Not just computers and companions

Mary Brück’s historical survey is the second RAS Series publication, and one that gives an insight into the different roles taken by women astronomers: original thinkers, computers, educators, and entrepreneurs. In this extract from the chapter “The Labyrinths of Heaven”, we find out how Maria Short (c1788–1869) came to own and operate an observatory open to the public in the mid-19th century.

Maria had a good astronomical pedigree. Her father, Thomas Short, was a scientific instrument-maker in Edinburgh. Thomas was a brother of James Short, a renowned telescope-maker who flourished in the period before William Herschel began constructing his own magnificent instruments. Like Herschel, his telescopes were of the reflecting kind. James began his career in Edinburgh, instructed in mathematics under the influence of the university’s great mathematicians, and moved his workshop to London where he carried on a very successful business for over 35 years ...

When he died, unmarried, in 1768, his brother Thomas came to London to manage the workshop and acquired several mirrors and unfinished telescopes, including one of 12 inches aperture valued at thousands of pounds, originally intended for the King of Denmark. Thomas returned to Edinburgh and formed the idea of establishing an observatory in the city where this large instrument would be installed as a commercial venture and used by the university and others on payment of fees. He meantime set up telescopes in daytime where visitors could, for a charge, view the city and the surroundings. When an eclipse of the Moon occurred, he set up the large telescope in the university, and sold tickets to watch the event. It was a great success. It was reported that “a very numerous and genteel company of ladies and gentlemen convened in the New Library Room of the university, observing the Lunar Eclipse. They were all exceedingly entertained with the different appearances of the moon exhibited, and which were beheld with great advantage through Mr Short’s telescope.”

The plan for a permanent observatory was less successful. The city of Edinburgh was to provide a site and promised further aid in the future. In return, the city was to have the influence of the university’s great mathematicians, and was awarded possession of the telescope by the city in recognition of her father’s efforts to establish the first public astronomical observatory in Edinburgh. A list of about 200 names of distinguished individuals who responded to her appeal included the Duke of Buccleuch, Lord Jeffrey and other lawyers, several university professors, Robert Stevenson the lighthouse builder, Alexander Nasmyth the artist, Sir George Clerk of Penicuik, and Miss Susan Ferrier the famous novelist. Even William Wallace succumbed, and signed a message of goodwill from the University of Edinburgh.

Maria erected a wooden building on Calton Hill and in May 1835 opened “Short’s Popular Observatory” which ran successfully for fifteen or more years. The scientific collection comprised the Great Telescope which Maria had repaired in London and re-mounted, various smaller ones, and other instruments. A printed prospectus declared that “the sublime truths of science are no longer confined to the wealthy and the learned”. The observatory figured in tourist pamphlets of the time. It was open every day from 9 a.m. to 9 p.m. One presumes that, for a charge, members of the public were shown the planets and interesting celestial objects – a forerunner of the twentieth century’s Planetarium. Maria also installed a camera obscura – an apparatus that gave an impressive panoramic view of the surrounding skyline in daytime ...

The first such panorama display for the public was that of the Edinburgh skyline from Calton Hill, demonstrated by Maria Short.●

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