

ROE/UKATC chronology and artifact list

| Date | Event | Instrument | Function | What Survives? (locations at about Sept 2023) | Reference code |
|-----------------|--|------------|---|--|----------------|
| 2 November 1926 | Grubb-Parsons send catalogue to ROE soliciting more business. | | Includes images of ROE and instruments | Catalogue and cover letter in Annex J | |
| 1935ish | | | Various photos of buildings and instruments, some undated | Photo album in Library Annex J | |
| 1940s? | | | | Box of mirror blanks from Grubb-Parsons in Library Annex | |
| 1961 | Satellite tracking at Earlyburn Outstation (starts?) | | Optical, satellite tracking until mid 1970's | Building outside Eddleston. Privately owned. | |
| 1963 | 16 inch Photometric Telescope and new University Building (quadrangle and lecture theatre) opened by Lady Tweedsmuir | | | Video of opening event from 16mm original | |
| 1 April 1965 | SRC set up, ROE becomes part of SRC | | | | |
| 1 July 1965 | Royal Visit by Queen Elizabeth II | | Visit | Slides, Photos. Signed visitors book, Old newspapers, programme etc in Library Annex J | |

| | | | | | |
|-----------------|---|-----------------|---|---|--|
| 4 June 1966 | Astronaut John Glenn Visits | | His capsule was at the NMS in town | Copy of autographed phototgraph | |
| July 1966 | King Hussein of Jordon Visits | | Visit | Slides | |
| 1966 | Hewitt Schmidt Camera installed at Early Burn. Previously at Malvern | | Bruik Book pp15/116 | | |
| 26 October 1967 | Outstation at Monte Porzio, nr Rome opens | 16/24in Schmidt | Optical, sky survey | Building near Rome? | |
| 1967 | Establishment of Dept of Astronomy and BSc in Astrophysics | | | Peter Brand timeline | |
| 1967 | 20inch telescope for Astronomy dept installed | | | | |
| 1967 | Galaxy Machine operational | GALAXY | Optical Plate Scanner. GALAXY = General Automatic Luminosity And X-Y | | |
| 1969 | 2m Michelson Interferometer installation starts at Monte Porzio | | Bruik Book p114 | | |
| 1970 ish | The GALAXY machine (General Automatic Luminosity And XY coordinate measuring machine) was developed jointly by ROE and Faul Coradi (Scotland) Ltd. GALAXY was a high speed system for locating star images on photographic plates and measuring their positions, diameters and densities. | | | Bill Sampson Notes | |
| 1970 | UK Schmidt Telescope Unit created at ROE | | Objective, build and operate UKST in Australia | Plates in library annex, some films, light tables | |
| 30 September | Last ROE Skylark Rocket Launch. | R100 | Diffuse UV sky brightness. 1450-3200A. Stellar | Nosecone in VC. | |

| | | | | | |
|----------------|--|-----------------|--|---|--|
| 1970 | Woomera, Australia | | fluxes 2200 and 2600A. Success | Payloads in store. Some stuff in NMS store? | |
| April-Nov 1971 | Site testing at Castlegrande, Italy | | | Scans of slides from Peter Moore | |
| 12 March 1972 | ESRO TD-1A Satellite launched carrying S2/68 Instrument | S2/68 | Belgian/UK UV All sky Survey. Absolute ultraviolet flux distribution between 2740A and 1350A of point sources. See also notes provided about Nandy's career | Witness pieces found in 2023 | |
| 1972 | Crawford books moved from main library to special room. Mary Smyth in charge | | Opened in November by Earl of Crawford. Buik Book p138 | Unsigned Note in archive. | |
| 1973 | UK Schmidt Telescope Opens in Australia | 48 inch Schmidt | Optical, sky survey | As Above. Plates in annex. Film Atlas donated to National Archives? | |
| 1973 | Earlyburn Outstation closes | | | (Kinetheodolite once in VC has vanished) | |
| 1973 | <u>Malcolm Smith was first involved with ROE in 1973 while employed at RGO by the (then) SRC for 6 months as a consultant to write the scientific case - with Professor Redman at Cambridge - for what are now the UK telescopes in La Palma</u> | | . | MJS e-mail | |

| | | | | | |
|---------------|--|--------|---|---|--|
| 17 April 1974 | UK Infrared Telescope project approved | | ROE leads construction of 3.8m IR telescope in Hawai'i | Telescope Model in library having been moved from East dome and IfA foyer | |
| May 1974 | TD-1A satellite ceases operations | | | | |
| June 1974 | (DES) approval for the construction of the lightweight, thin-mirror UKIRT 3.8m infrared telescope given in June 1974. Gordon Carpenter was appointed Project Manager and Professor Jim Ring of Imperial College London was appointed the Project Scientist and chair of the UKIRT Steering Committee. | | | | |
| 1974 | COSMOS machine operational. First publishable measurements in late 1974. | COSMOS | Optical Schmidt plate scanner, upgrade of GALAXY. Bruik Book p123 | To NMS? | |
| 1 Oct 1975 | Professor Bruck retired on 30 September 1975 and was succeeded by Professor Reddish on 1 October 1975. | | | RDW notes. Also Peter Brand timeline. Scan of SRC Press notice | |
| 1 Oct 1975 | Announced by VCR at ROE Staff Meeting on October 1: | | ROE Secretary no longer seconded from Scottish Office but an ROE appointment, Bennett McInnes. Other changes announced that day: Wednesday afternoon public tours of the ROE | PMW notes | |

| | | | | | |
|----------------------|--|--|---|-----------|--|
| | | | <p>to cease; Jim Campbell charged with building a Visitor Centre, which would have a separate entrance to keep visitor traffic away from ROE work.</p> <p>The Astronomer Royal's house to become the Management Building, where VCR would have his management office (retaining original Director's office for research) alongside ROE Secretary, finance staff, etc.</p> <p>ROE staff to move to new offices on Oct 1, e.g. administration staff from rooftop gallery to Clifton Building to make space for proposed Visitor Centre; electronics labs from 1963 building to Villas.</p> <p>Coffee breaks abolished.</p> <p>At the same time, the Schmidt telescope unit, which VCR headed, became part of the ROE. <i>(what was it prior to that?)</i></p> | | |
| Early 1976 | Early in 1976 the COSMOS plate measuring machine was made a national facility | | | RDW notes | |
| 1976 February-March: | 1976 February-March: Was there a financial crisis threatening the ROE about this time which was effectively resolved because of the success of | | | PMW notes | |

| | | | | | |
|-------------|---|--|---|--|--|
| | the Schmidt telescope? | | | | |
| 1975/76 | 1975/76 was a difficult financial year for ROE and for the Science Research Council (SRC) and this meant serious problems for many aspects of ROE's work, notably delays in recruitment due to centralization of recruitment procedures. | | | RDW notes | |
| 1975/76 | Work on UKIRT instrumentation was getting up to speed during 1975/1976 under the direction of Terry Lee. The sudden death in February 1976 of Gordon Cork, an electronics engineer who had been involved in the UKIRT project since its inception, was a sad event. | | | RDW notes | |
| 1976 | SRC gave ROE the responsibility to operate UKIRT once it was finished. | | | RDW notes | |
| March 1977? | With the increased need to put maximum effort into national facilities the outstation at Monte Porzio near Rome, which had been in operation since 1966, was closed down in March 1977 and the staff and equipment returned to the UK. | | Progress with the stellar interferometer had been delayed by technical faults and Dr Twiss who had been in charge of the instrument retired in March 1977. Bruik Book p114 says this closes in 1976, but telescope site and Dr Twiss still mentioned in 1976 annual report which ran up to September 1976 | RDW notes. JKD Notes and a few slide scans Visitors book in Library Annex Pickering Prism in Box in Library Annex | |
| 1976/77 | Progress on the Mauna Kea site of | | In April 1977 completion and figuring of the | RDW notes + JKD | |

| | | | | | |
|-----------------|---|--|---|-------------------------------------|--|
| | UKIRT and its building was proceeding smoothly as was the work on the mechanical assembly of the telescope structure at the Sheffield works of Dunford Hadfields Ltd. | | CERVIT thin primary mirror for UKIRT (edge: thickness ratio of 13:1 instead of the usual 6:1) was completed at the Newcastle-upon-Tyne facilities of Sir Howard Grubb Parsons & Co Ltd. | book/archive notes | |
| 14 January 1977 | 1977 Jan 14; Talk at RAS (See Obs 97, 153) by Jim Ring on UKIRT, | | possible upgrade of primary at cost of £k 12 to improve image quality to 1 arcsec, useful for optical observations, with discussion of altitude working, pointing accuracy, running costs | PMW notes also JKD book and archive | |
| February 1977 | February 1977 saw the first meeting of a new committee, the ROE Establishment Committee (ROEEC), to supersede the former ROE Committee. The function of ROEEC was mainly concerned with the resources of manpower and accommodation needed by ROE to fulfil its responsibilities, specifically to advise both the ROE Director and the Astronomy, Space and Radio Board of the SRC on what these needs were and to ensure as far as possible that these needs were met. | | The members were a combination of academics in astronomy, physics and engineering as well as leaders of private companies working in the fields of science and engineering. | | |
| 1977 | During 1977 the Image and Data Processing Unit (IDPU) set up to operate COSMOS and other measuring machines at ROE and through which university users could request time on these machines, with | | | RDW notes | |

| | | | | | |
|---------------|---|--|---|------------------------------|--|
| | R.S (Bob) Stobie in charge. | | | | |
| 1 June 1977 | 1 June 1977 death of Gordon Carpenter, the Project Manager for the construction of UKIRT. In June 1977 Colin Humphries was appointed to oversee the UKIRT construction. | | | RDW notes + JKD book/archive | |
| December 1977 | First batch of UKIRT telescope components were shipped to and arrived in Hilo mid-January 1978. | | By early spring the 80 tonne mechanical structure had been erected by the Dunford Hadfields team at the 4200m summit of Mauna Kea | RDW notes + JKD book/archive | |
| January 1978 | Accommodation was rented in Hilo and ROE construction staff began arriving in Hilo in January 1978. | | By mid-1978 ROE staff on the instrumentation and operations teams had started to transfer to the Hilo base. | RDW notes + JKD book/archive | |
| July 1978 | Mauna Kea Users Advisory Committee (MKUAC) set up to present a joint approach to the University of Hawaii (UH): The first meeting in July 1978 had representatives from UKIRT, IRTF, CFHT as well as NRAO who were considering erecting a 25 meter millimetre telescope on MKO at the time. | | UH had negotiated time on all Mauna Kea these telescopes as part of their agreement to run the site. | | |
| 1978 | Establishment of MSc in astronomical technology | | Largely organised by John Cooke | Peter Brand timeline | |
| 1978 | Twin Telescope moved to St | | Decommissioned about 1992? | Unsigned note in | |

| | | | | | |
|-----------------|---|--|---|-------------------------|--|
| | Andrews, declared open by Herman Bruck 20 November 1978 | | | archive | |
| 5 Sept 1978 | Visit by Shirley Williams, Secretary of State for Education, – “the good times are over”. | | | | |
| 17 October 1978 | Professor Reddish announced in an ROE Observatory Notice his decision to resign as Director as of 30 September 1979 | | He gave as his reasons: (1) the continuing lack of the senior line management appointments which were a prior condition of his acceptance of the post; (ii) the imposition of a Council-wide staffing policy which in his view and experience was damaging to the interests of this Observatory and to the career and promotion prospects of its staff; and (iii) the obstruction and interference by a growing bureaucracy in the Council’s central administration. According to a Nature article on 9 November 1978 this issue came to a head over his attempt to appoint a Head of Technology: Professor Reddish wanted to give the post to an astronomer with some technological experience who could interchange with astronomers at the Observatory’s other telescopes in Hawaii and Australia. SRC administrators on the other hand insisted that the post should go to an engineer. One year on in an article in the Edinburgh Evening News on 4 October 1979 Professor Reddish stated: “There has now been some improvement in the senior staffing situation, but I always said at the beginning | RDW notes and PMW notes | |

| | | | | | |
|------------|---|------|---|--|--|
| | | | that I did not think the SRC could make the basic changes in the administration that would have made it possible for me to stay". PMW asks (Q: Was it (also) refusal of Swindon to allow appointment of Deputy Director that triggered the resignation?) | | |
| Jan 1979 | UKIRT First Light. | | | | |
| | | UKT1 | IR Photometer: JHKLM + CVF | | |
| | | UKT2 | IR Photometer: JHKLM + 2.3->4.6 micron CVF | | |
| Jan 1979 | Terry Lee succeeds Colin Humphries as UKIRT astronomer-in-charge with David Beattie as Deputy and based in Leilani Street, Hilo | | | PMW notes + JKD book/archive | |
| March 1979 | UKIRT f/20 coude focus first (and only) light | | | PMW notes | |
| April 1979 | 1st Ukirt Newsletter | | | PMW notes | |
| Mid 1979? | UKIRT staff were reluctant to opt for Waimea and in 1979(?) they opted for a base sited in Hilo. PMW wrote to MSL on behalf of UKIRT staff requesting re-think of plan to move UKIRT base office from Hilo to Waimea on grounds of better infrastructure in Hilo (airport, | | | RDW notes + JKD book/archive + PMW notes | |

| | | | | | |
|-----------------|---|------|--|------------------------------|--|
| | harbour, customs port, Hilo Iron Works, etc) and housing and amenities for staff and their families. This was supported by the UKIRT Steering Committee urged on by Ian Robson who had observed in Hawaii. | | | | |
| July 1979 | UKIRT staff list: Mark Bateson, David Beattie, Jack Beentjies, Bryan Bell, Joachim Born, Yolanda Boyce, David Brown, John Clark, Colin Humphries, Terry Lee, Alex McLachlan, Manual Martinez, Alf Nield, Bill Parker, Terry Purkins, David Robertson, Malcolm Stewart, Kent Tsutsui, Rorie Urquart, Pat Wister. | | | PMW notes | |
| 10 October 1979 | 10 October 1979 the formal completion of the construction and commissioning program for UKIRT was marked by the official opening ceremony. | | Performed by the Duke of Gloucester in the presence of Professor Sir Geoffrey Allen, SRC Chairman, Professor Reddish as well as invited guests and members of the teams who built the facility | RDW notes + JKD book/archive | |
| 1980 | | UKT7 | L > Q Bolometer | | |
| 1980 | (i) Dutch involvement in UKIRT was negotiated; (ii) ROE had won the UK nomination to become the European Coordination Facility for the Space Telescope and a final bid was prepared; (iii) the Head of | | | RDW notes | |

| | | | | | |
|---------------------------|---|--|---|----------------|--|
| | Technology was finally appointed (Malcolm Smith); and (iv) the urgent recruitment of infrared astronomers for UKIRT had finally begun. | | | | |
| 30 September 1980. | Prof Reddish Finally leaves succeeded by Professor Malcolm Longair on 1 October 1980 | | | RDW notes | |
| 1980? | Visitor Centre Opens | | | | |
| 1981-83 | CCD Imaging polarimeter | | Optical. 512 x 320 CCD see 1983 facilities handbook p14, and 1985 handbook p70 | | |
| 1980? | ROE Pockels cell Polarimeter | | see 1983 facilities handbook p 58 | | |
| 1980 | Malcolm Longair replaces Vincent Reddish as ROE Director | | | | |
| 3rd and 4th February 1981 | ROE was visited by the Scientific Evaluation Panel whose task was to select the site of the Space Telescope European Coordinating Facility between the final contenders of the Institut d'Astrophysique in Paris, the Institute of Space Astrophysics in Rome and the European Southern Observatory in Garching as well as ROE. | | The five member panel chaired by Professor Van de Hulst from Leiden was clearly impressed by the quality of the facilities and operations carried out at the ROE and at our overseas sites but in the end the fact of Edinburgh's geographical location may have been the principal factor in their decision to choose ESO. The heaviest snowfall of the winter fell overnight on 3rd February as a result of which the panel was obliged to walk from the Braid Hills Hotel to ROE on the morning of February 4: the rumour that this may have influenced their decision is almost certainly untrue! | RDW notes | |
| 24 April 1981 | Visitor Centre Opened by Patrick | | | Plaque removed | |

| | | | | | |
|------------------|---|-------|---|---|--|
| | Moore | | | when pier demolished. Location not known. | |
| 15+ 16 July 1981 | First UKIRT Symposium that was held at the University of Edinburgh Attended by 86 astronomers. | | Although common-user instruments were at the time confined mostly to JHK and low resolution CVF spectroscopy between 1 and 5um an impressive range of topics were already being covered from volcanic hot spots on Io to JHK photometry of 3C radio galaxies. | RDW notes | |
| 1982 | | UKT8 | N, Q + 10micron CVF | | |
| 1982 | | CGS-1 | F/35, Single element InSb detector, spectrometer. | | |
| 1982 | UKIRT: first remote operations from Hilo (February 24) and the ROE (September 6) | | | PMW notes | |
| 1982 | | UKT5 | Photometer. InSb detector JHKLL' & M photometry | | |
| August 1982 | UKIRT staff list: Sidney Arakaki, David Beattie, Yolanda Boyce, John Clark, George Douglas, Ian Gatley, Tom Geballe, Mel Inouye, Rich Isaacman, Kevin Krisciunas, Terry Lee, Andy Longmore, Anna Lucas, Kenneth Maesato, Manual Martinez, Alf Nield, Patrick Nelson, Verna Oliviera, Bill Parker, Alan Pickup, Charlie Richardson, Mike Santos, Malcolm | | | PMW notes | |

| | | | | | |
|------------------|--|--------|--|-----------------------------|--|
| | Stewart, Peter Thanisch, Kent Tsutsui, Jay Tsutsumi, Peredur Williams, Bill Zealey. | | | | |
| 1980's? | SERC, in collaboration with the Netherlands Research Agency ZWO, gave approval for the construction of a 15 m aperture Millimetre Telescope (MT) to be erected on Mauna Kea. | | RAL was responsible for its construction (Project Manager, Ron Newport [RAL] and Project Scientist, Richard Hills [MRAO]) which began in 1983, | RDW notes | |
| | | UKT6 | Photometer. InSb detector JHKLL' & M photometry + CVF | | |
| January 1983 | CGS2 at UKIRT | CGS-2 | 7 Element Near IR Spectrometer | | |
| 1983 | UKIRT: acquisition of VAX 11/730 computer | | | PMW notes | |
| 1983 | IRAS Follow up instrument | IRASFU | N+Q 16 elements, Ar doped Si, mapper. NL instrument | | |
| July 1983 | UKIRT dome extension progressing | | | ROE Bulletin notes by JKD | |
| 11 August 1983 | Hawaii: new Hale Pohaku lodging facilities dedicated. | | | PMW notes. JKD Book/archive | |
| August 1983 | John Jefferies leaves IfA. At ROE COSMOS room being renovated | | | ROE Bulletin notes by JKD | |
| 4-6 October 1983 | Edinburgh Star formation Workshop | | | ROE Bulletin notes by JKD | |
| 24 November 1983 | mm-Wave telescope enclosure completed and tested in UK by | | | ROE Bulletin notes by JKD | |

| | | | | | |
|------------|--|--|--|---------------------------|--|
| | Robert Watson Ltd of Bolton. | | | | |
| Late? 1983 | A panel was set up by the ASR Division of SERC to make a report in response to the Rayner Review that the SERC should consider whether it needed five sites, especially in the light of the possible disposal at the time of Herstmonceux Castle, Panel chaired by Professor Peter Willmore from Birmingham University visited ROE on 5 December 1983. | | In a personal note accompanying the formal papers for the panel Malcolm Longair made clear his views on how problems of Treasury under indexation were eroding the funds for astronomy; and he stressed that, in making difficult decisions, the need to preserve the ability to do new science has to take precedence over institutional arrangements which were relevant to an earlier epoch of science. In this way the UK can remain a first-ranked power in world astronomy. Similar arguments may certainly have swayed the panel in ROE's favour in the sense that ROE's work had been moving for some time towards the new wavelength frontiers of infrared and mm/sub-mm astronomy thanks to its growing technical expertise. | RDW notes | |
| March 1984 | ASR forward look 1985/6 to 1989/90 (includes Wilmore panel) reports. ASR board will have a reduction in funding leading to staff losses. Little effect on ROE, but RGO told to redeploy 30 staff. | | | ROE Bulletin notes by JKD | |
| June 1984 | East tower conversion starts. Flood [in downstairs photolabs?] due to burst pipe. UKT9 acceptance tests at ROE by | | | ROE Bulletin notes by JKD | |

| | | | | | |
|---------------|---|------------------|--|---------------------------|--|
| | visiting Hawaii staff. FLAIR first light at UKST (4 fibre bundle). MM Telescope/JCMT Carousel delivery after various issues with chartered ship and demands for cash from Captain. | | | | |
| July 1984 | Asteroid 2884 named after Vincent Reddish. | | | ROE Bulletin notes by JKD | |
| 23 July 1984 | JAC Komahana St groundbreaking on 23 July 1984 (photo). See also September ROE bulletin. ISU2 commissioned at UKIRT. | | | ROE Bulletin notes by JKD | |
| August 1984 | UKT9 commissioning | UKT9 | Photometer. InSb detector JHKLL' & M photometry + CVF. | | |
| July 1984 | Contract for InSb Array signed with SBRC | | | | |
| November 1984 | Malcolm Smith leaving ROE to replace Terry Lee at UKIRT. Colin Humphries leaves for UKST to become OIC in November. Matt Mountain arrives as research fellow. GTE remote observing advert | | | ROE Bulletin notes by JKD | |
| 1985 | | UKT16 '8-Banger' | MNQ photometer. 4 x 2 detectors for mapping | | |
| | | UKT10 '2 banger' | JHKL Photometer. 2 detectors | | |
| Jan 1985 | Malcolm Smith succeeded Terry Lee as Astronomer-in-charge of UKIRT | | PMW asks (why is Malcolm Stewart's name in list ? – he returned to Edinburgh in 1982 or 1983) didn't he go out again for a while ??? | PMW notes | |

| | | | | | |
|---------------|--|-------|------------------|---------------------------|--|
| | UKIRT staff list: Sidney Arakaki, Joel Aycock, David Beattie, Gina Bernabe, Yolanda Boyce, Verna Duarte (prev. Oliviera) Ian Gatley, Tom Geballe, Mark Horita, Mel Inouye, Rich Isaacman, Nash Kobayashi, Kevin Krisciunas, Len Lawrence, Terry Lee, Andy Longmore, Anna Lucas, Kenneth Maesato, Manual Martinez, Patrick Nelson, Bill Parker, Gordon Pentland, Alan Pickup, Keith Raybould, Malcolm Smith, Malcolm Stewart, Kent Tsutsui, Jay Tsutsumi, Dolores Walther, Phil Williams, Peredur Williams. | | | | |
| May 1985 | Newspaper articles about RGO/ROE merger and/or merger of both with RAL from April issues of papers. MSL says it is all speculation but outline planning permission sought for extension to west wing. | | | ROE Bulletin notes by JKD | |
| 28 May 1985 | NATO Science committee visit | | | ROE Bulletin notes by JKD | |
| Mid-1985 | UKT12 Commissioning at UKIRT | UKT12 | Sub-mm Bolometer | | |
| June 1985 | JCMT Home end set up | | | ROE Bulletin notes by JKD | |
| 9 August 1985 | dedication of new UKIRT base facility off Komohana St | | | PMW notes | |

| | | | | | |
|-----------------|---|-------|--|----------------------------|--|
| 1986 | Bill Duncan project scientist and Ian Robson external project scientist | UKT14 | Sub-mm Bolometer. Used UKIRT then moved to JCMT | Was at ROE. In museum now? | |
| August 1986 | Russell Cannon leaves ROE to take up Directorship of the AAO | | | PMW notes | |
| 29-30 Sept 1986 | Symposium to honour Kashi Nandy on his retirement. Papers published in QJ 28, 207-338, 1987; there is also a good (clear) group photograph. | | Papers published in QJ 28, 207-338, 1987; there is also a good (clear) group photograph. | PMW notes | |
| October 1985 | Open days to celebrate 20 th anniversary of SRC. Gillian Wright expected on 14 October as a JRF. New photolabs equipment in corridor at base of East tower to be used for Schmidt plate copying working after a bit of a saga of problems with water quality etc | | | ROE Bulletin notes by JKD | |
| Xmas 1985 | UKT 14 shipped. Results from FLAIR tests | | | ROE Bulletin notes by JKD | |
| January 1985 | J Burnell awarded Beatrice M. Tinsley prize by AAS. UKT14 commissioning report. | | | ROE Bulletin notes by JKD | |
| May 1986 | Russell Cannon made director of AAO. Pat Roche joins as SRF. Newspaper clipping about RGO move to ROE blocked by council declining planning permission to extend site. | | | ROE Bulletin notes by JKD | |

| | | | | | |
|-----------------|---|-------|--|---|--|
| | | | | | |
| June 1986 | Newspaper clipping about council approving land required for RGO to move to ROE. Report of RGO staff visit to Edinburgh/ROE for fact finding about moving here. IRCAM first light in ROE lab. | | | ROE Bulletin notes by JKD | |
| July 1986 | Newspaper article about RGO moving to Cambridge, headline 'Edinburgh bitter over astronomy site choice'. | | | ROE Bulletin notes by JKD | |
| 21 October 1986 | IRCAM First Light Ian Mclean project scientist | IRCAM | 1-5 micron camera. SBRC InSb array 58 x 62 elements | Mechanics in RG/07, Cryostat in M8. Another cryostat in library annex. PMW notes + JKD book/archive | |
| December 1986 | JCMT First light was achieved in December 1986 and the telescope was officially opened by the Duke of Edinburgh in April 1987, and the observing program began in September 1987. | | By this time the JCMT was funded in a tripartite collaboration with the National Research Council of Canada as well as the Netherlands Foundation for Radio Astronomy (NFRA). The initial suite of three instruments covered the frequency range 218-270 GHz (Receiver A built by MRAO) ; 320-370 GHz (Receiver B built by NFRA); and (nominally) 150 -1000 GHz (2.0mm to 0.3mm) (UKT 14, a helium-3 cooled Ge bolometer built by ROE, QMC, Lancashire Polytechnic and University of | RDW notes | |

| | | | | | |
|------------|---|--|--------------------------------|---|--|
| | | | Oregon). | | |
| Xmas 1986 | List of long serving staff and graph of how ROE staff has grown. First Spectrum with JCMT on 10 th December. 3 FLAIR runs described | | | ROE Bulletin notes by JKD | |
| 1987 | JCMT sub-mm telescope operations start. See above entry | | Sub-mm Astronomy. UK-NL-Canada | Model in VC rooftop. Bigger model loaned to PPARC, never returned | |
| March 1987 | ROE restructured internally. New divisions led by Terry Lee, Ray Wolstencroft, Robert (Bob) Stobie, plus Admin, Hawaii. Jocelyn Burnell describes Beatrice Tinsley award event. JCMT users meeting to discuss Canadian interest in joining JCMT, this already agreed in Principle by Grants committee. JCMT financial situation not good. | | | ROE Bulletin notes by JKD | |
| March 1987 | Patrick Moore/Sky at Night visit to Hawaii | | | See May ROE bulletin | |
| April 1987 | Visit of Kenneth Baker, secretary of state at DES on 13 March. Joe Matthews (MBE) leaves 31 March having joined in 1958, originally living in the lodge | | | ROE Bulletin notes by JKD | |

| | | | | | |
|----------------|---|---------|--|---------------------------|--|
| 1987 | Mary Bruck Retires from university | | What was her role? | Peter Brand Timeline | |
| 1987 | IRCAM 2 Delivered to UKIRT | IRCAM2 | 1-5 micron camera. SBRC InSb array. 58 x 62 elements | Cryostat in M5. | |
| May 1987 | Report of Patrick Moore/Sky at Night visit to Hawaii in March. IR detector conference in Hilo, 200 people attend. ROE JCMT group reports on talking about a merger with ROE UKIRT group but this looks unlikely. | | | ROE Bulletin notes by JKD | |
| July 1987 | Newspaper article of plans to 'share' UKST 50:50 with Australia + critical letter on this idea from Sue Tritton. Also mentions sale of 25% of JCMT to Canada. | | | ROE Bulletin notes by JKD | |
| 1987 | SCUBA Approval | | | | |
| September 1987 | New scientist article in which Graham Smith, Astronomer Royal, lambasts SERC, criticises need for two Royal Observatories (esp move of RGO to Cambridge) as waste of money and says SERC should spend more money in Universities. Estate agent like description of Herstmonceux Castle. | | | ROE Bulletin notes by JKD | |
| November 1987 | VISPHOT delivered to UKIRT | VISPHOT | Leicester/ROE Optical (BV) photometer used icw IR photometers | | |
| Xmas 1987 | Xmas 1987: Tom Geballe made UKIRT AIC. From 1 February 1988 UKST merges with AAT. New Crawford | | UKST Handover agreement also in Library Annex | ROE Bulletin notes by JKD | |

| | | | | | |
|--------------|---|------|---|--|--|
| | room extension now in use for 19 th century books | | | | |
| March 1988 | Malcolm Rivkin's thank you letter after February visit. | | | ROE Bulletin notes by JKD | |
| 23 Sept 1988 | Official Opening of the Extension to the Crawford Room by the 29th Earl of Crawford to commemorate Centenary of Earl of Crawford's gift and foundation of new observatory. Photos in October ROE bulletin | | | | |
| 4 July 1989 | South Building opened by E.W.J. Mitchell and visit by HRH the Duke of Edinburgh. Report in August 1989 ROE bulletin | | Peter Hastings writes: July 1989 saw a visit from the Duke of Edinburgh to the ROE for the official opening of a new South Building. He toured the various departments, and I was introduced to him – explaining the technical intricacies of the ISO spacecraft and ISOCAM. Unlike just about every other 'distinguished' visitor he asked intelligent questions based on what he'd just been told and clearly listened to and understood the answers. | Building. Peter Hastings memories | |
| October 1989 | Food poisoning incident in ROE canteen | | | ROE Bulletin notes by JKD | |
| 1988 | UK Schmidt Telescope transferred to AAO | | | | |
| 1989 | CGS-2 Upgrade | CGS2 | Non-Destructive Readout & electronic improvements | | |
| Summer 1989 | Astronaut Alan Shepard visits | | To open Apollo Exhibition in VC | John Davies memory. He | |

| | | | | | |
|------------------|---|------|---|--|--|
| | | | | helped build the exhibition | |
| 1989-90 | | CGS3 | UCL Instrument 10 + 20 Micron spectrometer. 32 discrete detectors | | |
| January 1990 | POIROT Proposal to ESA M2 opportunity | | Radiatively cooled space telescope, not built | Medal in Frame in Lodge returned to Tim's widow in summer 2025 | |
| April 1990 | Supercosmos instrument arrives | | | ROE Bulletin notes by JKD | |
| 1990 June 20-21 | Remote Observing demo display at Royal Society Soiree, learned that MSL taking up chair in Cambridge | | | PMW notes | |
| 23 November 1990 | Astronaut Valentina Tereschova Visits | | En-route to Honorary degree from UofE | JKD memory, date from signed photo | |
| November 1990 | National Astronomy Week Open days at ROE Nov 19-23. Groups in the weekday mornings, public on Friday pm and weekend. 2203 visitors during National Astronomy Week. | | | ROE Bulletin notes by JKD | |
| Xmas 1990 | Photos and details of Valentina Tereschova visit. Paul Murdin appointed acting director from 1 Jan 1991. Newspaper report that the fellowship of Engineering in Britain has given its | | Need names form MacRobert award – REH, Newport.....but who else ??????... | ROE Bulletin notes by JKD | |

| | | | | | |
|------------------|---|------|---|--------------------------------------|--|
| | MacRobert award to 5 engineers and scientists at SERC for their part in building JCMT. | | | | |
| December 1990 | CGS-4 Delivered to UKIRT | CGS4 | 1-5micron Spectrograph. SBRC InSb array, 58 x 62 elements | | |
| 1990 | Position of Acting Director, ROE, offered for competition. (There were three candidates, two internal, one external). | | | PMW notes | |
| 1990 | Malcolm Longair resigns as director ROE and Regius Chair to take Jacksonian chair at Cambridge. P Muirdin acting ROE director. | | Peter brand becomes Head of Astronomy department | JKD notes. Also Peter Brand timeline | |
| 12 December 1990 | Meeting with Tony Hughes, Director of Establishments (?), to discuss Paul Murdin's appointment as Acting Director and forthcoming review of ROE and RGO meeting of whom???? | | | PMW notes | |
| January 1991 | Staff invited to write to John Love, Swindon, re Observatory Review | | | PMW notes | |
| 4 February 1991 | CGS4 First Light | CGS4 | | | |
| 13 February 1991 | Visit by Alan Howarth, Parliamentary Under Secretary of State | | | PMW notes | |
| 25 February | Visit by Nigel Griffiths M.P. | | | PMW Notes | |

| | | | | | |
|------------------|--|--|----------------------------|---------------------------|--|
| 1991 | | | | | |
| 27 February 1991 | Senior Management Meeting (SMM) re response to Observatory Review and PGM's presentation on Feb 15th | | Also on 28 th ? | PMW notes | |
| 1 March 1991 | Staff Meeting to discuss PGM's presentation to Observatory Review Panel. Vote of no confidence in PGM, 60 in favour, 2 abstentions. | | | PMW notes | |
| 4 March 1991 | SMM met to consider presentations by Bob Stobie (RSS), Terry Lee (TJL), John Peacock (JAP), (Donald Pettie (DGP)) to ORP | | | PMW notes | |
| 8 March 1991 | RDW, RSS, PMW, HMG, TJL, DGP, JAP, AJL went to Swindon to meet ORP (John Love, Peter Maxwell, Ian Corbett & Arnold Wolfendale) to present views of senior ROE staff on Review. | | | PMW notes | |
| April 1991 | CGS4 first light report. Report of petition protesting possible move of ROE to RGO. This petition describes a review in 1986 | | | ROE Bulletin notes by JKD | |

| | | | | | |
|---|---|---------|---|-------------------------------------|--|
| | <p>recommending a merger in Edinburgh which was overridden by SERC and RGO moved to Cambridge. M. Longair resigned from ROE in 1990, (leaving presentation was December 1990). P. Murdin appointed.</p> <p>Another SERC review which now recommends a merger in Cambridge. Report of JCMT carousel bogie repair in March 91.</p> | | | | |
| August 1991 | <p>2 and 3 August children's TV show Ghost Train filmed at ROE.</p> <p>Ron Parise Astro-1 Shuttle astronaut visited 24th August.</p> | | | Reports in Xmas 1991 ROE bulletin | |
| Nov 91 | Mid Infrared Array Camera of Least Effort commissioned at UKIRT | MIRACLE | MPE/ROE instrument. 7-22 microns 58 x62 Si:As array from SBRC | | |
| 1992 Jan 17 (or 24th? – both in PMW diary): | Meeting to hear "Merchant" (John Merchant, Director Policy and Administration) Plan adopted by Council to have one Director Royal Observatories and four sites (RGO, ROE, ING, JAC) | | | PMW notes | |
| 1992 | University puts MSc into abeyance | | Small number of students out of proportion to effort required | Peter Brand Timeline | |
| 12 April 1992 | Astronaut Helen Sharman Visits | | To Open new VC exhibition 'The Universe' | Date from S Beard invitation letter | |
| 1992 | ROE + RGO Merge. | | | | |

| | | | | | |
|------------------|---|-------------|---|---|--|
| 1992 | investigations on possibly becoming a "Next Steps" agency | | | PMW Notes | |
| Nov 1992 | Ian Robson takes up post as Director JCMT in Hawaii | | | | |
| December 1992? | ROE team on TV show Busman's Holiday | | John Davies, Alistair Glasse, Quentin Parker | JKD memory. Report in Feb 1991 ROE bulletin | |
| 13 February 1993 | Staff meeting for Director Royal Observatories announcement (Alec B) | | | PMW notes | |
| 15 March 1993 | Alex Boksenberg starts as new director of combined Royal Observatories | | | | |
| May 1993 | Edison Proposal to ESA M3 opportunity | | Radiatively cooled space telescope, not built | | |
| 1993 | "Home end" groups for JCMT and UKIRT under pressure, merged, Management Services Group report on JCMT support in UK, international vs. UK-only, and contributions from Netherlands and Canada, NL budget shortage | | | PMW notes | |
| 1993 | SuperCOSMOS replaces COSMOS | SuperCOSMOS | Optical, Photographic Plate Scanner | | |
| 1993 | University Merges physics and | | | | |

| | | | | | |
|-----------------|---|--------|--|--|--|
| | Astronomy Departments. Astronomers at ROE become the IfA | | | | |
| April 5-8 1994 | ROE organised ENAM (Joint EAJIS and RAS) meeting at Heriot Watt University (as part of 1894-1994 Centenary celebration?). | | | PMW notes | |
| 20 April 1994 | Patrick Moore at ROE for filming Sky at Night programme on work of ROE | | | PMW notes | |
| 1994 | IRCAM upgrade | IRCAM3 | 256 x 256 InSb Array replaces original 58 x 62 array | Cryostat in Library annex D. Optics and some loose filters in RG07 | |
| 8 July 1994 | Visit by Sir John Cadogan, Director General Research Councils | | | PMW notes | |
| 1994??? | Andy Lawrence becomes Regius chair and head of Institute. | | John Brown (Glasgow) becomes AR for Scotland. | | |
| 1994 | SERC Split up, ROE now part of PPARC | | | | |
| 19 January 1995 | Meeting of ROE staff called by IPMS to hear Andy Lawrence (AL) on UoE's interest in and possible bid for the ROE | | | PMW notes | |
| 20 January 1995 | Meeting of AL, PWJLB, Pusey (Head Physics & Astronomy), | | | PMW notes | |

| | | | | | |
|------------------|---|---------|---|---|--|
| | Boulton (Dean), SGP, DGP, TJL, JAP, HTMG, PMW to discuss UoE interest/bid. | | | | |
| 1995? | David Emerson of University dies | | | | |
| June 1995 | Hough 2 panel recommends formation of UKATC at ROE | | | UKIRT book archive, both paper and electronic. | |
| 1995 | WHIRCAM on WHT | WHIRCAM | Near IR Camera. ROE design input. Installed on WHT in LA Palma | | |
| 1995 | CGS4 Upgrade | CGS4 | 256 * 256 InSb Array | | |
| 17 November 1995 | ESA ISO Satellite launch carries ISOCAM | ISOCAM | IR Camera. 2.5 > 17 microns. 32 * 32 Sofradir Array. ROE tested optics and CVFs | Few test optics in RG/07 | |
| 1996 | UKIRT Top end upgrade | | 1995? | | |
| 1996 | Supercosmos scanning begins in earnest | | | Nigel Hambly Notes | |
| July 1996 | SCUBA commissioned on JCMT – project scientist Walter Gear | SCUBA | 450 (91 element) and 850 (37 element) micron camera | Detector arrays in RG/07 Instrument in NMS, Chambers St. | |
| 23 October 1996 | At RGO's request, SGP and PMW met their consultants (Mark Smalley and Peter ?) and lawyer (Julian Landy) on neutral ground (Durham) to hear their proposals for a joint business plan for the two | | | PMW notes | |

| | | | | | |
|---------------|---|--------|---|---|--|
| | ROs | | | | |
| 13 March 1997 | Meeting at BNSC London of Jim Sadlier, Rowena Sirey and Jeff Down (PPARC), Jasper Wall, Neil Pratt and Felicity Merle-Walker (RGO) and SGP, JMM and PMW (ROE) to agree terms for the RGO vs. ROE "benchmarking" exercise. | | | PMW notes | |
| 1997 | GMOS | | The first of the two Gemini Multi-Object Spectrometers is now approaching delivery. Peter was responsible for the initial opto-mechanical design in close collaboration with colleagues at the Dominion Astrophysical Observatory in Canada | See Peter Hastings Notes | |
| 4 July 1997 | Minister relieves PPARC from implementing Prior Options process and approves merger at ROE to form UKATC, hence closure of RGO. | | | RAS statement. Published on Web, in UKIRT book archive as paper and electronic. | |
| 1997 | SCUBA Operational | SCUBA | | | |
| 1997 | NOTCAM design | NOTCAM | ROE design work for 1024 * 1024 1-2.5um (I JHK) camera to be installed at Nordic Optical Telescope. | See Peter Hastings Notes | |
| 31 March 1998 | ROs dissolved. UKATC came into being. Some ROE staff transfer to UoE. | | | PMW notes | |
| 1 April 1998 | UKATC formed at ROE. Adrian Russell | | RGO closed | | |

| | | | | | |
|-------------------|---|---------|--|------------------------------------|--|
| | Director | | | | |
| 16 May 1998 | ISO satellite deactivated after cryogen depletion | ISOCAM | | | |
| 25 July 1998 | ORACDR deployed at JCMT | ORAC-DR | Software, Joint ROE/JAC project | | |
| 1998 | SPIRE design Work | | SPIRE is the bolometer camera and spectrometer for the Herschel Space Telescope – a natural successor to SCUBA on a space telescope. Peter developed the initial opto-mechanical design and was instrumental in the early thermal design and helped establish the ATC's foot in the door for space instruments, a major strategic objective. Launch 2009 (see later) | See Peter Hastings Notes | |
| 29 September 1998 | UKIRT Fast Track Instrument 1 st Light at UKIRT | UFTI | Design started at ROE but instrument completed at Oxford University | | |
| 1999-2005 | Astronomical Society of Edinburgh operate from Earlyburn site | | Lease given up when NERC put site up for sale. | Unsigned Note in archive. | |
| 1 April 1999 | 1999 April 1: More ROE staff (Wide Field Astronomy) transfer to (or appointed by) UoE. Wide Field Astronomy Unit formal inception within UoE IfA: 1st April 1999 | | | PMW Notes, also Nigel Hambly Notes | |
| 1999 | JWST/MIRI concepts | | Peter was part of a small team which worked closely with Astrium GmbH (former Dornier Satellitensysteme GmbH) which developed the concept for the Next Generation Space Telescope mid-IR spectrometer, as part of the | See Peter Hastings Notes | |

| | | | | | |
|---------------|---|----------|---|--------------------|--|
| | | | ESA payload study. This was very successful and helped pave the way for the acceptance of the importance and practicality of including a mid-IR instrument as one of three instruments in the payload. It is likely to be <i>the</i> major part of the UK contribution to NGST. | | |
| Autumn 1999 | IRCAM upgrade to improve thermal imaging with smaller pixels | TUFTI | Modified IRCAM cryostat | | |
| October 1999 | ORAC deployed at UKIRT | ORAC | Software, Joint ROE/JAC project | | |
| 1999 | Wide Field Camera for UKIRT Approved. Conceptual Design Review August 1999 | WFC | | | |
| November 2000 | GCAL delivery to Gemini N | GCAL-1 | Provides flat field and spectral calibration over 7 arc minute field (flat to 4%) between 0.3-5um | | |
| Feb 2001 | Major theft of hard disk drives from SuperCOSMOS machine room | | | Nigel Hambly Notes | |
| May 2001 | GCAL delivery to Gemini S | GCAL-2 | Provides flat field and spectral calibration over 7 arc minute field (flat to 4%) between 0.3-5um | | |
| August 2001 | UIST First Light in ROE Lab | UIST | 1-5 micron Camera/Spectrometer with IFUs | | |
| | | | | | |
| | | | | | |
| August 2001 | Michelle First Light at UKIRT | Michelle | 10 & 20 Micron imager/spectrograph | | |
| October 2001 | GMOS-N First Light | | Gemini Multi Object Spectrograph 1/2 | | |
| August 2002 | School of Physics formed. Andy Lawrence head of school, JS Dunlop | | | | |

| | | | | | |
|---------------------|---|--|---|--|--|
| | head of IfA | | | | |
| 2002? | NAIOMI at WHT | | Adaptive Optics Platform for WHT | | |
| September 2002 | UIST at UKIRT | | | 1 bit of image slicer in RG/07. Quarter detector array, possibly engineering model, in mount currently located in V18. | |
| 2002 | GPOL-N and GPOL-S shipped | | 0.3 to 5um polarimeter unit used with other instruments | | |
| Nov 2002 | Ian Robson appointed Deputy Director | | | | |
| Dec 2002 | VISTA Critical Design review completed | | | | |
| Late2002/2003 | Astronaut Pam Melroy + author Anne McCaffry visit | | Melroy gives McCaffrey map of stars over planet Pern created by Steven Beard and carried on Shuttle | | |
| 2003 | GMOS South on Gemini | | Gemini Multi Object Spectrograph 2/2 | | |
| 2004 | Crawford Building opens | | Date? | | |
| 21 October 2004 | WFCAM 1 st Light at UKIRT | | | Filter Mechanism in workshop | |
| 2005 | Adrian Russel resigns and Ian Robson becomes Director UKATC | | | | |
| 2005??? | SUPA formed | | | Peter Brand Timeline | |
| ~2006 (OPTICON FP6) | STARPICKER | | Technology Positioner Demonstrator for ELT instruments. | In Higgs building basement | |

| | | | | | |
|--|---|------|---|--|--|
| | | | | | |
| ~2006 (OPTICON FP6) | Micro Autonomous Positioning System | MAPS | Robotic Technology Positioner Demonstrator for ELT instruments | 2 Robots in RG1/06 | |
| 2006 | HARPS at JCMT | | Heterodyne Instrument + UKATC software for ACSIS (Auto-Correlation Spectrometer and Imaging System) | | |
| Mid 2007 | SuperCOSMOS machine dismantled and shipped to small metrology start-up in Germany | | | Nigel Hambly Notes | |
| 2007 | James Dunlop resigns, John Peacock head of IFA, School of Physics renamed School of Physics and Astronomy | | | Peter Brand Timeline | |
| 2009 | Vista handed over to ESO | | | | |
| 14 May 2009 to IHe depletion 29 April 2013 | Herchel/SPIRE. Final de-activation 17 June 2013 | | | BSM Prototype, weight relieved mirror and Herschel model in RG/07. Motorised Model and laser under MIRI display case. BSM prototypes in workshop | |
| 14-16 September 2009 | UKIRT 30 th Anniversary conference | | | Proceedings Published | |
| October 2011 | SCUBA-2 commissioning project scientist Wayne Holland | | Sub-mm Camera | Test Array in RG/07 | |
| April 2012 | Ian Robson retires and Gillian Wright | | | | |

| | | | | | |
|---------------------|--|------------|---|--|--|
| | appointed Director UKATC | | | | |
| April and June 2012 | Mid Kent Astronomy Society visit to remove 20Inch telescope from IFA | | | Photos | |
| November 2012 | KMOS Delivered to ESO and commissioning starts | | K Band Multi Object Spectrograph | Spare Arm in Visitor centre. Another Arm and grating mechanism in workshop | |
| 2013 | ALMA observing Tool | | | | |
| 2014 | Goniometer | Goniometer | Sample positioner for Diamond. Non-Astronomy Project | | |
| March 2015 | GHOST flies on NASA UAV | GHOST | Greenhouse gasses experiment; Non-astronomy Project. Peter Hastings writes The last project in which I had a large design input was for a spectrograph (Green-House Observations of the Stratosphere and Troposphere - GHOST) to be carried on one of NASA's high-altitude atmospheric research drones. It is a cryogenic spectrometer which analyses specific atmospheric gases. It was an interesting project in that it used liquid nitrogen rather than closed-cycle coolers – closing the ring technologically. My successor, David Pearson, had the pleasure of working at NASA Ames facility for the commissioning and early flight tests. | Peter Hastings notes | |
| 2017 | Retinal Densitometer | | Medical spinout | | |
| 2017 | HiPerCam | | Collaboration with university of Sheffield | | |

| | | | | | |
|-------------------------|--|--|--------------------------------------|---|--|
| Cubesats | | | Deployable mirror | Breadboard, currently drifting from office to office | |
| 2018 | Higgs Building Opens | | New labs, spinout companies | | |
| 12 January 2018 | Wayne Holland awarded Jackson-Gwilt medal of RAS | | For work on SCUBA and Scuba-2 | Medal left to ROE when Wayne died. Last seen in Library office | |
| 2020? | Moons starts | | New large instrument of ESO | | |
| December 2022 | ERIS/NICS Delivered | | J-M band hi resolution imager at VLT | | |
| Launch 25 December 2021 | JWST | | | Image slicer optics and models in Crawford building. Flight spares in optics lab. Misc small components in workshop | |
| 2025 | MOONs delivery (planned) | | | Spare Fibre Arms? Small Diameter Test mounting plate. Lego Model. | |
| ELT/Harmoni | Future instrument | | | Lego ELT in Cafeteria | |
| | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

