The Board of Visitors of the Royal Observatory—II : 1830–1965

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The accession of William IV necessitated a new Royal Warrant for the appointment of Visitors to the Royal Observatory. The rapidly-growing reputation of the Astronomical Society of London and the frequency with which the Admiralty consulted its Council on matters of importance, such as the reform of the Nautical Almanac, now led to members of the Society taking an important rôle in the direction of the Royal Observatory's affairs.

The Warrant of 1830 September 9 named as regular Visitors the President for the time being and five Fellows of the Royal Society (Davies Gilbert, John Lubbock, Henry Kater, George Peacock, William Pearson and Richard Sheepshanks), the President for the time being and five Members of the Astronomical Society (Sir James South, Charles Babbage, Francis Baily, Francis Beaufort, Olinthus Gregory and John Herschel), the Savilian Professor of Astronomy at Oxford (S. P. Rigaud) and the Plumian Professor of Astronomy at Cambridge (G.B.Airy, who thus made his first official appearance in connection with the Royal Observatory); seven of the above to be a quorum. The Visitors were instructed to direct the Astronomer Royal to make such observations as they thought proper, to survey the instruments, to inform the Admiralty as to necessary changes or repairs and to suggest improvements in the buildings, instruments and observations. The Astronomer Royal was to deliver fair copies of his observations every three months to be printed by the Admiralty; when the Presidents of the two Societies had received as many printed copies as they required for distribution, the remainder were to be sold at a price fixed by the Admiralty; Visitations were to be held on the first Saturday in June and additional meetings held at such other times as the Admiralty thought expedient; the Chairman at Visitations was to be the President of the Royal Society, or in his absence the President of the Astronomical Society; an assistant from the Royal Observatory was to be employed as Secretary and vacancies caused by death filled by the appropriate Presidents, both of whom would remain Visitors after relinquishing their offices with the Societies.

In 1831 January the Admiralty took the initiative and asked the President of the Royal Society, Augustus Frederick, Duke of Sussex

(1773–1843), the most liberal-minded of the sons of George III, to call a meeting of the Visitors at the Admiralty Office to consider the rapid publication of the Greenwich Observations and also those of the Cape Observatory. At this meeting (the first of the newly-constituted Visitors), held on 1831 January 19, it was decided to print the Greenwich Observations on inferior paper for cheapness, 'the present splendid manner in which it is published being wholly unnecessary,' while Airy, Baily, Herschel and Sheepshanks were asked to confer on the best arrangement of the data. Airy's influence was soon apparent in the decision to print in the same form as that used for the Cambridge observations.

Nearly a year before this, the Astronomical Society had empowered its President, Sir James South (1785–1867), to sign a petition to the King for the grant of a Charter. Although William IV entered his name in the Society's autograph book as Patron on 1830 December 15 (and the Society could thenceforth call itself the Royal Astronomical Society), the delay in agreeing the draft of the Charter and obtaining the King's signature resulted in South's no longer being President at the time of grant on 1831 March 7. An inveterate trouble-maker, he raised such a storm that he never served on the Council again, although he remained an embarrassment to the Visitors for years to come.

Before the end of Pond's term of office as Astronomer Royal, the Nautical Almanac had been revised and its production separated from the Royal Observatory, the number of casual visitors invited as guests at Visitations vastly reduced, the Catalogue of 1112 stars published (a very real contribution to meridian astronomy) and the first accurate public time signal instituted in 1833 in the form of the Greenwich Time Ball. To all these the Visitors gave effective support.

The Astronomer Royal's ill-health and prolonged absences convalescing at Hastings, combined with the burden of chronometer rating undertaken a decade before and the lack of control exercised over the staff by an alcoholic First Assistant, caused the Royal Observatory to fall into such a chaotic state that drastic action had to be taken to save the establishment. This led to Pond's resignation on 1835 September 30 and the appointment of George Biddell Airy (1801–1892) as Astronomer Royal.

The Admiralty had long considered Airy as Pond's successor and had sounded him, through the President of the Royal Society, some eighteen months previously.

While Airy's appointment was being negotiated, the Admiralty obtained sanction to revise the salary scales of the future Astronomer Royal and his six assistants, upgrading that of the First Assistant to permit the recruitment of highly qualified candidates. The old

allowances for 'coals and candles' were abolished and the Astronomer Royal's salary raised to £800 a year. In future the first Assistant would be known as the 'Chief Assistant, who should be a person of respectable rank in Society' and would have a maximum salary of £400 a year; the remaining assistants' salaries would not exceed £150 a year, meaning a reduction in some cases. By these adjustments the Astronomer Royal's salary was raised enough to suit Airy's taste while the cost to the Admiralty only amounted to £27 10s. a year more than under the existing arrangement. In addition, a memorial from the Admiralty to the King led to an Order in Council dated 1835 September 30 which gave the Commissioners 'full authority to issue instructions to the Astronomer Royal as we may deem fit,' although they nevertheless agreed to consult the Visitors on such matters. This strengthening of the Admiralty's hand reduced the powers of the Visitors but removed some of the difficulties in the administration of the Royal Observatory.

Airy took up his appointment on 1835 October 1 (with a Royal Warrant dated the previous August 11) and wasted no time in putting the Royal Observatory in order. Pond's First Assistant had been dismissed on Airy's insistence and was now replaced by the Rev. Robert Main, the first of the highly-qualified Chief Assistants on the new salary scale.

At a meeting of the Board of Visitors (only, it seems, styled 'Board' in the Minutes after Airy's advent) held in Kensington Palace, the residence of the Duke of Sussex, the Astronomer Royal proposed that magnetic observations should be carried out at Greenwich as he believed that 'it is perfectly correct that of the magnetic element which is most easily deduced (the variation) there does not exist a single authentic determination in England within the last ten years.' His proposals were supported by the Visitors and eventually led to the addition of the Magnetic and Meteorological Department at Greenwich and an extension of the Royal Observatory's grounds.

At the Visitation of 1836 Airy introduced the annual report of the Astronomer Royal to the Board of Visitors. These reports, continued by his successors until the dissolution of the Board in 1965, contained an invaluable review of the work carried out at the Royal Observatory during the preceding year, including any changes, additions and improvements to instruments, staff changes and, on frequent occasions, proposals for new instruments and programmes. The reports were printed and given wide distribution for 130 years.

Within a short time the Board reported to the Admiralty that they felt 'that a somewhat greater power of calculation seems to be required for placing the Observatory in the fullest state of efficiency and extracting the utmost advantage from the splendid instruments and

unrivalled personal means of observation. In other respects the Royal Observatory in its organisation and direction approaches very nearly to perfection and reflects the highest credit on the talents and zeal of the Astronomer Royal and the liberal support of your Lordships.'

In 1837 the Admiralty suggested that the Board of Visitors should also meet annually on the second Saturday in January, to which the Board agreed but took the opportunity of pointing out that 'one of their members had called their attention to the expenses incurred by himself and others attending the Board' and that they should be re-imbursed, but that 'from feelings of delicacy some of them were reluctant to enter upon their minutes any resolution conformable to such opinion.'

This resulted in an Admiralty letter dated July 4 authorising the sum of £50 a year for the Visitors' expenses, plus £10 a year for the Secretary for two meetings each year.

When the Visitors' Warrant was renewed by Queen Victoria on 1838 January 27, it was addressed to 'the President for the time being of the Royal Society, also the President for the time being of the Royal Astronomical Society (unless being also Astronomer Royal for the time being)', the usual number of Fellows and the Professors of Astronomy. The proviso about the Astronomer Royal arose from Airy's refusal to take the Chair at any meeting in order to maintain his independence.

It was felt, however, that the constitution of the Board was not entirely satisfactory and it was proposed to ask the Queen to add the astronomers of the Universities of Edinburgh, Glasgow and Dublin as ex-officio members, to reduce the quorum to five and give the President of the Royal Society authority to call meetings as required.

Nothing came of these suggestions and it was not until early in 1857 that a Committee of the Board was set up to consider alterations in the Royal Warrant. The principal reason for requesting a revision was explained by the Astronomer Royal in a letter dated 1857 January 20 to the Secretary of the Admiralty: 'At the present time (as I have reason to believe from private information) a contingency of a still more inconvenient kind threatens the Observatory. It is extremely probable that one of the Assistants of the Royal Observatory may at no distant period be elected President of the Royal Astronomical Society. There is nothing in the Warrant of 1838 to prevent him from exercising the functions of Visitor in his own person or from appointing new Visitors in certain cases of vacancy.' The person concerned was his Chief Assistant, Main, who was elected President of the Royal Astronomical Society in 1859.

With this letter Airy submitted for consideration a draft for a new Warrant drawn up by himself. Most of his suggestions were accepted

but the Admiralty also took the opportunity of strengthening their position and the final version, which received the Sign Manual on 1858 June 5, named the Hydrographer of the Navy as an additional Visitor. Previously Admiralty representation had usually been assured by the Hydrographer's being a nominee of the Societies and although formerly a Secretary could have been chosen from the assistants at the Royal Observatory, Airy had considered this most improper and this position, it seems, had for some time been filled by an assistant to the Hydrographer. Henceforth, this was certainly so, Captain Becker, R.N., acting as Secretary to the Board of Visitors for many years. All subsequent Secretaries have been nominees of the Hydrographer.

The proposal for adding further professors having been dropped, the Visitors listed were:

'The President for the time being of the Royal Society,
The President for the time being of the Royal Astronomical Society,
together with Our trusty and well-beloved William, Earl of Rosse,
Sir John Lubbock, Baronet,
Rear-Admiral William Henry Smyth,
The Very Reverend George Peacock, Doctor in Divinity, Dean of Ely,
The Reverend William Whewell, Doctor in Divinity, Master of Trinity College, Cambridge,
Major-General Edward Sabine,
Fellows of the Royal Society;
and The Lord Wrothesley,
Charles Babbage, Esquire,
Samuel Hunter Christie, Esquire,
Manuel J. Johnson, Esquire,
Sir John Frederic William Herschel, Baronet,
John Couch Adams, Esquire,
Fellows of the Royal Astronomical Society;
also Sir James South, Knight,
and the Savilian Professor of Astronomy at Oxford, for the time being,
the Plumian Professor of Astronomy at Cambridge, for the time being
and the Hydrographer of Our Navy for the time being,

to be regular Visitors of Our Royal Observatory at Greenwich during Our pleasure; provided always that neither the Astronomer Royal, nor any of his Assistants, shall be a Visitor of Our said Royal Observatory.'

The Societies still had five nominated representatives, Rosse and Adams still being Visitors as Past Presidents. South had to be included for the same reason, although he had not put in an appearance since 1831; it would appear from a remark in Airy's correspondence that South had badly over-reached himself in the presence of Royalty and that 'it was the calm and dignified rebuke of the Duke of Sussex which delivered us from our Astronomical Trouble-all.'

To avoid similar complications in the future the new Warrant omitted the clause contained in Queen Victoria's first Warrant that 'Our further will and pleasure is that any President of Our said Royal Society, or the President of the Astronomical Society, unless as aforesaid who may have become a Visitor of Our Royal Observatory by virtue of his office, shall during Our pleasure continue to be a Visitor notwithstanding that he may have vacated the office of President of such Society.'

To make doubly sure, a further proviso stated 'that if any Visitor (not being such by virtue of his office) failed to attend Visitations for three successive years without reasonable excuses being accepted by a majority of the Visitors present, he should cease to be a Visitor'.

Expenses (usually £5) were to be allowed for Visitors living more than ten miles from the Royal Observatory and Admiralty boatmen were allocated up to £1 12s. 6d. (spent on grog) for their service in rowing the Visitors to Greenwich. Although this last had been the practice for many years, it is not clear when it started; it was discontinued in 1862.

Finally, any meetings additional to the annual Visitation on the first Saturday in June could henceforth be called by either the Admiralty or the President of the Royal Society.

This Warrant, it was hoped, would now meet all contingencies.

In the past two decades Airy had brought about great changes at the Royal Observatory. The addition of important instruments, to mention only the Altazimuth, the South East Equatorial (with a $12\frac{3}{4}$-inch objective) and the world famous Transit Circle, new departments, the distribution of time signals over the new railway telegraph network and large scale programmes of investigation were all ably supported by the Board under the Astronomer Royal's continued pressure. The staff of the establishment was built up to meet the new demands and the Visitors called upon to oppose any encroachment on Greenwich Park which might affect the work of the Royal Observatory; they were successful, for example, in preventing railways approaching too closely.

The affairs of the Visitors did not, however, always run smoothly where personal matters were concerned. Bad feeling, which existed

between two of the Visitors, Babbage and Sheepshanks, had developed into open warfare a few years before. Babbage, a founder of the Royal Astronomical Society, in his later years suffered from a persecution mania of which his friend South was quick to take advantage in provoking an attack on Sheepshanks (an ally of Airy's). It is unnecessary to give details, but Sheepshanks, never doing anything by halves, retaliated with 'A Letter to the Board of Visitors of the Greenwich Royal Observatory in reply to the Calumnies of Mr Babbage at their meeting of June 1853 . . . by the Rev. R. Sheepshanks, M.A., One of the Visitors.' This document, with appendices, ran to ninety-two printed pages, but the other Visitors declined to take sides and no action was taken by the Board.

At the Visitation of 1859, under the chairmanship of Sir Benjamin Brodie (1783–1862), the Board resolved that 'some acknowledgement is due to Professor Hansen for the great addition he has made to Astronomical and Nautical science by his investigation of the formulae in the lunar theory and his superintendence of the formation of tables in conformity with them, which have been found by an extensive comparison with the Greenwich observations far to surpass in accuracy any previous. . . . And they consider that the sum of one thousand pounds would be well bestowed by the British Government on him as a mark of their approbation.'

P.A.Hansen (1795–1874), the Danish astronomer, had in 1838 published a revision of the lunar theory, upon which were based his 'Tables de la Lune', published by the British Government in 1857 and adopted by the Nautical Almanac.

Lubbock, a Visitor, was unable to attend this Visitation and was consequently unaware of the resolution for a few days. Feeling that his own work on lunar theory deserved some reward, he protested strongly at the suggestion to award Hansen a thousand pounds.

On this, Airy wrote a lengthy defence of Hansen to which Lubbock took exception, accusing the Astronomer Royal of misrepresenting the facts and adding that he 'would have come a thousand miles to attend the meeting'.

The Board nevertheless upheld their resolution but added that any further improvements by mathematicians should qualify for a reward.

The principal adversaries relieved their feelings by printing accounts of the dispute (marked 'Private and Confidential') and giving them the widest possible distribution, before the disturbance died down.

Hansen duly received the recommended grant.

In 1861 Major-General Edward Sabine (1788–1883) was elected President of the Royal Society, an event which caused Airy some

concern as he was far from being on good terms with the new Chairman of the Board over the establishment of magnetic observations.

At the next Visitation, held on 1862 June 5, the Board decided (on Airy's insistence) to press for a time ball at Start Point controlled by the Royal Observatory, but also noted with regret and some acidity that 'the time of the Astronomer Royal has lately been employed in operations for carrying out the Act for the measures for the Sale of Gas and are of opinion that such or similar employments have little or no reference to the business of his office and, absorbing as they naturally must so much of his valuable time, are most inexpedient'.

By such censure the Visitors (or, more probably, Sabine) hoped to curtail the Astronomer Royal's extraneous activities which included such diverse subjects as the railway gauge and sewers.

In the autumn of the same year matters came to a head between Airy and Sabine over the latter's recommendation to the British Association 'that it is necessary to maintain the complete system of self-registration of magnetic phenomena at the Kew Observatory, because no sufficient system of magnetic registration is maintained elsewhere in England'. The implication that the system of continuous registration at Greenwich was at fault could have only one possible result and in the ensuing exchanges between these two self-opinionated men, Airy found himself in the awkward position of facing Sabine in two of the latter's rôles, one as President of the Royal Society, against whom Airy obviously felt himself capable of holding his own, and the other as Chairman of the Board of Visitors, with whom it was essential for the Astronomer Royal to be on good terms if he were to receive continued support in his plans for the Royal Observatory.

Failing to secure a special meeting at which to discuss the matter, Airy at the first opportunity (the Visitation of 1863) read a long personal statement to the Visitors. Caught between two fires and most reluctant to support either side, they eventually resolved 'that the whole of the Board of Visitors observe with regret certain expressions in that correspondence relative to the position of the Chairman of the Board; they would greatly regret that anything should interfere with the frank and cordial terms on which the Astronomer Royal and the members of the Board have met and, while they do not feel called on to enter the scientific questions which have been discussed, they beg to assure him of their undiminished confidence'.

Airy, in thanking the Visitors at the next Visitation a year later, added that he 'would continue as heretofore to rely on his own judgement on the events of science'.

Although Sabine remained President of the Royal Society until 1871, no open friction interfered with the business of the Board.

Whilst the constitution of the Board was in most ways satisfactory, the problem of ageing Visitors was ever present and was to remain so for many years. Once elected to the Board, Visitors conscientiously and tenaciously attended until ill-health or increasing infirmity obliged them to resign; most vacancies were brought about by death. In 1869, James Challis (1803–1882) had been a regular Visitor as Plumian Professor since the thirties and Herschel from the forties. The latter, then 77 years of age, wished to resign on ill-health grounds, but was dissuaded from taking this step, the other Visitors 'being so well convinced of the value of his aid as a Member whether present or absent, that they would greatly regret to lose so important and so highly distinguished a Member'. He died two years later and was replaced by William Huggins (1824–1910).

In 1871 Airy had the satisfaction of succeeding Sabine as President of the Royal Society, an office he held for two years. As Astronomer Royal he was, of course, debarred from taking the Chair at meetings of the Board; Professor Arthur Cayley (1821–1895), President of the Royal Astronomical Society, acted as Chairman.

During this period, the Board was strong in its support of the Transit of Venus expedition to determine solar parallax, requesting a Treasury grant of £5000 for the necessary photographic apparatus. The Astronomer Royal undertook the organization and direction of the project—and was still corresponding with the Admiralty over expenses in 1880.

Relations between the Board and the Astronomer Royal were harmonious for the last decade of Airy's term of office and he was able to continue the expansion of the Royal Observatory by the addition of departments and instruments, introducing spectroscopy and photography, while attempting to further the determination of longitudes (including that of Australia) by means of the now extensive telegraphic links throughout the world. In this last field he was frustrated by lack of Admiralty support. By the end of his period as Astronomer Royal Airy had a staff of eight higher grade assistants (including W.H.M. Christie as Chief Assistant) and a variable number, usually about ten, of supernumerary computers. These underpaid but essential members of the Royal Observatory staff had recently petitioned Airy for an increase in salary with the result that at the last meeting of the Board he attended as Astronomer Royal on 1881 June 4 he asked the Visitors to insert in the minutes a memorandum he had drawn up 'embodying the policy which, after very long experience, he judged best for the Royal Observatory'. In this remarkable statement he pointed out that individual salaries could be increased only by the retirement of some of the computers 'as the gross amount at his command was fully

engaged', and also that most computers leaving with good references obtained good posts. ('I know of two to the amount of £1000 a year'.)

His final remarks were 'that as in most cases it has been considered that the education in regular and practical habits was the principal remuneration that could be offered for work', he advised them 'to follow up the course which has prevailed for forty years; to gain a good character here for order, industry and fidelity; not to place their substantial hopes on the acquisition of external offices to which such characters may be expected to lead'.

Not long after this, Airy was to receive a farewell testimonial from the Royal Observatory staff which must have given him some cause for reflection; it contained conventional expressions of respect, but little else.

In his last report as Astronomer Royal he mentioned the longitudes of distant ports, as referred to Greenwich, and continued: 'I approach the subject with grief. We have entirely abandoned the longitudes of the Atlantic, which have been cleared away, before our eyes, by the scientific enterprise of another nation. The Pacific, bearing those vast and important colonies, almost entirely British, is equally neglected; though so much is ready that the mission of a single officer would quickly establish all. The same aspiring nation, which has mastered the Atlantic, is now bent (as I understand) on adding to its scientific dominion the Pacific. I think this is not honourable to our nation.'

Retiring on 1881 August 15, Sir George Airy, K.C.B., was thus absent at the reading of the Admiralty's indignant reply at the next Visitation.

By 1883, however, he was a Visitor himself, aged eighty-two, filling a vacancy caused by the death of another member of the Board; he attended until 1891.

During his long reign, Airy had worked with a Board of Visitors comprising many distinguished astronomers under the Chairmanship of eight Presidents of the Royal Society and one President of the Royal Astronomical Society (Cayley, as already mentioned, who took the Chair during Airy's Presidency of the Royal Society in 1871–73), with whom, apart from Sabine, he had been on good terms. Under his commanding influence, the Board had contributed in no small measure to re-establishing the efficiency and reputation of the Royal Observatory.

This may be an appropriate place to remark on what has not hitherto been mentioned, namely the social side of Visitations.

A dinner for the Visitors had long been a feature of Visitation Day and as early as 1817 Pond had issued printed invitations to take dinner

with him at the Crown and Sceptre tavern in Greenwich. Shortly after his appointment in 1835 Airy noted that 'the business has always terminated with a dinner in Greenwich', that the Astronomer Royal was host and that it had become the custom to invite personal friends as well as the official guests. Replies to these invitations ranged from the formal and pompous to 'Dear Airy, I will come D.V. You write *Visitors* as if they were *Vintners*. No doubt they justify the more genial denomination', and 'I shall have much pleasure in joining the Idlers tomorrow at the Visitation'. This last from George Bishop, later President of the Royal Astronomical Society.

Dinner was taken at 5.30 or 6 p.m. and one wonders whether the Visitors were rowed back to London by the Admiralty watermen, whose dinner, beer and grog came to 2s. 6d. a head against about £1 for a more exalted guest.

These occasions became rather too popular for Airy's liking and by 1846 the question of issuing invitations was becoming complicated, Airy writing in exasperation 'If the President R. Soc. *will do nothing*, the Pres. R.A.Soc. *must do the whole*'. Eighty guests attended, including the Lords and Secretary of the Admiralty, local dignitaries, astronomers and representatives of general science.

In 1849 Airy wrote to one of the Visitors, his friend Captain W.H. Smyth, R.N. (1788–1865), who had been President of the Royal Astronomical Society 1845–47, 'I wish you would take in hand this awful Dinner business'. Invitations were issued by the Chairman of the Board of Visitors after lists had been drawn up by the Societies, the Admiralty and the Astronomer Royal and exchanged, as Smyth wrote, 'to boom off collisions'. The latter's highly nautical style of writing included scattering 'Aye, aye, Sir!' through his letters, in one of which he expressed the hope that 'no mulishness or tom-foolery will mar the lustre of our characters'. A system satisfactory to all parties was eventually devised and by the sixties the guests were placed in two categories, General Assembly and Dinner. Some two hundred guests attended at 3 p.m. to view the Royal Observatory; these were attended to by members of the staff stationed at strategic positions to explain the working of the telescopes and answer questions. This lower order of guest had to be satisfied with hot chocolate, lemonade and cakes on the lawn while the members of the Board and their guests, in all numbering between fifty and sixty, were entertained at the Crown and Sceptre Tavern or the Ship Hotel, near the waterfront in Greenwich.

Expenses for the dinner were met by devious means; the Admiralty paid £15 for official guests, the Societies each paid for a limited number, while the remainder were described as contributing members, and paid for their own.

Invitations were issued in the name of the President of the Royal Society as Chairman, official guests and distinguished foreigners having their cards endorsed by the Admiralty seal, entitling them to a free meal. Those not in this fortunate position were informed that 'Dinner (price 21s.) will be on the Table at Six o'Clock', accompanied by champagne with an upper price limit of 12s. a bottle.

Socially, the Visitors had to move with the times and in 1880 ladies were admitted as guests; seven were friends of the Airy family and fourteen were introduced by Visitors. That the ladies were not to be allowed to create much of a diversion is made clear by Airy's instructions to the gate porter: 'All ladies are to be presented to Miss Airy and to take seat with her'. A very strict security check was ordered to prevent unauthorised admittance to the General Assembly, all guests, including the Visitors themselves, being obliged to sign a visitors' book at the main gate. These signatures were later laboriously checked against invitation lists when it was usually revealed that something under ten per cent of those admitted were gate-crashers.

Eventually the Admiralty granted £70 a year under subhead B of Vote 12 of Navy Estimates to cover the cost of what was rapidly becoming an open day at the Royal Observatory, but reacted strongly if this sum was exceeded.

In its heydey the dinner was gargantuan and it is impossible to resist the temptation to give the menu submitted by the manager of the Ship in 1889.

Royal Observatory Dinner

Sherry	Thick or clear soup
Hockheimer	Flounders Souchée
Bordeaux	Lobster Rissoles, Fried Slips
	Whiting Pudding à la Crémière
	Stewed Eels à la Bordelaise
	Grilled Trout. Tartare Sauce
	Crab omelettes
	Salmon Cutlets à l'Orientale
	Whitebait, Plain, Black and Red devil'd
Champagnes	Timbales Foie Gras Périgord
Irroys	Fore quarter Lamb. French Beans and Potatoes
Delbeck	
	Ducklings and Green Peas
	Asparagus
	Devilled Ham and Tomato Salad
Liqueurs	Jellies, Creams, Pastrys
	Ice Puddings
Port	Dessert

Margaux Claret Coffee

20 Courses and Dessert Wine, inclusive attendance 25s. per head

Inevitable economies drastically reduced the grandeur of the Dinners and the Visitors were in later years entertained by the Astronomer Royal to luncheon in the Octagon Room at the Royal Observatory. Until the outbreak of war in 1939, Visitation Day was a well-attended occasion at Greenwich, the afternoon guests still being numbered in the hundreds.

Airy's successor as Astronomer Royal was W.H.M.Christie (1845–1922), later Sir William Christie, K.C.B., who had been Chief Assistant since 1870. During his term of office great advances were made in the acquisition of large telescopes and the expansion of accommodation. In 1885, at the Astronomer Royal's suggestion, the Board 'recommended to the favourable consideration of the Admiralty the providing of a telescope with an object glass of twenty-eight inches aperture, which it appears can be affixed to the mounting of the South East Equatorial at a cost of under £4000. This Board would observe that the principal Equatorial Telescope of the Royal Observatory is very far inferior to those of the chief observatories of Europe and America; and further, that the suitability of the present mounting would effect a saving of £9000, the cost of mounting and dome'. Experience over the years had taught the Visitors that an appeal invoking patriotism and pointing out economies was most likely to suceed with the Admiralty; the telescope was installed in 1894. During the last decade of the century the Board pressed for many improvements and the Royal Observatory was eventually provided, partly as a result of their efforts and partly by gift, with the 26-inch refractor, the 30-inch reflector, the astrographic telescope, a new altazimuth and the New Physical Observatory (the cruciform terracotta building in the southern part of the Royal Observatory grounds). Extensive alterations were also made to buildings and a separate portion of the Park enclosed to house a magnetic observatory. Representations made in 1893 resulted in an increase in staff (including an additional Chief Assistant), but still only bringing the number up to fifteen established members; there was an average of seventeen supernumeraries.

Some years before, at the Washington Conference of 1884, Greenwich had been adopted as the Prime Meridian, but attempts to introduce Time Zones based on Greenwich Mean Time had proved unsuccessful; more success was achieved in other international fields, such as the compilation of the Astrographic Catalogue and Charts.

At the end of the Victorian era, King Edward VII's Royal Warrant of 1901 May 23 named as Visitors the Presidents of the Societies and six Fellows of each, the two Professors and the Hydrographer of the Navy, but made no change in the powers of the Board although it did permit a relaxation of the inflexible first Saturday in June for Visitation

and the payment of expenses for all attending Visitors. Although a few Visitations were held on Wednesdays, the first Saturday in June soon became the traditional day once more and remained so with very few exceptions until the Board was dissolved.

The Astronomer Royal was able to sponsor eclipse expeditions and the Royal Observatory was provided with a considerable quantity of photographic and electrical equipment, the latter being suggested by Lord Rayleigh (1842–1919), President of the Royal Society 1905–08.

In spite of this increase in the Royal Observatory's potential, a major disaster occurred in 1906 with the erection of the L.C.C. generating station at Greenwich, little more than half a mile due north of the Transit Circle. No steps seem to have been taken to avert the consequences of the proximity of a large power station until it was too late. A resolution of the Board on May 30 stressed the serious interference to the work of the Royal Observatory by the vibration of large reciprocating engines driving the generators and by the heated air from tall chimneys straddling the meridian. A committee of three representing the parties concerned was appointed to report on the working of the installation and possible ill-effects on the Royal Observatory. The members, all Fellows of the Royal Society, were the Earl of Rosse (a Visitor of long standing, representing the Royal Observatory), Sir Benjamin Baker (for the L.C.C.) and J.A.Ewing (for the Admiralty). Their recommendations were adopted in part and the vibration was largely overcome, but the heated air and smoke remained a constant source of trouble and supported the case (nearly forty years later) to move the Royal Observatory to a more suitable site.

Sir William Christie retired on 1910 October 1 and was succeeded in office by F.W.Dyson (1868–1939), later Sir Frank Dyson, K.B.E., who proposed and carried out new programmes of investigation on the regions covered by the astrographic charts, including photographic magnitudes, colour temperatures, proper motions and parallaxes. The Astronomer Royal also installed free pendulum clocks at the Royal Observatory and introduced the 'six pips' broadcast time signal in 1924, followed in 1927 by the rhythmic signals transmitted daily by the B.B.C. from Rugby for the benefit of navigation. New instruments were brought into use, including the 36-inch reflector (the gift of William J.Yapp) while the Visitors successfully advocated the provision of the Reversible Transit Circle.

During Dyson's term of office only one special meeting of the Board of Visitors seem to have been called and this (on 1921 November 19) by the Admiralty to consider the proposal for an Admiralty conference to discuss means for safeguarding the Royal Observatory from the effects of the possible electrification of the South Eastern and Chatham

PLATE 5

VISITATION DAY

R.B.CLIFTON 1878. R.A.S. | A.W.RÜCKER 1892. R.S. | H.H.TURNER 1894 Savilian Professor of Astronomy, Oxford | SIR G.G.STOKES 1859. R.S. | W.D.BARBER Secretary (1890) | LORD RAYLEIGH 1884. R.S. | J.W.L.GLAISHER 1886. R.A.S. (Miss Airy's dog)

(*Date is that of first year of service on Board of Visitors;*

PLATE 6

1897 JUNE 5

G.H.DARWIN
1883
Plumian Professor
of Astronomy,
Cambridge

EARL OF ROSSE
1886. R.S.

A.A.COMMON
1894. R.A.S.

W.HUGGINS
1871. R.A.S.

F.W.DYSON
Chief Assistant, R.O.

Initials indicate the Society represented on this occasion.

(later Southern) Railway. This led to the removal of the magnetic observatory to Abinger, in Surrey, in 1923.

Relations between the Astronomer Royal and the Board were smooth apart from an explosive but brief disagreement with an individual Visitor in 1912.

On Sir Frank Dyson's retirement on 1933 February 28, he was followed as Astronomer Royal by H.Spencer Jones (1890–1960), later Sir Harold Spencer Jones, K.B.E., who previously occupied the position of H.M. Astronomer at the Royal Observatory, Cape.

Spencer Jones was from his appointment much concerned with the deteriorating observing conditions at Greenwich caused by atmospheric pollution and was indefatigable in enlisting the support of the Board to advocate the removal of the Royal Observatory to a site where favourable conditions prevailed.

The Royal Warrants of King George V dated 1910 June 11 and of King Edward VIII dated 1936 April 1 had not changed the constitution or powers of the Board of Visitors, but that of King George VI, signed on 1937 May 1, contained the important alteration that 'each of the six Fellows of the Royal Society and six Fellows of the Royal Astronomical Society shall retire after serving upon the Board for a period of six years, provided that the Visitors now serving shall retire at the rate of one per annum on the 30th June of each succeeding year in order of length of service as Visitors'. On 1938 November 15 a special meeting was held, at the Astronomer Royal's request, at which the Visitors decided to report to the Admiralty the urgency for the removal of at least some of the Royal Observatory's departments and instruments to a more suitable site and that the magnetic work being carried out at Abinger should be transferred to a southern site as far as possible from electrical disturbance.

The last Visitation in traditional style was held on 1939 June 9. Following the outbreak of war and the dispersal of some sections of the Royal Observatory, only a skeleton staff remained at Greenwich; from 1940 to 1946 the Visitation meetings were held at the rooms of the Royal Society and in 1947 the formal meeting was held in the Royal Naval College, after which the Visitors inspected the much-battered Royal Observatory.

Prior to the second world war, it would appear that the only occasion on which a Visitation (as distinct from a special meeting) was not held at Greenwich occurred in 1925 when, in order to inspect the new magnetic station at Abinger, the Board met at the Red Lion Hotel, Dorking.

During the war period, the Board greatly assisted in discussions and investigations connected with the permanent removal of the Royal

Observatory, many special meetings, involving several sub-committees, being held. Negotiations being completed, it was announced on 1946 April 11 that the new site was to be at Herstmonceux Castle in Sussex.

In his annual report, the Astronomer Royal stated that 'a selection had been made after the examination of a large number of sites, and after investigation of the meteorological and geological conditions of each. A committee of the Board of Visitors, consisting of Professor Greaves, Professor Plaskett and Sir George Simpson examined with the Astronomer Royal a selected short list of sites and reported to the Board. The final choice of Herstmonceux Castle was made by the Admiralty in consultation with the Board of Visitors. The conditions for astronomical observations at this site appear to be as good as can be obtained in England'.

By Royal Assent the future name of the establishment would be 'The Royal Greenwich Observatory, Herstmonceux', thus retaining the name which had become so famous over the centuries.

In 1946 July the President of the Royal Society announced that the Chancellor of the Exchequer had agreed to provide funds for the construction of a reflecting telescope of 100-inch aperture, to be associated with the name of Isaac Newton and to be available for use by qualified astronomers from all observatories in Great Britain. It was later decided to erect this instrument at Herstmonceux and a Board of Management was set up, consisting of the Astronomer Royal (Chairman), the Astronomer Royal for Scotland, the directors of the Cambridge and Oxford University observatories as ex-officio members, together with four Fellows of the Royal Society and four Fellows of the Royal Astronomical Society, each to serve four years, one nominee of each Society retiring annually. The Secretary of the Board of Management was to be the Secretary of the Royal Greenwich Observatory. In practice this meant that some Visitors would be on the new Board of Management.

The last Royal Warrant appointing the Board of Visitors was signed by Queen Elizabeth II on 1953 November 20; it differed in one respect from the previous Warrant in the appointment as a Visitor of the Professor of Astrophysics at Cambridge in place of the Plumian Professor of Astronomy.

Sir Harold Spencer Jones retired on 1955 December 31, before the Royal Greenwich Observatory was in full operation at Herstmonceux, but had the satisfaction of seeing the greater part of the transfer completed. It is interesting to note that the Nautical Almanac Office, after being separated from the Royal Observatory since Pond's time, was placed under the Astronomer Royal's control in 1937. His successor, the present Astronomer Royal, Sir Richard v.d.R.Woolley,

completed the task of re-establishing the Royal Greenwich Observatory at the new site, transferred the magnetic observatory at Abinger to Hartland in North Devon and brought about the administrative merger of the Royal Greenwich Observatory and the Royal Observatory, Cape, in 1960. The Astronomer Royal and representatives of the Board of Visitors made the latter's first visit to the Royal Observatory at the Cape in 1963 March. He has the added responsibility, as Chairman of the Board of Management of the Isaac Newton Telescope, of bringing into operation this large instrument, now nearing completion.

After the transfer of the Royal Greenwich Observatory, the Board of Visitors met at Herstmonceux and carried out the annual inspection of the establishment. Visitations usually took place on the first or second Saturday in June, the greatest departure from the accustomed date being occasioned by the railway strike in 1955, when the meeting was held on July 9.

At what was to prove the last Visitation of the Royal Greenwich Observatory, on 1964 June 6, the Board of Visitors comprised:

The President of the Royal Society, Sir Howard Florey,

The President of the Royal Astronomical Society, Office held by the Astronomer Royal,

The Professor of Astrophysics at Cambridge, Professor R.O. Redman,

The Savilian Professor of Astronomy at Oxford, Professor D.E. Blackwell,

The Hydrographer of the Navy, Rear-Admiral E.G.Irving,

Nominated as Fellows of the Royal Society,
Sir Graham Sutton,
Professor G.Temple,
Professor W.H.McCrea,
Sir Basil Schonland,
Professor M.Ryle,
Professor H.Bondi,

Nominated as Fellows of the Royal Astronomical Society,
Dr R.L.Waterfield,
Professor C.W.Allen,
Dr W.H.Steavenson,
Professor T.G.Cowling,
Professor F.Hoyle,
Professor D.W.N.Stibbs,

Secretary, G.W.Fisher, Esq.

As a result of the reorganization of Government science, on 1965 April 1 the direct responsibility for the Royal Greenwich Observatory was transferred from the Ministry of Defence (Navy), as the Admiralty had by then become known, to the Science Research Council of the Department of Education and Science. This led to the decision to dissolve the Board of Visitors on the grounds that such a body was inappropriate under the new organisation.

The following Royal Warrant was signed on 1965 August 27:

ELIZABETH THE SECOND, by the Grace of God of the United Kingdom of Great Britain and Northern Ireland and of Our other Realms and Territories, QUEEN, Head of the Commonwealth, Defender of the Faith, to all to whom these Presents shall come,

Greeting!

WHEREAS by Warrant under Our Royal Sign Manual bearing date the Twentieth day of November 1953 We did constitute and appoint the Presidents for the time being of the Royal Society and the Royal Astronomical Society, certain Fellows of those Societies and the Savilian Professor of Astronomy at Oxford, the Professor of Astrophysics at Cambridge and the Hydrographer of Our Navy, each for the time being, to be regular Visitors of Our Royal Greenwich Observatory during Our pleasure:

AND WHEREAS We did authorise and require the said Visitors from time to time to order and direct Our Astronomer Royal and Keeper of Our said Royal Observatory to make such Astronomical Observations and calculations as they in their judgement should think proper and to survey and inspect Our instruments in Our said Observatory and from time to time to make suggestions and representations to Our Lord High Admiral, or the Commissioners for executing the Office of Lord High Admiral, touching the said Observatory and its library and instruments, the observations and calculations:

AND WHEREAS We did confer upon the said Visitors certain other powers and functions relating to the said Observatory and did give directions as to the manner in which they should conduct their proceedings and as to their terms of office and the making of the new appointments:

AND WHEREAS by Warrant under Our Royal Sign Manual bearing date the twenty-fourth day of March 1964 We did direct, with effect from the First day of April 1964, that the functions conferred on Our Lord High Admiral or Our Lords Commissioners of the Admiralty should, in relation to the aforesaid Warrant, be exerciseable by Our Secretary of State for Defence:

AND WHEREAS by Our Charter under Our Royal Sign Manual bearing date the first day of April 1965 We did grant and declare that there should be established a Body Corporate by the name of The Science Research Council:

AND WHEREAS the Science Research Council has assumed responsibility for the conduct and control of Our said Observatory and its observations and calculations:

NOW THEREFORE We do by these Presents revoke the Warrant under Our Royal Sign Manual bearing date the Twentieth day of November 1953,

Given at Our Court at Saint James's this twenty-seventh day of August One thousand and nine hundred and sixty-five in the fourteenth year of Our Reign.

By Her Majesty's Command

Thus was the Board of Visitors dissolved after an association with the Royal Greenwich Observatory lasting nearly two hundred and fifty-five years. During this time there were eleven Astronomers Royal, forty-one Presidents of the Royal Society (including Airy) and, since 1831, sixty-two Presidents of the Royal Astronomical Society, of whom six served more than one term of office. In all, there were a hundred and ninety-eight Visitations, in a hundred and thirty-five of which the Royal Astronomical Society participated, and probably a comparable number of special meetings.

On only a few occasions was an annual Visitation held under the Chairmanship of a President of the Royal Astronomical Society and on two such occasions (in 1872 and 1873) the Astronomer Royal was President and could not take the Chair, which was taken by Cayley. For the record, the other instances were in 1835 (Airy, immediately prior to his appointment as Astronomer Royal), 1861 (J. Lee), 1886 (J. W. L. Glaisher), 1897 and 1898 (Sir R. Ball), 1899 (G. H. Darwin), 1900 (E. Knobel), 1951 (H. Dingle), 1955 (H. Jeffreys), 1958 (W. H. Steavenson) and 1959 (R. O. Redman). On only two occasions (when neither of the Presidents were able to attend) was it necersary to choose a Chairman from the other members of the Board, viz. in 1836 (F. Baily) and 1960 (A. C. B. Lovell). Attendances by the Presidents of the Royal Society were remarkably good.

The Board of Visitors has, nevertheless, a lineal descendant. In a recent report the Astronomer Royal, reviewing the work of the Royal Greenwich Observatory, commented on the part played in the past by the Visitors and continued: 'With the formation of the Science Research

Council in 1965, administrative and scientific control of the Observatory have both passed to a single body, and the need for external scientific consultants is less evident. Nevertheless the Science Research Council has recognized the value of independent advice, and the new Royal Greenwich Observatory Committee follows the pattern of the old Board of Visitors in comprising nominees of the Royal Society and the Royal Astronomical Society'.

Continuity and experience are there; may the new committee do as well in the future as the Board of Visitors did in the past.

I am indebted to the Astronomer Royal, Sir Richard v.d.R.Woolley, O.B.E., F.R.S. for permission to consult the Royal Greenwich Observatory archives and to publish this article.

As it is based almost exclusively on material in these records, it is hoped that the picture of the activities of the Board of Visitors may not be too one-sided.