiralty to the Science Research Council in 1965 SRC led to the complete rewriting and renegotiation of the conditions of service since SRC included the Rutherford and Daresbury Laboratories that were not civil service establishments in the strict sense and so had slightly different conditions of service. This consumed (wasted?) an enormous amount of time of staff at many levels. (See section 4.1.2)

This section ought to be expanded to give an account, for example, of the major contribution of Joy Penny. who was secretary of the Herstmonceux section of the SRC Branch of the Institution of Professional Civil Servants until her premature retirement in 1976. Until 1969, I served as chairman of the section, represented it on the committee of the branch, and served on the computer sub-committee of the IPCS Scientific Staff Group. From 1970-1972, I served as an SRC representative on the Higher Grades Committee of the Group. Many other members of the staff were involved in the activities of IPCS and of the various unions that tried to achieve better conditions for all staff, whether they were members or not.

C.4 Women in the RGO at Herstmonceux Castle

C.4.1 Appointments

Major changes in the role of women within the scientific grades in the RGO took place during the period that it was at Herstmonceux. The changes in the administrative grades appear to have been much less marked. As far as I am aware no woman was employed in the Observatory at Greenwich or Abinger at the Assistant level before 1948, although there were some Junior Assistants. In the AR's

report for 1948, Miss C. M. Chapman and Miss E. M. Moore were Junior Assistants, Miss C. J. A. Penny was listed as an “Assistant (Temporary)”, and Miss P.M. Morris was a ‘Temporary Assistant (Scientific)’. (Miss Penny was then working in the Royal Observatory at Edinburgh where there was still a wartime out-station of the Time Service.) The 2 Clerical Assistants and the 5 women Temporary Clerks were probably engaged on scientific or technical work. On the administrative side Miss H. Pettican (at Abinger?) was the only Clerical Officer and most of the other clerical staff, and all of the typing staff, were women..

In the Nautical Almanac Office (NAO), which was still at Bath at that time (1948), Miss F. M. McBain was an Assistant and Miss M. R. Rodgers was a Junior Assistant. Mrs E. M. Freeman was a Temporary Clerk (II), but was (probably) engaged on scientific work. She was listed above Miss D. M. Fooks, an Assistant Experimental Officer, who was one of the first members of the RGO staff to be appointed in the new grades of the Scientific Civil Service. Miss E. J. Grove was appointed as Temporary Assistant (Scientific); she was recruited in Sussex, but started to work in Bath. Miss J. E. Perry and Miss Y. I. Reddy were Clerical Officers, but the latter may have been engaged on scientific work. Miss I. M. Restorick was a Clerical Assistant, but was also (probably) engaged on scientific work.

By the time of the AR’s report in 1949, most of the scientific staff had been regraded. For example, Miss McBain became a Principal Scientific Officer and Miss M Rodgers an Experimental Officer in the NAO. Most of the new appointments were listed as ‘Temporary’, but many were confirmed later.

The number of females in the junior scientific staff increased as each of the departments moved to Herstmonceux. Many of the Assistants (Scientific), who are referred to here as Scientific Assistants (SA), were girls with good O-levels from the local girls’ schools of the area. (The schools for boys and girls were then still separate.) Two women graduates (from Glasgow), Miss M. M. S. Gibson and Miss A. M. James, were recruited in the NAO as Assistant Experimental Officers (AEO). In the annual reports of the Astronomer Royal there were separate lists for the Royal Observatory (RO) and for the NAO. The statistics are as follows:

In RAR 50:	RO:	8 women SAs out of 24;	no women AEOs
	NAO	7	10; 3 out of 4
In RAR 53:	RO	12	24 no women AEOs
	NAO	5	6; 3 out of 5

In 1950 Miss F. E. A. Jeffries was graded as a Senior Assistant (Scientific), (SSA) , whereas in 1948 she had been a Clerical Assistant.

In RAR 58 the staff are listed by department and there were 7 women SAs out of 9 in the Meridian Department and 6 out of 7 in the three departments for astrophysics and astrometry. Most of the young SAs left after a few years, although a few stayed on and gained higher qualifications and promotion.

Miss Penny, as an SEO in the Time Dept., was the only woman above the Scientific Assistant grade in the old-RO departments for many years. One graduate woman AEO is listed in RAR 62 and three more AEOs (2 graduates) are listed in RAR 64. In addition Miss H. H. Swope of the Mount Wilson and Palomar Observatories worked as a Principal Research Fellow in 1964. Otherwise, before Dr Margaret Burbidge’s appointment as Director in 1972, there was only one female appointment, Dr. B. Louise Webster, in the Scientific Officer class; she was appointed as an SO in

1969. In later years a few other women (see C.4.5) were promoted to SSO, but none were promoted to PSO at Herstmonceux.

In the following sections, first names and maiden names (sometimes followed by the married surname) are normally used.

C.4.2 Observing

It is possible that Betty Collett was the first female member of the Observatory staff to be engaged on night observing, as she had joined the RO Time Department at Abinger in 1943 and used to observe at night on the small transit. Pamela Morris also observed on the small transit later. Joy Penny also joined the Time Department in 1943 to work at the reserve time-service station at the Royal Observatory Edinburgh. She had previously been on the staff of ROE. Her first recorded observation was on 1943 October 18. My understanding is that none of the women employed at Greenwich carried out night observing duties except that Joy Penny observed at Greenwich when the reserve time-station was moved back from Edinburgh.

There is doubt about when women started observing at Herstmonceux. I hope that the observing logs are available in the RGO archives at Cambridge to settle this issue, but it seems that in 1959 Linda Mather and Mary Dann were the first women to use the 36-inch telescope. Sheila Osbon observed on the astrolabe from 1959 Nov. to 1962 Sept., and Irene Saunders observed from 1960 March to 1963 Feb. It is possible that Virginia Papworth was the first woman observer on the PZT. David Thomas recalled in June 2006 the following incident.

“There is an interesting story concerning Virginia’s appearance at a Civil Service Board – can’t remember whether Establishment or Promotion. Anyway when asked to describe her work she described how she operated the PZT which was a fixed telescope that only observed stars at the zenith. The so-called scientist on the panel refused to believe her. When she reported back to Hunter he had to ring up the Panel Chair to assure him that V was right, and I presume she was passed after all.”

Rosemary Cornford (Yallop) recalled in December 2005 that she and other Meridian Department ‘girls’ observed on the astrolabe and the PZT around 1962. One of them was Maureen Harmer, and on one occasion her scooter broke down when she was returning home after observing, and she had to push it all the way home. After that it became a rule that women observers had to stay in the hostel in the Castle after their duties. Valerie Page also observed on the PZT. It appears that Pat Baker was the only girl to observe on the RTC, although others acted as micrometer readers.

Margaret Evans (Penston) thought that Lady Woolley insisted that the girls should observe in pairs, and not singly, at night, but it is not clear whether this was made a formal rule. In later years, Diane Pottinger (Harmer) observed regularly on the 30-inch reflector and Louise Webster used the Isaac Newton Telescope. Margaret Evans (Penston) may also have done so.

C.4.3 Sports and social activities

The appointment of many more women led to changes in the sporting and social activities of the staff compared with these at Greenwich. These activities are described in appendix D on the RGO Club, but a few examples may be noted here. Men’s hockey was replaced by mixed and women’s hockey and the Sussex game of stoolball was played by mixed teams. Mixed-doubles tennis and table tennis were also

popular, especially as they could be played at lunch-time and in local leagues. The increased proportion of women on the staff made possible new social activities at Herstmonceux. In the early years an annual pantomime and a party for children were held on a Saturday afternoon and were followed by a staff party, with dancing and social games, in the evening. Some dances were arranged in local villages. Woolley introduced folk dancing soon after his arrival. After the building of the Clubhouse, badminton was played during the evening and a ballroom-dancing section was started. In addition the Club arranged well attended occasional Saturday evening dances in the Clubhouse and in the Castle.

A netball team was entered in the SRC Sports Days at Chiswick and ladies also played in the mixed-doubles tennis with some successes. Others went along as supporters of the various teams. Later ladies took part in the SRC Indoor Sports Days in badminton and, possibly, in table tennis and volleyball.

C.4.4 Marriages

Not unexpectedly, there were many marriages amongst the young staff who were appointed during the early years at Herstmonceux. Some were between couples who had lived in the hostel at the same time, while others were between couples who had served in the same group of departments. Sports and social activities may have been the meeting points for others. Donald and Flora Sadler used to claim that Margaret Evans and Michael Penston became friends after being guests for dinner at their home while they were vacation students in 1962.

One surprise wedding was that of Sir Richard Woolley, after his retirement and the death of his wife, to Mrs E. M. P. Marples, who had been the Canteen Manageress while he had been AR.

A list of marriages between Herstmonceux staff is given in C.12. It does not claim to be exhaustive or free from misunderstanding. The list also includes the marriages after 1948 amongst the staff at Abinger and Greenwich where the couple subsequently moved to Herstmonceux. The AR's report for 1950 lists two such marriages, but then comments that several other marriages took place.

In later years there were many examples of wives who rejoined the staff, or who joined for the first time. Many of the wives served in a part-time capacity.

C.4.5 Notes on some individuals

The following notes on individual members of the staff are intended to illustrate the wide variety in the career patterns of women in the RGO. These notes are incomplete in respect of both the individuals included and the details of their careers. They are based largely on my memory and on points that I have noted in the past while glancing through Information Bulletins and Reports. Some additional information and corrections have been provided by other members of the staff. They are listed in alphabetical order.

Rosemary Brett joined the AR's Department as a Scientific Assistant (SA) in 1967. It was said that she had been a Carnival Queen in Bexhill. She married Lester **Selmes** in 1970 and went part-time soon afterwards. She was a contributor to *Astronomers at Herstmonceux*, where it is stated that she spent seven years working on the quasar research programme and that this involved working as a night observer on the Thompson 26-inch refractor.

Margaret Burbidge's brief period as Director in 1972 and 1973 is described in section 5.2. She continued her distinguished research and was awarded, jointly with her husband, a Gold Medal by the RAS in 2005.

Anneilia Isabel Cassells came as a vacation student from Edinburgh in August 1962 and joined as an AEO in AR's Dept. in 1963. She married **Wal Sargent** in the following year, and they both resigned a few months later to move to California. In recent years she has served as the President of the American Astronomical Society (1999-?) and has given the George Darwin Lecture to the Royal Astronomical Society (200?).

Ann Coleman was appointed as an SA in the NAO in 1965. She was encouraged by Sadler to gain further qualifications and she took a sandwich course at the Brighton College of Technology in 1966-1970. Much to Sadler's dismay she did not spend any of her four 'sandwich' periods in the NAO; instead she gained experience in electronics and physics. She married **Richard Savage** in 1969. She rejoined the RGO as an AEO in the AR's Dept., and went on to obtain an M.Sc.(Sx). She started to work for a Ph.D under the supervision of Margaret Burbidge, but completed it under Roger Taylor (U. Sussex) and John Bolton (U. Sydney). She was seconded to the radio observatory at Parkes, N.S.W., in 1974 and was promoted to SSO in 1975. In 1978 she returned to RGO and her Ph.D. examination. She was then transferred to the ROE and hence to the UK Schmidt Telescope Unit in Australia in 1979 to 1982. She spent another 3 years at ROE in 1982-1985, but then returned to UKSTU. She appealed unsuccessfully against her non-promotion to PSO in 1993 and retired early in 1995. She and her husband have a farm near Coonabarabran.

Janet Dudley was appointed as the Librarian in 1978 after serving at the Royal Aircraft Establishment. She identified the rare books to form the Airy Collection, which was housed in special cabinets in the chapel. More importantly, she emphasised the importance of the archives of the Observatory and persuaded Graham Smith and the SRC that they should not be transferred to the Old Royal Observatory at Greenwich. Moreover she obtained approval for the appointment of a Conservation Officer and the setting up of a conservation laboratory. Later, she set up the 'Laurie Project', which was funded by the Manpower Services Commission, to catalogue the archives.

Janet was reprimanded for her participation in the IPCS campaign against the move of the RGO to Cambridge and in 1987 she resigned to take up the post of Librarian at the Royal Radar Establishment. In 1993 she became the head of the Information and Library Services in the Department of Trade and Industry.

Elizabeth Epps joined as an SA in 1960 and was promoted to AEO in 1964. She resigned to take a degree course at U Sussex and rejoined as an AEO in 1968. She was promoted to HSO in 1972. She married **Richard Bingham** in 1975 and was working in a part-time capacity when she resigned in 1987.

Margaret Evans was a vacation student in 1962 and joined as an AEO in 1963 and served in several departments before returning to the AR's team in 1964. She married **Michael Penston** in 1965. She obtained her M.Sc. (Sx) and was promoted to SO in 1968 and HSO in 1971 while she was working at the Hale Observatories as a Guest Investigator with Michael. She obtained her Ph.D. (Sx) in 1973. She took special leave to work at the AAO and on the IUE before returning part-time in 1981.

She was secretary of the local branch of the IPCS and, like Janet Dudley, was reprimanded for her role in the branch's opposition to the move to Cambridge. She was

a Liberal Alliance candidate for Pevensey in the elections for the East Sussex County Council in 1985. [See *Eastbourne Herald*, 1985-04-08, with photo.] She remained with the RGO until its closure in 1998. She served as Secretary of the RAS (1997- ?) and President of the Society for Popular Astronomy (200?- ?). She was awarded the MBE in the New Year Honours in 2002.

Mavis Gibson was appointed as an AEO in the NAO at Bath (on, I believe, the recommendation of Prof. W. M. Smart of the University of Glasgow) just before the move to Herstmonceux. She and I [GAW] worked together in organising the evaluation on the punched-card machines of the series for the nutation for 100 years. She was also a keen tennis player. She married Patrick **Wayman** in 1954 and resigned at the end of 1955. She went to South Africa with Patrick in 1957 to 1960 and then to Ireland in 1964 when he was appointed Director of the Dunsink Observatory.

Anita and Celia Hewerdine are twins who joined as shorthand-typists in November 1949. Anita became Woolley's personal secretary in March 1956 and was promoted to Senior Personal secretary in 1966. Celia became head of the Typing Pool and was promoted to CO/Sec when she became secretary to Dr. Hunter and Dr. Eggen in 1964; she was promoted to EO in 1974. They both resigned in October 1976; Anita became the secretary to the Vice-Chancellor of the University of Sussex, while Celia started a BA course at the University. Anita later also studied at the University and was awarded a PhD.

Catherine Hohenkerk joined the Solar Department as an SA in 1971 and after further studies was promoted to SO in 1974, on appeal with the support of Dr. Hunter. She transferred to the Computer Department in 1974 and to the NAO in 1978. She obtained a B.Sc. in 1978 and upgraded it to an Honours degree in 1981, after which she was promoted to HSO. She moved, still with the NAO, to Cambridge in 1990 and was promoted to SSO in 1991. She moved to the Rutherford Appleton Laboratory in 1999 after the closure of the RGO and to the UK Hydrographic Office at Taunton in 2006. She now plays a key role in the NAO, which has a staff of only 3 persons for the production of the almanacs and other paper and electronic publications. In 2005 she received the Superintendent's Award of the United States Naval Observatory "in recognition of distinguished service and extraordinary dedication to the joint publications of Her Majesty's Nautical Almanac Office and the United States Naval Observatory".

Dorothy Hutchings was a vacation student in 1960 and joined the NAO as an AEO in 1961. She married John **Hobden** in 1964. She was promoted to EO in 1968 and was regraded as an HSO in 1971. She supervised the operation of the ICL 1909 computer in 1969 onwards until she was transferred to the Astrometry Division for work with the GALAXY measuring machine. In 1981 she transferred to the computer section of the La Palma Division, where she remained until the RGO moved to Cambridge. She was one of the contributors to *Astronomers at Herstmonceux*.

Flora McBain worked in the NAO during the vacation in 1935. In 1936 she went on the University of Aberdeen eclipse expedition to Siberia. She joined the NAO in 1937 as a Junior Assistant, was promoted to Assistant in 19??, and regraded as a PSO in 1946. She served as a Secretary of the RAS in 1949–1954 and as an editor of *Monthly Notices of the RAS*. She married Donald **Sadler**, the Superintendent of the NAO at the end of 1954 and retired in 1973. She died in 2000 at the age of 88.

Lesley Murdin (the wife of Paul Murdin) is a historian who worked for a few years (1979 to 1982) in the library and archives. Her first book, *The new astronomy*,

was published in 1977 and the dust cover of her second book, *Under Newton's shadow*, describes her as follows.

“Lesley Murdin took her first degree at Oxford in 1963, and has studied literature and history at postgraduate level in the US and Australia. She holds an MA from Macquarie University, Sydney, and has written widely on the cultural background of the history of astronomy. She has carried out research on 17th century astronomical subjects in the archives of the Royal Greenwich Observatory, and is now a part-time member of the staff of the Open University, for which she teaches courses on the history of ideas.”

Jacqueline Pardoe spent three months (1967 July to September) as a temporary SA in the NAO (computer?) at the same time as Simon **Mitton** was working in a similar capacity in Lynden-Bell's RT. They subsequently married. She is the author of several popular astronomy books, including OUP's *Concise Dictionary of Astronomy*. She has also served as the Public Relations Officer for the RAS.

Joy Penny joined the staff of the Royal Observatory at Edinburgh in 1941. She went to Edinburgh to be with her twin sister, Angela, who was studying in the University for a PhD. Joy joined the ROG Time Department in 1943 and her duties at the reserve station of the Greenwich Time Service at ROE, included night observing. She later observed at Greenwich. (See also C.4.2 and C.14) She was promoted to SEO in 1957 and was head of the GTS section within the Time Department at Herstmonceux. She took voluntary premature retirement in October 1976 for family reasons

In addition to her work for the Greenwich Time Service she was a very active secretary of the RGO section of the Institution of Professional Civil Servants. In addition to the negotiations with the Astronomer Royal on local matters, she was involved in the negotiations about the changes in the conditions of service when the responsibility for the RGO was transferred from the Admiralty to the Science Research Council in 1965. (Further details are given in section 4.1.2 of the main account. See also appendix C.14.)

Joan Perry joined the NAO in Bath in 1943 and was promoted to CO(Sec) in 1947. She continued to serve as secretary of the Office until 1965, when she was promoted to EO and appointed as the RGO Librarian. She had previously been in charge of the NAO Library in the West Building. She was awarded the Queen's Silver Jubilee Medal in 1977 and she retired in 1979.

She served as secretary of the RGO Social & Sports Club from 1950 to 1956. She organised the Ballroom Dancing Section from 1961, then in the Clubhouse and later in the Castle, until 1989. During her retirement she became a qualified dancing teacher. (See appendix D.6.2)

Sue Pocock joined the Magnetic Department as an AEO in 1966, but transferred to the AR's Dept. in 1968. She gained her MSc at Sussex in 1969 and was promoted to SO in 1970. Later that year she married Keith **Tritton**. They were given special leave in 1974 to spend two years at Chiangmai University in Northern Thailand, where they were responsible for initiating courses in astrophysics and for the installation of a small telescope. She returned to the Royal Observatory at Edinburgh (and not to the RGO) to work in the UK Schmidt Telescope Unit.

Diane Pottinger joined as an AEO in Bernard Pagel's Research Team in 1967 and married Charles **Harmer** in the following year. She observed regularly on the 30-inch reflector. She was promoted to HSO in 1973 and to SSO in 1975 after obtaining an

MSc (Sx). She was working in the Astronomy Research and Support Division when she resigned at the end of 1985. My only information about her subsequent career is that she has been working for many years at the Kitt Peak Observatory.

Janet Purdy joined as TSA in 1962 and served in the AR's Dept., the Solar Dept. and the Astrometry Dept. before she resigned in 1964 to go to St. Andrews University. She spent the summer of 1965 in the Astrometry Dept. and rejoined as a TSA in 1966 and was promoted to AEO in 1971. She married Andrew **Sinclair** in 1970 and took unpaid leave in 1975/1976 to go with him to Australia for a year. She was promoted from SO to HSO in 1977 when she was in the Galactic Astronomy Dept. She moved to Cambridge and was transferred to the support team for the Isaac Newton Group until the RGO was closed in 1998.

Iris Restorick, who was always known as **Flip**, joined her elder sister, Kay, in the NAO at Bath in 1944 as a temporary clerk. She was involved in the computational work of the Office and was regraded as an Assistant (Scientific) in 1947. She moved to Herstmonceux in 1949 and operated the punched-card machines. She married Norman **Rhodes** in 1952 and resigned in 1962. Unfortunately, Norman died in 1966 and so Flip rejoined the NAO in 1967, and later transferred to the Meridian and Photographic Astrometry Departments. She had another short interruption of service before she retired in 1987.

Marion Rodgers joined the NAO, then at Greenwich but separate from the RO, as a temporary computer in 1933. She was promoted to Junior Assistant (Lower Grade) in 1937. She was evacuated to Bath with the NAO in 1939. She considered moving to the Tidal Branch of the Admiralty, but decided not to do so when she realized that the NAO was much more advanced. She was regraded as an EO and was later offered promotion to SEO in 1961, but she declined. She was, however, promoted to Acting SEO in 1966. She retired in 1969 and moved back to London in 1972. She kept in touch with many former members of the NAO and she kept me informed about them. She attended the NAO Reunion at Greenwich in 1993, when she and Flora Sadler were presented with bouquets. She died in 2003, aged 93.

Christine Thoburn worked on cosmic rays as a Ph.D. student at Bristol University. She joined the Meridian Department as an SO in 1977 and was promoted to HSO in 1977. She was listed as an SSO in Meridian astrometry in 1985 and in the Astronomical data group in 1987.

Louise Webster had a PhD when she joined as an SO in 1969. She observed on the Isaac Newton Telescope. She was promoted to SSO in 1970 and to PSO in 1974; she transferred to the Radcliffe Observatory (via the Sahara) in 1972 and to the AAO in 1975. She married Tony **Turtle** of the University of Sydney in 1978. Unfortunately, she died a few years after having one of the first (if not the first) liver-transplant operations in Australia.

Sue Worswick had a PhD when she was appointed as a Research Fellow in 1978 in the Instrument Development Division. In 1981 and 1982 she was funded by the RGO for work on optics with Professor Wynne at Imperial College. She rejoined as an SSO at the beginning of 1983 and worked in the optics group in the Instrument Sciences until the RGO closed in 1998.

C.5 Staff conditions in more detail

C.5.1 Hours and leave

The hours and leave allowances when I joined the RGO are described in section 2.1.2.4. These were based on a six-day week and so were changed when a five-day week was introduced in 195?. The total hours of attendance were reduced from 44 to 42, of which 5 were for lunch breaks. The normal starting time was brought forward to 8.30 and the normal departure time was changed to 4.30 on Fridays. The actual times varied for those using official home-to-duty transport. (Sadler also continued to come in at 9.00 and so he left at 5.30 or later.) There were corresponding changes in leave allowances, so that I had 30 days, instead of 36.

Staff were also allowed to take short absences on sick leave without a doctor's certificate. I was not aware of any abuse of this privilege, although it may have occurred.

Time off was usually granted for attendance at meetings of scientific societies, such as the Royal Astronomical Society, even if the subject of the meeting was not directly related the work of the individuals concerned. (See section C.5.3)

Time-off was also allowed for some special events, such as participation in Civil Service sports championships and later SRC sports days. (See appendix D.6)

C.5.2 Home-to-duty transport

Initially, (as has been described in section 2.1.2.2) transport was provided to and from the Castle at the beginning and end of each day for staff living locally, while a hostel was provided for those who were recruited from more distant places. The local staff were taken either to Herstmonceux village (or to Boreham Street), where there were bus connections to Hailsham and Ninfield, or to Pevensy Bay Halt, where there were train connections to Bexhill and Hastings or to Eastbourne and Brighton. The Royal Navy lorry was replaced by a more suitable coach after a few years.

Eventually, more and more staff used their own cars to get to and from the Observatory. but the provision of home-to duty transport was continued on a reduced scale.

Transport was also provided at lunch-times between the West Building and the Castle for the benefit of elderly members of the staff (such as Miss Rodgers). It may have been used by others in times of inclement weather, but I believe that most used cars as such times. Staff usually used their own cars when travelling between buildings in the course of their work, although I believe that official transport may have been available.

C.5.3 Travel and subsistence on duty

When staff were required to travel to other places in the course of duty, there were several options: (1) to use their own cars to and from their homes; (2) to use public transport, such as rail for journeys to London; (3) to go in an official vehicle; or (4) some mixture of the these, such as use their own cars or an official vehicle to go to and from the station. Approval in advance was necessary and, at first, vouchers were provided for travel by rail. A mileage allowance was paid for journeys by car.

A 'privilege' enjoyed by staff above certain grades was that of first-class travel on the train. Staff in lower grades travelled third-class except when there was good

reason for them to travel with a higher-grade officer. My recollection is that I became entitled to first-class travel when I was promoted to the grade of Senior Scientific Officer in 1956, but it might have been to PSO in 1970. This had two advantages other than greater comfort; firstly, there was less chance of having to stand on a crowded peak-hour train; secondly, it was easier to work as it was quieter and as papers could often be placed on the adjacent seat. (Then the first-class seats were in small compartments with three seats on each side.)

Staff on 'detached duty' were also allowed to claim subsistence allowances that depended on the time away from home, such as a half-day, full day or overnight. These allowances were intended to cover the extra costs of meals and accommodation; they were at fixed amounts and it was not necessary to provide detailed accounts. The allowances were such that it was usually possible to keep the extra expenses within the allowance.

My recollection is that the allowances for short visits abroad were fixed for the country concerned, but this may not have been the case. Flights and hotel bookings were usually made through the General Office, which in turn used a travel agent in Eastbourne. I found that journeys abroad by car at the standard mileage allowance usually cost less than the sum of the air fare, subsistence allowance while travelling, and public transport in the places being visited. Consequently, I often travelled by car, and took annual leave for the days spent on the journey.

C.5.4 Attendance at RAS meetings

I understand that the Fellows (and others ?) at Greenwich used to attend meetings of the Royal Astronomical Society as a matter of course since it took little time or money to get there. The situation was different at Herstmonceux as it entailed the cost of the fare, unless one went on duty. It was, however, not necessary to take a half-day's leave for an afternoon's absence from work as 'time-off' was usually allowed. If we went on duty we were able to get transport to Polegate after lunch, and then a train to Lewes, where we changed for the train to Victoria station in London. Otherwise, it was necessary to leave earlier in order to go via Pevensy Bay Halt.

Later, the IPCS negotiated a concession so that Fellows could go on duty to 2 meetings a year even if they were not presenting a paper or were not on the Council of the Society. I believe that Sadler and other senior staff always went on duty since it was possible for them to arrange other meetings in London for the same day. I also did this once I had good reason to do so, but I only went occasionally to RAS meetings.

C.5.5 Foreign service allowance

Staff who served abroad on duty for an extended period were paid a foreign service allowance to cover the extra costs of accommodation and other living expenses. When I went to the USA in 1957/1958 (see section 3.3.1.1) I was paid the allowance for a single man, even though my wife and child went with me, since I was to be there for only one year instead of the usual three. Nevertheless, we were able to live comfortably and we were able to save enough to travel cabin class, instead of tourist class, on the return journey.

C.6 Staff training.

Staff were encouraged to encouraged to undertake further education courses

that would lead to additional qualifications and hence improved chances of promotion, either within the same class or to another. I do not recall the level of support that was given. Some staff obtained first degrees by part-time study at evening classes and later by taking 'sandwich courses' during which they returned to the Observatory for the work experience part of the sandwich. (See Anne Coleman in C.4.5.)

The link between RGO and the University of Sussex led to several of staff with first degrees taking MSc courses and some went on to undertake research at PhD level.

Much of the work of the Observatory was specialised and so it was appropriate to organise classes that were held at the Observatory. I started a series of lunch-time talks for Scientific Assistants in October 1955 in order to give them a general background in astronomy. Other members of the staff gave some of the talks. These were followed up by a more formal and comprehensive programme in the autumn of 1956. (See section 3.4.5) Lectures on various aspects of computing became almost a regular feature as it was first of all necessary to introduce staff to the concepts of programming and then to the particular systems that we adopted. I gave many of the early lectures as I was then the only one with any experience of using a computer and I wrote much of the basic software for the ICT 1201 computer. In 1962, an IBM programmer gave the first lectures on the use of Fortran for the IBM 7090 computer. Later, staff from the University of Sussex took over some of the in-house training for the ICL 1909 computer. Some members of the staff, including me, also went on courses organised by the computer supplier.

During the early 1970s I attended two management seminars at the Civil Service College at Sunningdale. These were residential and covered a wide variety of topics, including new ideas, such as 'management by objectives', as well as basic topics, such as interviewing techniques. The opportunity to meet other staff from a wide range of backgrounds and establishments was particularly stimulating. I do not know whether any other senior RGO staff went on these courses.

The position of part-time training officer is first shown in the staff list for 30 September 1976. It was held by H M Smith, with B D Yallop as his deputy. Yallop took over the main post in the following year, while J W Gietzen became the training officer for technical staff. Alfred Heath became training officer in 1980. He was also safety officer and he organised first-aid courses. Others were involved at other times, but I do not have details at hand.

C.7 Long-service staff

The Prologue contains a brief review of the staff of the RGO before the move and notes the retirements in 1948 of W M Witchell and P J Melotte, who each served more than 53 years at the Royal Observatory at Greenwich. (See section 1.3) Two years later, Mr R T Cullen retired from the post of Head of the Meridian Department on 1950 December 31 after 49 years in the Observatory. I did not meet these men, who were allowed to stay on long after the age (60) at which they were entitled to retire and draw their civil service pensions. They had probably served for many years as temporary staff before they became 'established' civil servants, and so they would have wished to continue working in order to qualify for a larger pension. Other pre-war staff were not able to serve so long, but nevertheless some achieved long-service records.

H G Barker	RO 1936-07-19 to 1964-04-30 [120]
Harold H J Barton	RO to 1961-09-30 [96] [RAR 62 > 50 years]
Kenneth C Blackwell	RO 1927-03-28 to 1976-10 -09 [219] (with a few months in NAO in 1934)
Albert E Carter	RO 1931-01-01 to NAO 1934-08-23 to 1977-06-30 [223]
E A Chamberlain	RO to 1956-07-31 [52]
R T Cullen	RO c.1901 to 1950 [183]
Arthur J Daniels	RO 1899-11, to NAO 1912 to 1951-12-23 [117]
Sydney G Daniels	RO 1901-11, to NAO ??? to 1949-12-04
C C Harris	RO 1928 to 1962-05-30 (died in service) [99]
Alan Hunter	RO 1937-11-08 to 1975-12-31 [213]
F Jefferies	RO 1906-04-30 to 1953-01-03 [11]
A J Johnson	RO 1928-10-01 to 1975-03-31 [209]
Phillip S Laurie	RO 1935-01-28 to 1977-05-24 [221]
B Richard Leaton	RO 1937-07-02 to 1967-09-01 [150]; in NERC to 198?
E G Martin	RO 1911-09-04 to 1957-01-15 [56]
Flora M McBain	NAO 1937-09-20 to 1974-04-11 [192]
Harold W Newton	RO 1910-04-08 to 1955-05-31 [36]
Harold W P Richards	NAO 1931-06-29 to 1961-09, then RGO Admin to 1967-05-31 [146]
P L Rickerby	RO 1925 to 1967-11-22 [152]; in NERC to 19??
George W Rickett	RO 1918-03-18 to 1968-01-19 [153]
Marion R Rodgers	NAO 1933-03-01 to 1969-07-15 [164]
Donald H Sadler	NAO 1930-10-13 to 1972-02-18 [182]
Walter A Scott	RO 1921-04-30 to NAO 1926-05-10 to 1966-12-31 [143]
Arthur Shortland	RO 1929- to 1974-09 at RO Cape then to SAAO to 1976-06-30 [216]
Eric Smith	RO 1924-01-07 to NAO 1930-03-31 to 1972-06-30 [185]
Humphry M Smith	RO 1936-10-01 to 1976-07-03 [222]
Norman South	RO 1947-02 to 1987-09-22 [Gem 18]
L S T Symms	RO 1913-01-20 to 1968-02-29 [153]
R. H. Tucker	RO 1939-06-01 to 1982-09-24 [82/10]
George F Wells	RO 1916- to 1960-12-13 [92]
A C S Wescott	RO 1932- to 1956-06-30 [49]

Only a few of those that joined the Observatory after the war were able to serve long enough to complete the 40 years necessary for a full pension; many left after a few years in order to take up posts with better pay and prospects elsewhere. Others had attended university before joining the RGO and so were already in their 20s when they were recruited. Post-war staff with long-service records included:

Michael E Buontempo	1955-12-05 to 1997-10-20?
Fred. A. R. Everest	ROA 1948- to 1980-09- [251]
Claude Knell	1955-04 to 1987-09-22 [Gem 18]
Michael Lowne	1950-02-25 to 1989-05-12 [89/85]
Arthur S Milsom	1949-09-08 to 1985-03-03 [85/04] re-emp. to 1988-10-12 [check]
Leslie V Morrison	1960-09-16 to 1998-10-31?
C Andrew Murray	ROG 1950-02-10 to 1986-01-06 [86/02]
William Nicholson	1954-09-23 to 1986-05-11 [86/06]
Bernard E J Pagel	1956-07-30 to 1990-01-03?
John D Pope	ROA 1945-11-25 to 1984-04-14 [84/05]
I M (Flip) Restorick (Rhodes)	NAO 1944-01-03 to 1987-05-30, with gaps [87/07]
Gordon E Taylor	1949-05-16 to 1985-08-07 [84/09]
G. B. Wellgate	ROA 1943- to 1977-04-04 [221]
John H. Whale	ROG 1947- to 1975-05-31 [210]
George A Wilkins:	1951-10-01 to 1989-07-04 [89/115]
Bernard D Yallop:	1960-11-01 to 1996-10-14

In 1990 SERC made long- service awards to staff who had served in SRC/SERC since it was established in 1965. They are listed with a group photograph in *Gemini 31*. See also appendix G.12.4 for a list of awards by PPARC.

C.8 Honours

C.8.1 Civil honours

Knighthood

Harold. Spencer Jones	K.B.E. 1955, but knighted in 1943. (AR 1933 to 1955)
Richard v. d. R. Woolley	1963-01-01 (AR 1956 to 1971)
Francis Graham Smith	1986 (AR 1982 to 1990) (after service in RGO)

C.B.E.

Alan Hunter	1975-01-01 [211] (Dir. 1974-1975)
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O.B.E.

George A. Harding	1977-01-01 [220]
Paul G. Murdin	1988-01-01 [88/02]
Donald H. Sadler	1949-06-01 (?)
Humphry M. Smith	1973-01-01 [190]

M.B.E.

H. G. Barker	1958-07-22 [77]
Henry G. Gill	1981-06-01 [262]
Philip S. Laurie	1975-06-01 [211]
Brian Mack	1989?

Walter A. Scott	1965-01-01 [127]			
A. C. S. Westcott	1953-06-01 [17]	(Coronation Birthday Honours)		
B.E.M.				
M. Dermody	1976-06-01 (?) [217]			
George Gutsell	1979-01-01 [233]			
E. M. P. Marples	1975-01-01 [208]			
A. L. Jeffries	1973-01-01 [190]			
Coronation Medal 1953 [17]				
Sir Harold Spencer Jones (AR)				
E. A. Chamberlain (SEO)				
G. H. Pearce (Laboratory Mechanic)				
Silver Jubilee Medal 1977 [223]				
A. E. Carter	A. E. Cordwell	H. J. K. Duffell	J. E. Perry	
N. South	E. Stoakley			
Imperial Service Medal				
L. Mountain, 1964 [126] R. Blow, 1964 [126]				
Safe Driving Awards [& 98]				
J. Clarke	A. J. Hutchings	J. Manser		

C.8.2 Scientific and technical awards

Sir Harold Spencer Jones	For various academic awards see section 2.83 and IBs 3,19, 27, 31, 35.			
Sir Richard Woolley	For various academic awards see IBs 157, ... RAS Gold Medal, 1971 [174]			
Fellows of the Royal Society				
H Spencer Jones	R. v. d. R. Woolley	F. Graham Smith	A. Boksenberg	
Other awards				
R. d'E. Atkinson	RAS: Eddington Medal, 1960			
D. H. Sadler	RIN: Gold Medal, 1957 Adion Medal (Nice Observatory), 1969 [163] Hon. Doctorate, University of Heidelberg, 1970 Janssen Medal (Ast. Soc. Pacific), 1972 [187]			
C. G. Wynne	RAS: Gold Medal (1979) [233]			
J. G. Porter	BAA: Goodacre Medal, 1965 [131]			
G. E. Taylor	BAA: Merlin Medal and Award, 1962 & 1979 [99] [238] Minor Planet 2603 named Taylor in 1982 [AR 85] [Gem3, 10-11]			
A. Boksenberg	Minor Planet 3205 named Boksenberg in 1988 [88/106]			

H. E. West	Bronze Medal of the British Horological Institute	1956. [42]
C. C. Heal		1970 [173]
(several of the watchmakers were elected as Fellows)		
W. A. Roseman	2 Swedish horological medals	1964 [122]

The following topics might be added as new sections:

RGO staff who served as senior officers in national learned societies: might include officers of RS, RAS, RIN and BAA.

Also: as senior officers in international organisations: might include officers of ICSU, IAU, IUGG, COSPAR (if any), FAGS.

C.9 Duty overseas

Lengthy (1 year or more) overseas visits (prior to 1972) included:

L. J. (Joe) Bates to Cape, 1962, but he died there in 1964.

Robin Catchpole to Cape 1966 to 1969 ?

George Harding to Cape, 1960 to 1963 [85, 89, 111]

Geoff Harvey to Cape, 1968 to 1974

Derek Jones to California on Harkness Fellowship, 1961 to 1963

Derek Jones to Cape, 1965 to 1969

Stuart Malin to Cape, 1963 to 1965

W L (Bill) Martin, to Radcliffe 1971 to 1974 [178] and Cape 1974 to 1977

John D. Pope to AAO, 1967-09-01 to 1971-09-07 [152]

David Thomas to Cape, 1964 to 1967

Keith Tritton to Radcliffe, 1970 to 1971

Norman Walker to Radcliffe, 1966-11 to 1968-01

Roy Wallis to Cape, 1965 to 1969 the Radcliffe, 1969 to 1971

Patrick A. Wayman to Cape, 1957 [59] to 1960 [88, 90]

G B Wellgate to Cape, 1961 to 1964 [118, 121]

George A. Wilkins to USNO and Yale University Observatory, 1957 to 1958

Roger Wood to Radcliffe, 1968 to 1971

Bernard Yallop to Cape, 1964 to 1967

Perhaps add long visits after 1972 and up to 1981 (i.e. pre-La Palma).

C.10 Vacation students

Some students were employed individually before 1956 when Woolley started vacation courses for students (see section 3.4.5) who were not employed as members of the staff. They often, however, made useful contributions to the work of the Observatory. Some of them became astronomers, either in the Observatory or elsewhere, as is shown by the following list, which is probably incomplete.

Pre-1956 vacation students

F M McBain in NAO 1935 [192]

Mary Almond in NAO 1950 ?

J M A Danby (in NAO) 1950 [RAR 51]

V. C. Reddish (at ROG) 1950 [RAR 51]

List of post-1955 vacation courses with names of students who became astronomers.

* denotes those who joined the staff of RGO

Total number of students given in parentheses after date

1956 (late summer) (12) IB 52, 54

*D H P Jones *S R C Malin

1957 (late summer) (9) IB 67, but no names

P. W. Hill B. G. Marsden

1958 (early summer) (12) IB 77

*S. R. C. Malin *I. G. van Breda

1958 (late summer) no detail in IBs

P. W. Hill

1959 (early summer) (12) IB 83, but no initials

P. W. Hill R. B. Shobbrook R. D. Wolstencroft

1959 (late summer) (13) IB 84, but no initials

I. W. Roxburgh *I. G. van Breda *B. D. Yallop

1960 (early summer) (14) IB 90

J. Sykes ?

1960 (late summer) (14) IB 90

*D. E. Hutchings *L. V. Morrison *J. Saunders B. Warner

1961 (early summer) (16) IB 95

S. W. Hawking C. Jordan T. H. H. Lloyd-Evans J. V. Narliker R. C. Smith

1961 (late summer) (16) IB 96

*P. G. Murdin W. van Altena (USA)

1962 (early summer) (14) IB 100

*R. D. Cannon *M. J. Evans *G. M. Harvey *P. G. Murdin *M. V. Penston

R. S. Stobie

1962 (late summer) (16) IB 101

*A I Cassells W. McD. Napier R. C. Smith

1963 (early summer) no course [?? as AR in USA ??]

1963 (late summer) (14) IB 111, 113

*R. Wood

1964 (early summer) (18) IB 118, 121, but no list

1964 (late summer) no course [?? IAU GA in Hamburg ??]

1965 (early summer) (16)	IB 130		
*S. Pocock			
1966 (early summer) (15)	8 weeks	IB 140	
*K. F. Hartley S. A. Mitton			
1967 (early summer) (16)	8 weeks	IB 149	see also list of lectures
*A. J. Penny	*D. J. Stickland	*K. P. Tritton	D. T. Wickramasinghe ??
1968 (early summer) (15)	8 weeks	IB 156	
*R. A. E. Fosbury *S. F. McWilliam			
1969 (early summer) (12)	8 weeks	IB 164	
*D. J. King			
1970 (early summer) (12)	8 weeks	IB 170	
no names recognised			
1971 (early summer) (12)	8 weeks	IB 177	
no names recognised			
1972 (early summer) (12)	8 weeks	IB 185	
H. A. Couper *S. N. Henbest			

Listing of later courses deferred for time being (Jan 2004).

Note that Chris Benn has made a similar list in *Gemini* 17, 21-23.

C.11 Sandwich students and short-term appointments

The following list contains only a small proportion of these appointments as I did not look for them when going through the IBs. I will try to look up others and the projects on which they were engaged. I hope the relevant files are at CULib.

C.11.1 In NAO

Miss R L Briggs	TSA 1968-06-17 to 1968-09-20 [156, 159]
J W Bryce	TSA 1968-07-08 to 1968-08-16 [156, 159]
P. R. Burfitt	SS 1966-07- to 1966-12-
J A Coombs	SS to 1979-09-30 [172]
Miss J M Darke	TSA 1968-07-31 to ??[156,]
G. Frangarkis	Temp. AEO from 1967-06-26 to 1967-09-30. [148]
	Mature, probably a graduate, from Greece.
I L P W McLean	SS to 1970-09-11 [172]
Miss Jacqueline Pardoe.	TSA 1967-07-03 to 1967-09-30. [148]
	Married Simon Mitton. RAS press officer; author.
Miss A. R. Parkin	SS from 1971-08-02 to [178]
Miss A. Maxwell	SS 1974 with BDY on night-sky brightness
C S Back (U Surrey)	SS to 1975-07-01
A Stamper	SS to 1977-09-23 [224]
K P Rogers	SS to 1977-09-23 [224]

Saied S Rezavi SS 1978/1979 -> BSc (2) [252]
 G A Winbow TSA 1962-06-13 to 1962-09- [100]

C.11.2 In other departments

Denis E Winch Temp. SSO, from 1968-04-01 to 1968-07-31 [154] [158]
 Lecturer on sabbatical leave from University of Sydney; to Magnetic Dept.
 Later became Professor of Applied Mathematics.

David R. Wilkins Temp. SA, working for Bernard Pagel.
 1978-01-03 to 1978-06-30 [225, 227]
 1978-12-07 to 1979-01- [232]
 1979-06-18 to 1979- [237]
 1979-12-10 to 1980-01-11 [244, 245]
 1980-07- to 1980-09-18 [253]

Son of author. Now lecturer in mathematics at Trinity College Dublin.

There were probably many others of whom I have no records.

C.12 List of marriages between RGO staff

This list is intended to include marriages after 1949 in which both partners were, or had been, members of the RGO staff at the same time. There are probably errors and omissions in this list.

* resigned immediately before wedding

~ resigned some months before wedding

(A) the staff were at Abinger before moving to Herstmonceux

The numbers in brackets are those of the Information Bulletins or other sources.

In the hostel: Angela James and Keith Jarrett 1953-04-04 [16]
 Mavis Gibson and Patrick Wayman 1954-06-19 [28]
 *Cynthia (Scrap) Ryall and David Smith 1955-09-17 [40]
 Virginia Papworth and Eric Mitchell 1956-03-31 [49]
 Julia Burman and ~Bob Airlie (site engineer) 1958-06-14 [76]

In the same department; (A) = Abinger

Ethel Moore and B John Harris (A) 1949/50
 Rosemary Pavey and Henry Gill (A) 1949/50 [29]
 Monica Lawrence and Fred Everest (A) 1949/50 [33]
 Rosemary Harrison and John Pope (A) 1949/50
 Betty Collett and R. H. (Tommy) Tucker (A) 1949/50
 Joan Phillips and Peter Lamb (A) 1954-08-07 [29]
 Audrey Nevell and Mike Candy 1954-09-04 [29]
 Flora McBain and Donald Sadler 1954-12-22 [33]
 *Evelyn Grove and ~John Green 1955-04-09
 H. Howe and ~Michael Nunn 1955-08-28 [41]

*Margaret Newman and ~Ron Teague 1955-12-03 [42]
 Margaret Jeffery and Eric Shepherd (A) 1956/57
 Jill Beaver and Roy Wallis (A) 1956-08-12
 Patricia Scott and Brian Scales 1956-12-05
 Janet Pumfrey and Harry Cook 1958-03-29 [75]
 Linda Mather and John Alexander 1962-09-22 [102]
 Sheila Osbon and ~Philip Hill (vacation student) 1962-10-06 [102]
 Rosemary Cornford and Bernard Yallop 1 1964-01-11 [118]
 Annelia Cassells and Wallace Sargent 1964-08-05 [123]
 Susan Bailey and Leslie Morrison 1965-06-07 [129]
 Alison Gaydon and Bill Martin 1967-01-14 [144]
 Marion Whale and Martin Fisher 1969-09-20 [166]
 Sue Pocock and Keith Tritton 1970-06-05 [171]
 Mrs Jeannette M Northcott and H. Emrys Davies 1971-09-18 [179]
 Lynda Swift and Richard Martin 1972-09-02 [187]
 Wendy Duffy and Jim Sadlier 1986-09-12 [86/10]
 Vanda Bennett and Max White 1987-04-04 [87/04]
 Mrs Barbara (Seward) Mutter and Adam Perkins (Laurie Project)
 1988-09-02 [88/85]

In other circumstances (usually different departments):

Violet Strong and Gordon Taylor 1951-03-19
 Iris (Flip) Restorick and Norman Rhodes 1952-08-16
 Rosemary Weakley and Philip Christie 1954-07-10 [28]
 Valerie Terry and ~Gilbert Satterthwaite 1957-03-30
 Virginia Knight and Ken Long 1958-09-05 [78]
 Diana Damen and Michael Lowne 1958-12-13 [80]
 Janet Holloway and Michael Buontempo 1961-09-16 [96]
 Irene Saunders and Stuart Malin 1963-03-30 [108]
 Dorothy Hutchings and John Hobden 1964-09-19 [123]
 Margaret Evans and Michael Penston 1965-09-25 [132]
 Gillian Romain and John Carey 1966-10-08 [143]
 Ann Tidmas and Arthur Milsom 1967-07-01 [147]
 Dianne Pottinger and Charles Harmer 1968-03-29 [154]
 Marilyn Harris and Brian Carter 1969-07-05 [164]
 Janet Purdy and Andrew Sinclair 1970-01-30 [170]
 Sue Cowen and Ken Hartley 1973-02-05 [221]
 Pauline Watson and John Thomas 1974-01-12
 Elizabeth Epps and Richard Bingham 1977-09-24 [224]
 Gillian Edmonds and Philip Gibbs 1982-03-20 [271]
 ~Maureen Berry (nee Winter) and Tony Seabrook 1979-04-07

C.13 Deaths of RGO staff

The following lists are based largely on reports in the RGO Information Bulletins etc up to July 1989, but they may not include all such reports. Moreover, it is likely that the Bulletins recorded only the deaths in retirement of senior and long-serving members of the staff.

An asterisk indicates that a reference to a published biographical article or obituary is given in appendix G.7.

C.13.1 Deaths of RGO staff while in service after 1948

1959-05-19	Rosemary A Wilder	Road accident [82]
1962-05-29	J. R. Hill	[99]
1962-05-30	C. C. Harris	[99]
1964-12-09	L. J. Bates	In South Africa [127]
1966-11-20	Norman S. C. Rhodes	[143]
1967-01-09	R John Manser	Road accident [144]
1971-06-06?	John H. Barry	[178]
1971-08-14	David R. Coulthard	[179]
1973-07-19	Cyril E. Taylor	[195]
1975-03-27	E. Reynolds	[210]
1975-07-29	J. P. Robinson	[211]
1987-08-21	Richard Worth	Road accident [87/09]
1987-10	Tony Farrington	Road accident on La Palma [Gem 18]
1990-12-23	*M. V. Penston	[Gem 31, 32]

C.13.2 Deaths of staff who retired or transferred after 1948 and before closure in 1998

The following list contains only those whose deaths I have noticed in IBs etc
The IB Reference may refer only to a note at time of retirement.

1965-12-05	D. S. Perfect	[127]
1972-01-29	R. T. Cullen	[183]
1977-03-26	L. S. T. Symms	[222]
1977-06-21	H. W. P. Richards	[223]
1980?-	Flora I Penfold	[220]
1981-09-13	*J. G. Porter	[94]
1982-04-27?	W. G. Grimwood	[258, 261]
1982-08-23	*P. S. Laurie	[82/11] [Gem 3]
1982-10-28	*R. d'E. Atkinson	[Gem 4]
1982-12-03	H. G. Barker	[83/01]
1983-03-26	W. A. Scott	[83/04]
1985-12-09	H. W. Newton	[36]

1986-04-28	*G. A. Harding	[255]
1986-11-	Jack Pike	[OC 85/86]
1987-05-02	E. A. Chamberlain	[87/06]
1987-10-24	*D. H. Sadler	[Gem 18]
1987-12-08	A Shortland	[Gem 18]
1989-07-03	*A. E. Carter	[223]
1991-11-10	*H. F. Finch	[146]
1992-10-05	Jack Hutchins	[Gem 38]
1994-11-03	*M. P. Candy	[163]
1995-12-11	*A. Hunter	[213]
1996-03-04	H. P. C. Cook	[145]
1997-11-18	Irene Saunders/Malin	
1998-10-02	*O. J. Eggen	[147]

C.13.3 Deaths of former RGO staff after closure (from November 1998)

The IB Reference may refer only to a note at time of retirement.

???	Louise Webster/Turtle	
1998-12-21	*Patrick Wayman	
1999-05-03	*K. C. Blackwell	
1999-05-11	Ann Heather/Strong	
1999-01-13	*William L Martin	
1999-10-01	*Charles Wynne	
2000-12-25	*Flora M. McBain/Sadler	
2001-11-12	Pat Hanning	[83/04]
2001-03-30	Derek A. Harragan	[98]
2002-05-27	Brenda Harris	[85/04]
2002-11	Philip F. Cottrell	
2003-11-03	Marion Rodgers	[164] [A&T Newsletter no 1, 2000]
2003-05-02	R. H. (Tommy) Tucker	[Gem 3]
2004-11-14	*David S. Evans	[157]

Later deaths are (probably) available in the records of the RGO Society. They include:

???	G B Wellgate
2005-08-11	Richard Bingham
2005-08-15	Bill Roseman
2006-02?	Maureen Harmer/Napier
2007-10-09	Keith Jarrett

C.14 Notes on individuals

I have given notes on some of the ladies on the staff in C.4.5, but I had not intended to give similar notes on any of the men, although the main text contains some notes on senior staff and particular even. I have since, however, decided to include the following note where the circumstances were unusual. Notes on others will be added when it seems to be appropriate.

G. B. Wellgate

The following note was supplied by Nathy O’Hora in 2005.

On the day of his funeral prior to the service we wondered why in his obituary in *The Guardian* he was described as Dr Wellgate. All was revealed during the service when we heard of his early days in the UK. He got an appointment at Cambridge, where he had just submitted his PhD thesis when the war commenced, and he was arrested as an enemy alien and sent to the Isle of Man. Amongst the things he took with him to the I.o.M. was a copy of his thesis. This puzzled the “intelligence” agents who decided it was coded intelligence of military importance and destroyed it forthwith. His thesis at Cambridge was accepted but (acting on the advice of MI6?) the Cambridge authorities lost it. About 45 years later somebody at Cambridge found it again and the University then bestowed the degree of PhD on him.

[He joined the Time Department at Abinger on 1943-03-15.]

C J A Penny

This note about Joy’s initial appointment is a supplement to the paragraph above in C.4.5

I have a note (but no reference) that Joy Penny joined the Time Department at Abinger as a Temporary Junior Assistant on 1943-09-27, but it appears that she was actually at ROE since it was stated in IB 220, when she took premature retirement in 1976, that she joined the Observatory at the Edinburgh outstation in 1944. Nathy O’Hora suggests [email to GAW on 2006-01-15] that Miss Penny joined the staff of the Royal Observatory at Edinburgh in 1941, immediately after she had graduated, but the date and grade are not known as the staff lists for ROE for that period have not been found by David Thomas. She made her first time-service observations on 1943-10-18

I do not have the AR’s report for 1944, but Miss Penny is not listed in the report for 1945. She is listed as a Junior Assistant in the reports for 1946 and 1947, but in the AR’s reports for 1948 and 1949 she is listed as an Assistant (Temporary). There is a statement in the report for 1950 that she “was transferred from the anomalous grade of Assistant, Temporary, to that of Temporary Experimental Officer”. She was first listed as an Experimental Officer in the report for 1952.