

THE FIRST PHOTOGRAPHS MADE AT THE CAPE OF GOOD HOPE

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Abstract: The first photographs taken at the Cape of Good Hope (and therefore South Africa) date from 1843 and were due to Charles Piazzi Smyth, Chief Assistant at the Royal Observatory, Cape. His surviving positives and negatives are gathered here with descriptions of their subjects. They are mainly of the Royal Observatory, Cape of Good Hope, of a Magnetic Observatory on the same site that no longer exists, and of various buildings in Cape Town. However, they also include the first photographic portraits made at the Cape and images of two astronomical instruments.

Keywords: photography, calotypes, C.P. Smyth, Royal Observatory Cape of Good Hope, Cape Town, portraits

1 INTRODUCTION

Charles Piazzi Smyth (1819–1900) was a precocious youth, born into a highly intelligent family with many acquaintances among astronomers (Brück and Brück, 1988; Warner, 1983). In 1835, at the early age of 16, he was appointed Chief Assistant at the Royal Observatory, Cape of Good Hope, whose Director, Thomas Maclear, was already familiar with his abilities.

Smyth had many interests both at this time and later in life when he became Astronomer Royal for Scotland. What is relevant here is that he took the first photographs at the Cape of Good Hope, where he worked from 1835 to 1846. He employed the process known as Calotype, invented by W.H. Fox-Talbot (1800–1877; Schaff, 2000) in 1841, that made use of negatives and positives on paper. Our knowledge of Smyth's early photographic work is largely due to Warner (1981). This paper discusses the surviving Cape images, the three finest of which were unknown to Warner. All of the images in this paper were reproduced with the permission of the Universities of Glasgow and Cambridge, and the Royal Observatory Edinburgh.

According to Warner (1983), Smyth's first attempt at photography was probably made in March 1842 or earlier. However, at that time he had no means of fixing images and nothing recognisable has survived. The earliest dated fixed images are from February 1843 and were included in a scrapbook of Dr John Lee (see below). Also according to Warner, Smyth was likely to have obtained technical information from the book *A Popular Treatise on the Art of Photography* by Hunt (1841). He would have needed silver nitrate, potassium iodide and gallic acid to sensitise the paper and develop the latent images. Afterwards, fixing was accomplished using the now well-known chemical 'hypo' (sodium thiosulphate) whose efficacy re-

lating to calotypes had been advocated by Sir John Herschel in 1842. Positive prints from the negatives were made on paper impregnated with common salt and silver nitrate. The range of chemicals available in Cape Town, whose population was then around 20,000, was likely to have been very limited and orders placed with suppliers in England and their subsequent delivery would have taken up to six months. The early date of Smyth's work is thus all the more remarkable.

Some of the remaining calotypes are original negatives that show much better detail than original positives. The poor quality of the latter can easily be explained. The negatives were exposed on thin, translucent, paper. The positives would have been made by pressing sensitized paper against the negatives and allowing sunlight to pass through the former. Thus, any defects or grain in the paper of the negative would have affected the positive. Two images, one each from Edinburgh and the Museum of the History of Science in Oxford, show watermarks that indicate the paper used was of Whatmans 'wove' type (i.e. not 'laid' paper that would have shown a grid pattern arising from the support used during manufacture).

Most of the photographs are of the Main Building of the former Royal Observatory, completed in 1828, and of a Magnetic Observatory (Glass, 2015) on the Southern part of the Observatory terrain that enjoyed a brief existence in the 1840s. Also included are a few images of buildings in Cape Town. Especially interesting among the latter is one of the Grootte Kerk (the main Dutch Reformed Church) that had been rebuilt only a few years before and still exists today. Smyth also photographed his colleague William Mann (1817–1873) who was then Second Assistant. Mann's are the first portrait photographs made in South Africa.

Many of the images are somewhat washed

out and have been adjusted in brightness and contrast to make the scenes more recognisable. Some were available to me as digital scans in colour. Most are sepia-(brown) tinted but two at least seem to have been touched up with colours. I do not reproduce Smyth's negatives but instead show black and white positives derived digitally from them.

The Appendices include a contemporary map of the Royal Observatory showing the locations of the Magnetic Observatory buildings in relation to later ones.

2 SMYTH'S CAMERA

The design of Smyth's camera is unknown. However, his photographs of the Royal Observatory are consistent with an angular field of about 42 degrees. The maximum width of the original paper images is about 20 centimetres, implying that the focal length of the lens must have been about 25 cm, or about 10 inches.

The fact that images of people occur in some of the photographs indicates that the exposure times were probably not more than a minute or two.

The photographs seem to be free of the distortions that a simple lens would have caused, indicating that Smyth must have used something more sophisticated. [Schaaf \(1994\)](#) mentions that Sir John Herschel was using an aplanatic lens of his own design, made by Dollond, in a photographic camera of 1839 but others were already becoming available commercially for use with Daguerreotypes, the main rival process.

Early cameras consisted of two wooden boxes that could slide within one another. The front box had the lens fixed to it and the back one had a ground glass screen in the focal plane that was replaced by sensitized paper in a carrier with a dark slide for the actual exposure. The focus was adjusted by sliding the back box in or out. Some had a simple shutter that could cover the lens to control the exposure time.

3 SUMMARY OF EXTANT POSITIVES AND NEGATIVES

Surviving prints and negatives exist in four different places:

- (1) Glasgow University Library [GUL] was the recipient of a large number of prints that had remained in the photographic business started by David Octavius Hill (1802–1870) and Robert Adamson (1821–1848) in the early days of photography. Their premises were located close to the Calton Hill Ob-

servatory in Edinburgh where Smyth worked after becoming Astronomer Royal for Scotland. It could be that the three of his calotype negatives now in the Glasgow collection were presented by Smyth to Hill and Adamson. The positive prints shown here are modern (from GUL) and the images, having been photographed from the negatives, are of much better quality than those in the other collections. The original contact positive prints in the other collections were, as explained, affected by the poor quality of the backing of the negatives.

- (2) One print, of the Magnetic Observatory on the grounds of the Royal Observatory, Cape, was sent with a letter from C.P. Smyth to the Astronomer Royal, Sir George Airy, in 1849, according to [Warner \(1981\)](#). The original should be with the Royal Observatory Greenwich papers in Cambridge University Library [CUL] but was not found during a recent search (see below).
- (3) The Library of the Royal Observatory Edinburgh [ROE] has the most extensive collection of material relating to Charles Piazz Smyth, on permanent loan from the Royal Society of Edinburgh. Within it is "*Sketchbook 1 South African Microcosm 1835-1846. Vol. 6*", containing calotypes of the Royal Observatory and scenes around Cape Town, on pages 72 to 77. Some of these are positives and some are negatives. The relevant pages were kindly scanned into pdf files by the librarian, Ms Karen Moran, and have been extracted into jpegs using 'Gimp'.
- (4) The Museum of the History of Science, Oxford [MHS]. Piazz Smyth was friendly since childhood with Dr John Lee, a noted amateur astronomer, who had albums of interesting material that he collected, including some of the former's calotypes. They are in one of his 'Commonplace Books' that eventually found their way to the MHS.

3.1 Glasgow University Library

The three original negatives in Glasgow from which the positives shown here ([Figures 1–3](#)) were made are the best of all the remaining images in terms of resolution. Some of the early positive prints appearing elsewhere were made by Smyth from these.

[Figure 1](#) was taken from the SE corner of the Main Building of the Royal Observatory, which was finished in 1828. The camera was facing south-east. The buildings on the left are residences associated with the Magnetic Observatory of 1841 and the residence on the

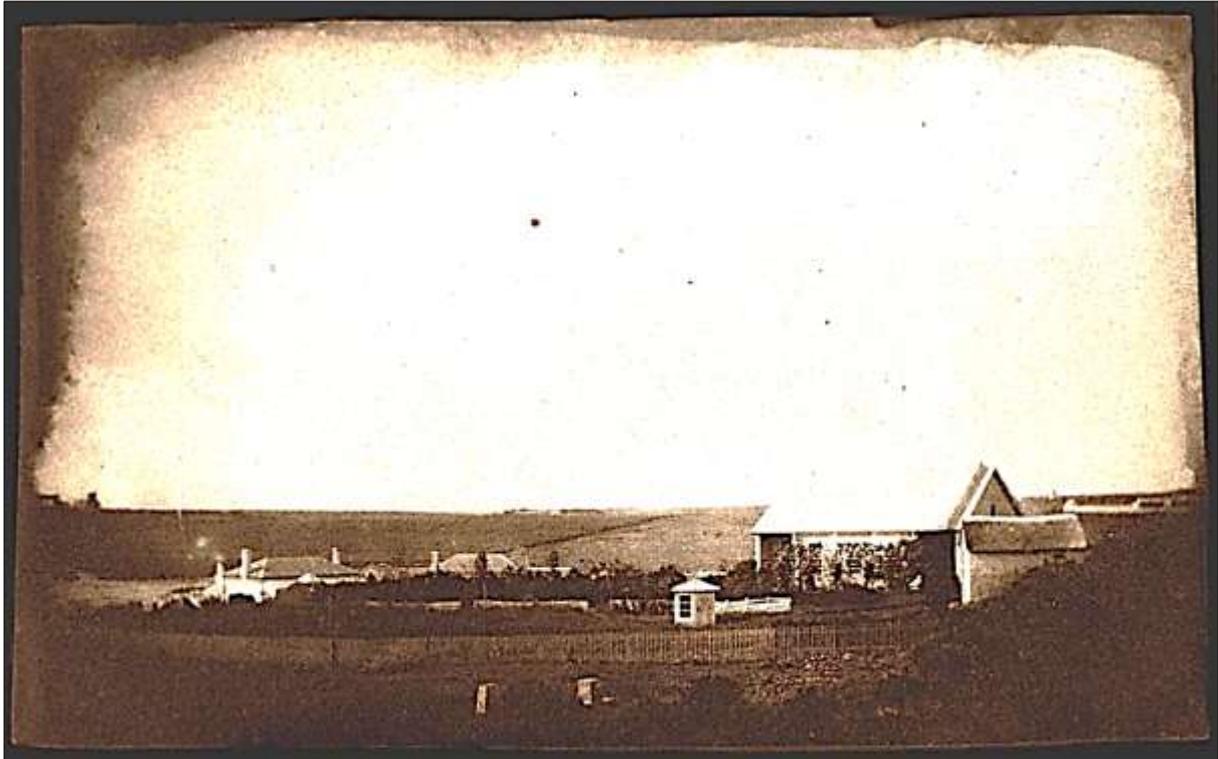


Figure 1: GUL933. A view of the Magnetic Observatory on the grounds of the Royal Observatory.

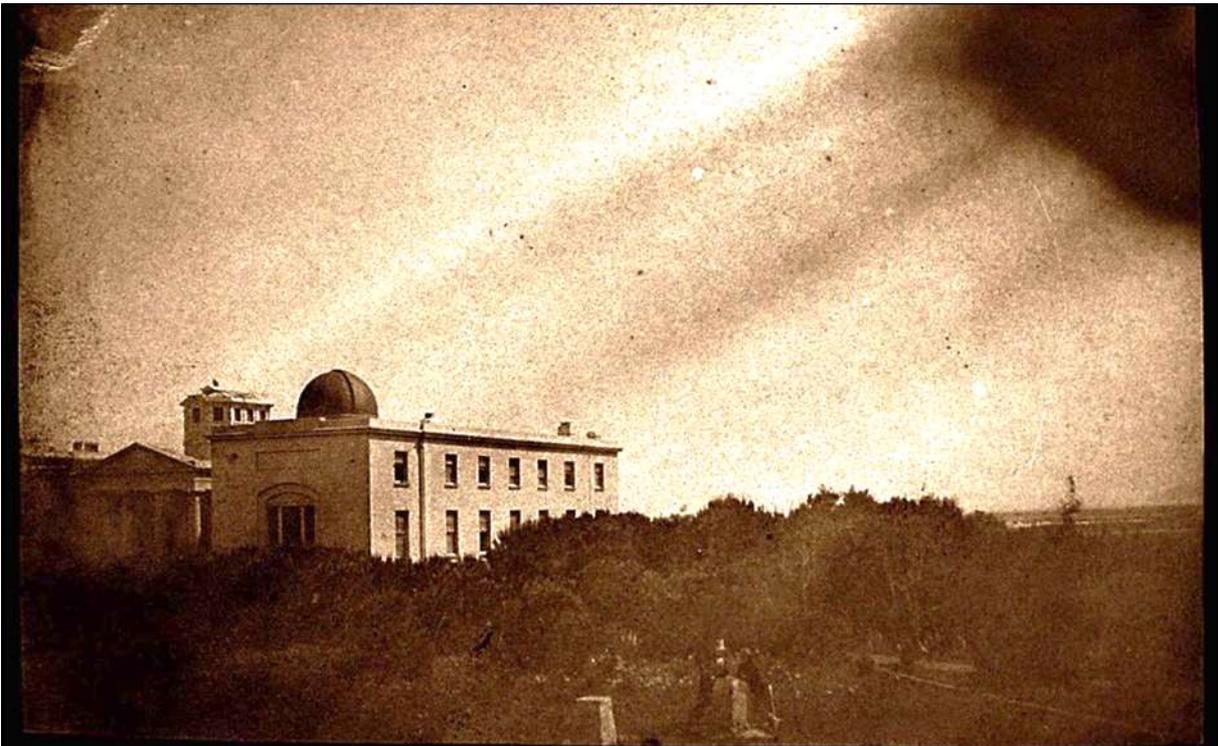


Figure 2: GUL932. A view of part of the Main Building at the Observatory, and Smyth's garden.

furthest left is extant, though since extended somewhat. The small roofed structure in the centre (the Dip House) existed until at least 1932 but the larger building to the right (the Magnetic Observatory) burned down in 1852.

The small, possibly thatched, building on the extreme right (the Intensity House) may have been incorporated into the present Quarters 6 (sometimes called Jacaranda House). The distant building on the right is part of Valkenberg



Figure 3: GUL934. This is another view of the Magnetic Observatory.

Manor, a neighbouring farmhouse that is extant. Clapperton's Mill, one of the many windmills of the time, is just visible in the far distance, to the left of the end of Valkenberg Manor. At the left of the picture, also on the horizon, is Oude Molen, once the oldest windmill in the Cape (Marx, 2006). The low piers in the foreground were south-east of the Main Building, approximately where a road is now, and were probably used during its construction to support portable instruments. They were removed early in the twentieth century.¹ GUL is a 17.1 × 10.5 cm negative image on paper.

Figure 2 shows the Main Building of the Royal Observatory, completed in 1828, as viewed from the south-east. A garden planted by C.P. Smyth was east of the Main Building. The dome on the roof was removed in 1888 and the central 'lantern' in 1960. The temporary piers, also shown in GU933, are shown in the foreground. Note the presence of two people in this image, one wearing a top hat. GUL932 is a negative image on paper and measures 16.7 × 10.5 cm.

The scene in Figure 3 is similar to Figure 1 above. The Valkenberg Manor House at right in the distance is seen very clearly, as is the picket fence surrounding the Magnetic Observatory. GUL934 is a 17.2 × 11.5 cm negative image on paper.

3.2 Royal Observatory Greenwich Archives Cambridge University Library (CUL)

Only one photograph is represented here (Figure 4). This is a copy of the photograph used for Plate 74 in Warner (1983), "A closer view of the Magnetic Observatory", referred to by him as "... from the Archives of the Royal Greenwich Observatory (it accompanied a letter sent by Piazzini to the Astronomer Royal in 1849)." (see Warner, 1983: 119). I could not find this in the on-line CUL RGO15 listings.

Correspondence with Emma Saunders (Archivist of the RGO Archives) revealed that the original calotype could not be found from the information provided by Warner (the RGO Archives were moved to the Cambridge University Library in 1998). However, a photographic copy was found. Ms Saunders (2023) wrote that there "... is indeed a copy (film negative) of the calotype. It is attributed to PS Laurie, RGO, and dated 19 January 1977." Phil Laurie (1913–1982) was at one time the RGO Archivist. The Cambridge University Library reference is: "Photograph, RGO118/Neg 4668, 'Buildings constituting the Magnetic Observatory, Cape of Good Hope. Calotype by C. Piazzini Smyth', one item."

This photograph looks West and shows the main Magnetic Observatory on the left, the Wind Tower (which carried an anemometer), a small covered instrument almost centre and the

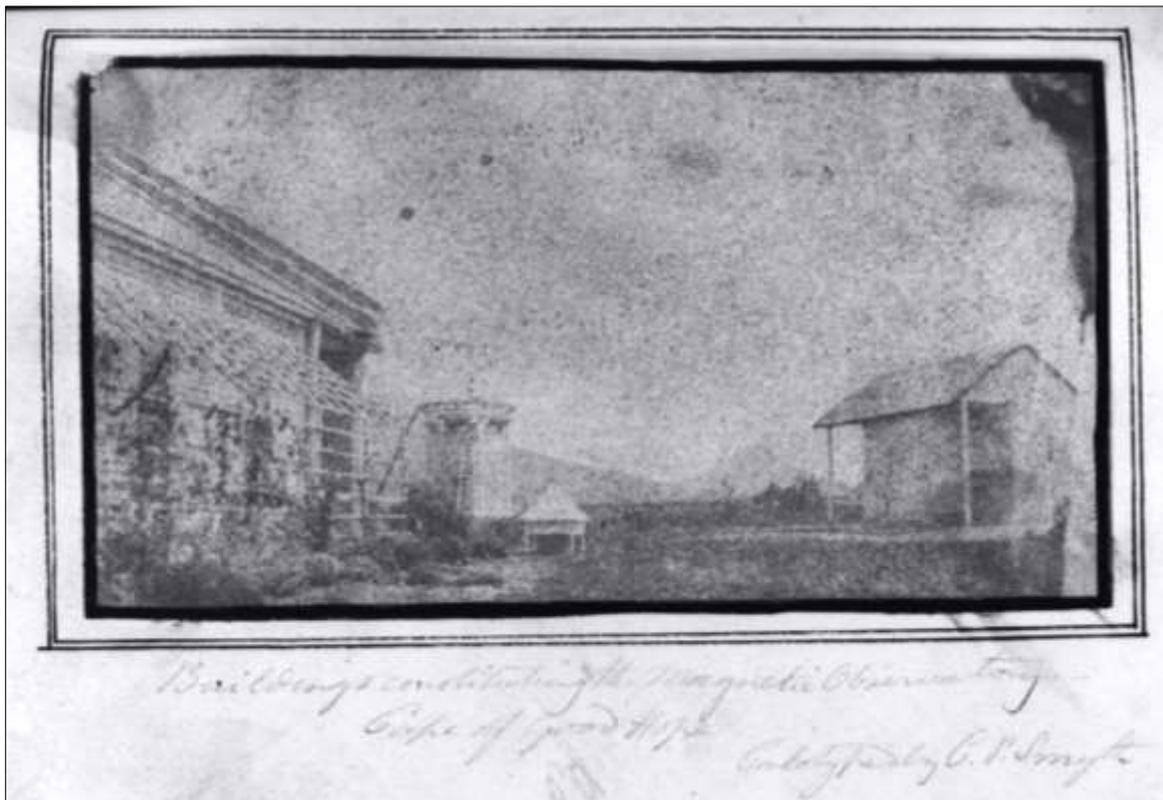


Figure 4: "Buildings constituting the Magnetic Observatory, Cape of Good Hope Calotyped by C.P. Smyth." (reproduced by kind permission of the Syndics of Cambridge University Library).

Intensity House on the right. The only item remaining today may be the Intensity House, which, as mentioned, is probably part of the building currently called 'Jacaranda House'. The Lion's Head mountain is seen in the background. This image is similar, but not identical to, that at MHS (see below). There is also a painting made from about the same viewpoint by William Dixon (see Appendix 1).

3.3 Royal Observatory, Edinburgh (ROE)

All of the items in this section are from *South African Microcosm 1835-1846. Vol. 6* in ROE Library (credit: Charles Piazzi Smyth Archive of the Royal Observatory Edinburgh). The images were extracted one-by-one from pdf scans kindly provided by the Librarian, Ms Karen Moran. There are several on each page and each has been given numbers, the first being the page, the second the row and the third the column. The drawing and photograph shown on Page 72 and titled "1 dwg and 1 calotype" are not reproduced here as they are not relevant.

The first image from this book shown here is 72_2_1, on page 72, and is reproduced here as Figure 5. This is followed by nine photographs from page 73, and titled "Calotypes positives and negs of RO" (see Figures 6–14).

Figure 5 shows the Royal Observatory at the Cape of Good Hope. It was taken from the

eastern side of the Black River, which runs to the East of the Royal Observatory property. It shows the (currently non-existent) Magnetic Observatory buildings, dating from ca. 1842, on the left and the (extant) Main Building of the Royal Observatory complex on the right. The low connected structures on its right side are the stables, completed in 1836. There is a small building almost at river level in front of the Main Building complex also seen in precise drawings dating from 1833 by Charles D'Oyly (see [Gordon-Brown, 1968](#)) and 1837 by Sir John Herschel, reproduced in [Warner \(1979\)](#). The Black River pools are in the foreground. Devil's Peak is faintly visible in background. This positive is possibly from the same negative as 73_3_22.

Another view of the Royal Observatory, also viewed from the East, is reproduced here as Figure 6. However, this photograph clearly shows Devil's Peak and part of Table Mountain in the background. A long thatched building is faintly seen at bottom right. There is no positive of this photograph in the collections, and the author made this 17 × 5 cm positive print from the original negative.

Figure 7 is a 10.5 × 8 cm positive print made by the author from the original negative. A fluted column of the Main Building portico is visible on the right. Thus, it must have been taken



Figure 5: 72_2_1. A partly coloured photograph of the Royal Observatory, Cape of Good Hope.



Figure 6: 73_1_1. The Royal Observatory Main Building.

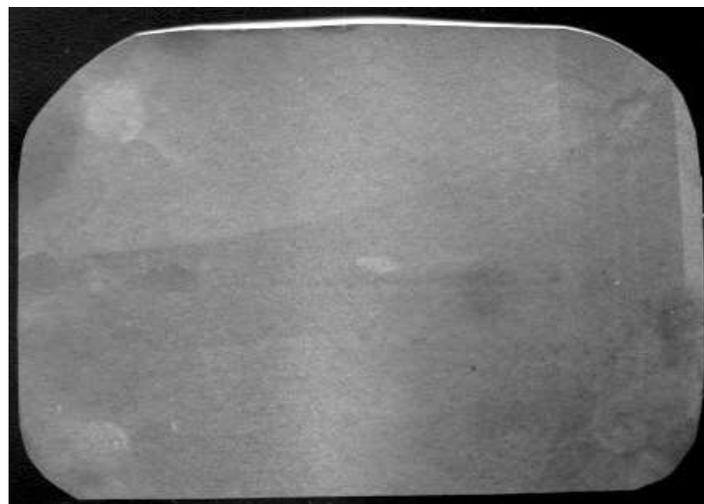


Figure 7: 7. 73_1_2. Possibly looking towards the slope of Table Mountain.



Figure 8: 73_2_1. The Main Building of the Royal Observatory and its stables.

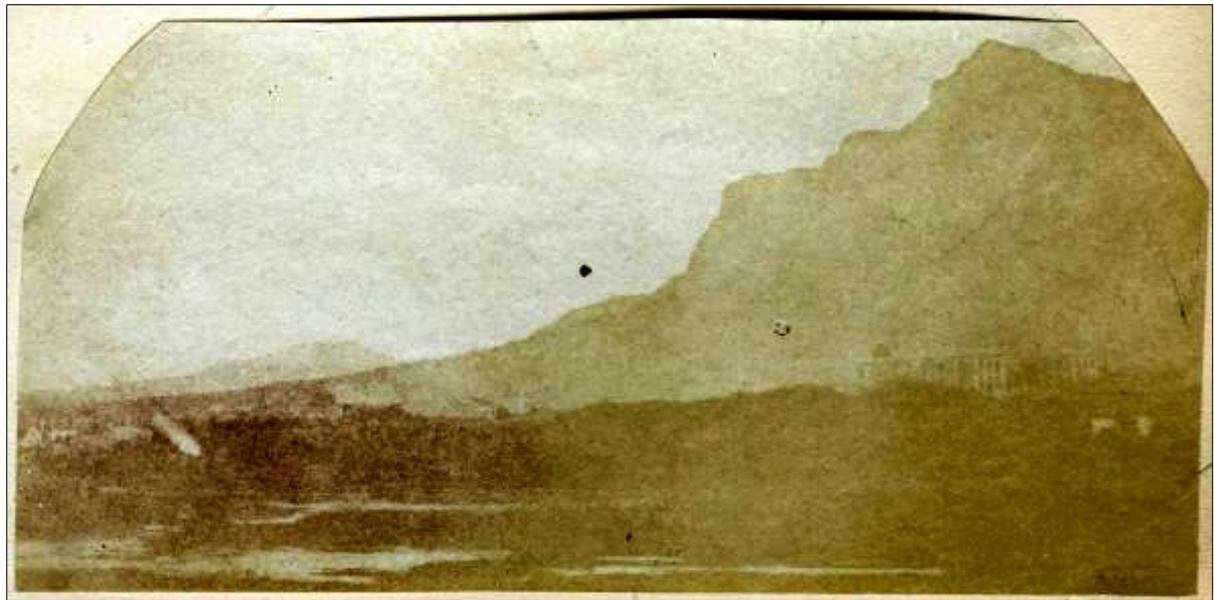


Figure 9. 73_2_2. This panoramic view shows (left-to-right) the residences of the Magnetic Observatory, the Magnetic Observatory buildings and the Main Building of the Royal Observatory, Cape of Good Hope.

from the wall of the Main Building in a SW direction. The faint buildings at mid-level may be some of the farms between the present day Observatory and Rondebosch. Two glue blobs appear on the left-hand side of this image.

In [Figure 8](#) we have yet another indistinct photograph of the Main Building at the Royal Observatory, with Devil's Peak in the background. The Lion's Head is also seen towards the right. This 18 x 5.5 cm positive print was made by the author from the original negative. [Figure 9](#) provides a wider view, extending from the Magnetic Observatory to the Main Building of the Royal Observatory. In the background is Devil's Peak, and in the foreground the swamps of the Black River. This 15 x 7.5 cm image may be a cropped print from the same negative as [72_2_1](#) above (see [Figure 5](#)).

The poor-quality photograph reproduced in [Figure 10](#) shows the Magnetic Observatory

buildings in the centre, and its residences on the left. Parts of Devil's Peak and Table Mountain are visible in the background of this 14 x 6 cm image.

[Figure 11](#) is a fine 16 x 5.5 cm photograph of part of the Main Building at the Royal Observatory, Cape of Good Hope. This is evidently a print of GUL932 (see [Figure 2](#)), and has been coloured.

Another panoramic view of the Royal Observatory is reproduced here as [Figure 12](#). This is a fairly clear original 14 x 7 cm positive image, and shows (left-to-right) the residences of the Magnetic Observatory, the Magnetic Observatory buildings and the Main Building of the Royal Observatory. Devil's Peak is in the background and the swamps of the Black River in the foreground. The small cottage visible in [Figure 5](#) is conspicuous.

[Figures 13 and 14](#) are two remarkably clear

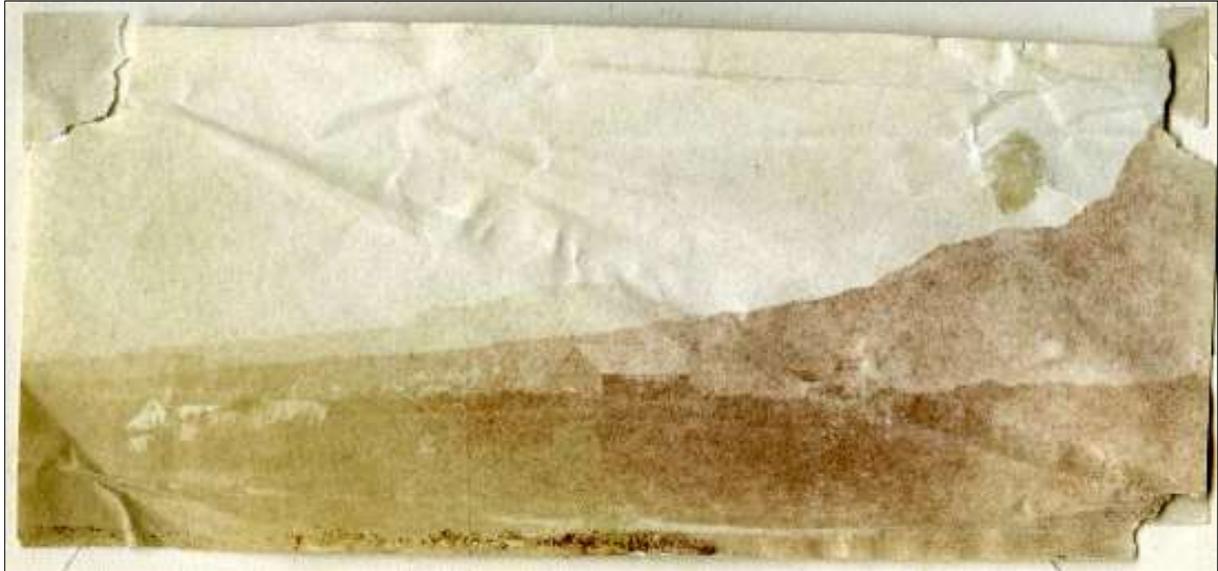


Figure 10: 73_3_1. The Magnetic Observatory buildings.

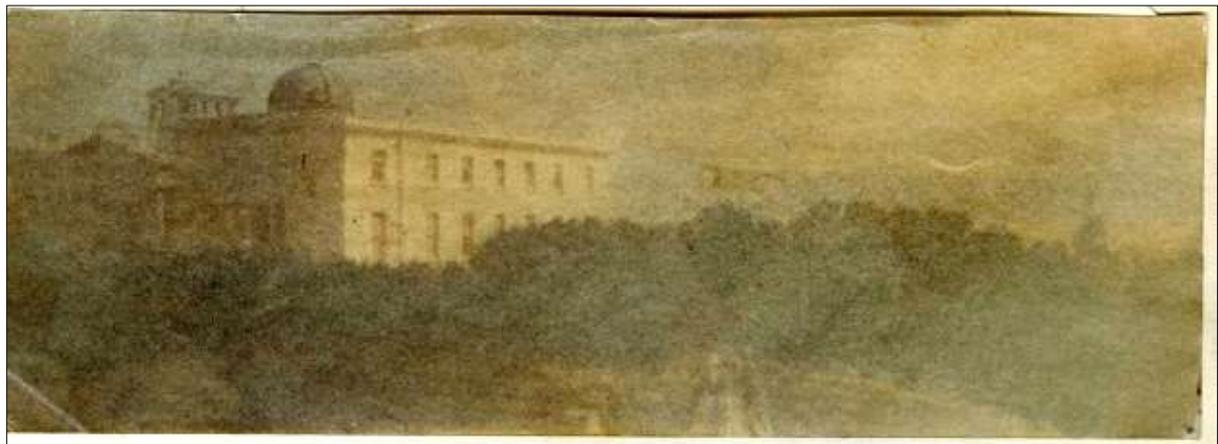


Figure 11: 73_3_2. The Main Building at the Royal Observatory.

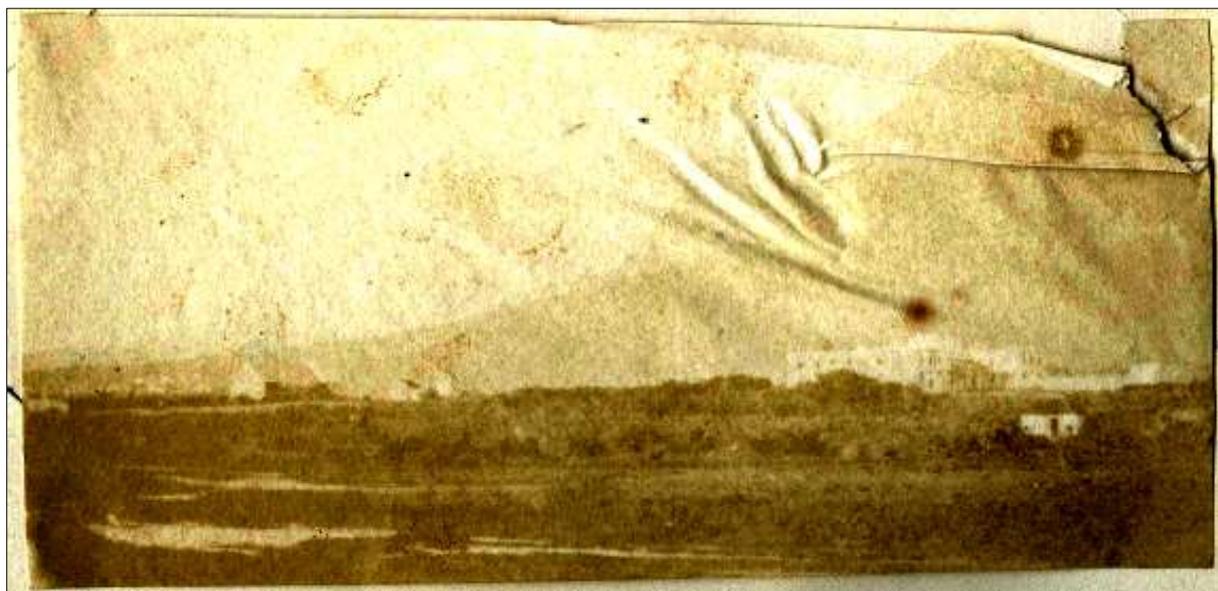


Figure 12: 73_4_1. Another image of the Royal Observatory at the Cape of Good Hope.



Figure 13: 73_4_2. The Main Building from the south-east.



Figure 14: 73_5_1. Another view of the Main Building from the south-east.

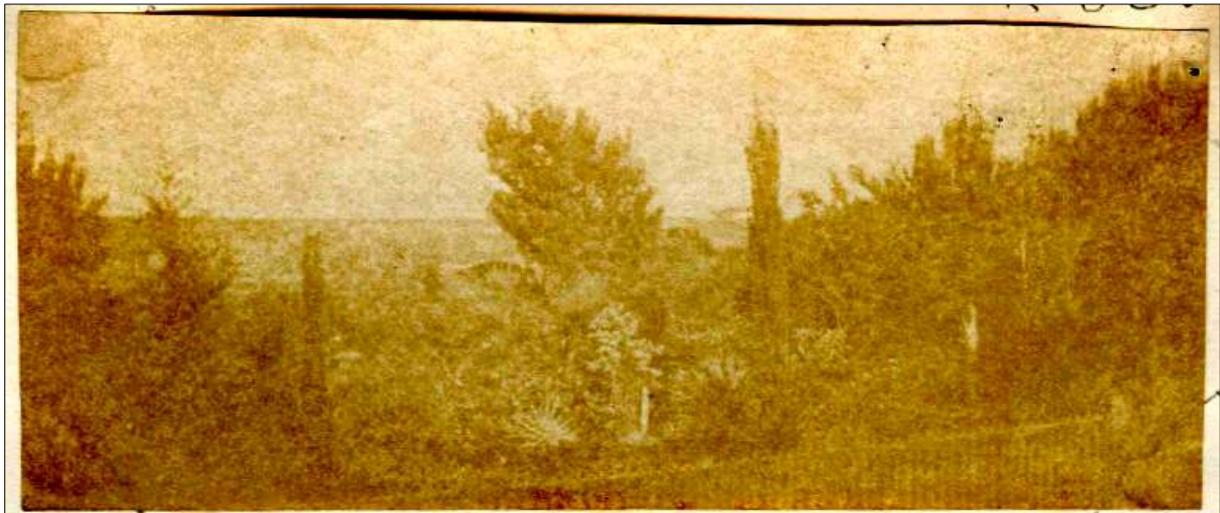


Figure 15: 74_1_1. Piazzì Smyth's garden at the Royal Observatory, Cape of Good Hope.

images of the Main Building at the Observatory. These positive prints were made by the author from the original negatives, and measure 15 × 4.5 cm and 15 × 3 cm, respectively.

In addition to the foregoing images, on page 74 in *South African Microcosm 1835-1846. Vol. 6* in the Library of the Royal Observatory, Edinburgh, there are ten different calotype positives and negatives of the 'Cape Observatory', and these are discussed below.

Figure 15 shows a view of Piazzì Smyth's garden on the eastern side of the Main Building,

looking towards the East. Note the hump-backed bridge in the background. This 15 × 6.5 cm positive print by Smyth was made using the original negative 74_2_1, but not including all of the right-hand side.

A different view of part of the garden and the Main Building is shown in Figure 16, which is possibly a partial print from the same negative as Figure 14.

Figure 17 is a clearer version of 74_1_1 (Figure 15). This 17 × 6 cm positive print was made by the author from the original negative.



Figure 16: 74_1_2. A view of the Main Building, with Smyth's hedge in front.



Figure 17: 74_2_1. Another view of Smyth's garden.

Figures 18 and 19 are two different views of the Magnetic Observatory structures at the Royal Observatory, Cape of Good Hope. Figure 18 (16 × 5 cm) is evidently a positive print made by Smyth from the Glasgow negative GUL933 (see Figure 1). Figure 19 (13.5 × 4 cm) is a different positive print of the same Glasgow negative made by Smyth.

Figures 20 and 21 present two views of the Magnetic Observatory, Wind Tower and Flagpole in front of the Main Building. Figure 21, in particular, shows a clear view of the Valkenberg Manor house in the background and the picket fence in the foreground. This positive print was made by the author from the 15 × 7 cm original negative. Figure 22 is a 15 × 7 cm positive print made by Smyth.

A close-up of the front of the Main Building of the Royal Observatory is shown in Figure 22. Note that this photograph has been reversed

from the original Smyth positive print, on the grounds that what appears to be the slope of Table Mountain is in the background. This is a 10 × 7 cm positive print made by Smyth.

Figure 23 shows a view from an open downstairs window in the Main Building. What appears to be a thermometer is visible on the right, and there are hedge or trees in the distance. The view is facing East, possibly from the Assistants' quarters? The two Assistants, Smyth and Mann, shared the East Wing of the Main Building. This is an 8 × 7.5 cm positive print made by Smyth.

Another close-up photograph taken from the Main Building at the Royal Observatory, Cape of Good Hope, is Figure 24. This shows the portico of the Main Building of the Royal Observatory and is a 9 × 7.5 cm positive print made by Smyth. This image can be compared with 73_1_2 (Figure 7).

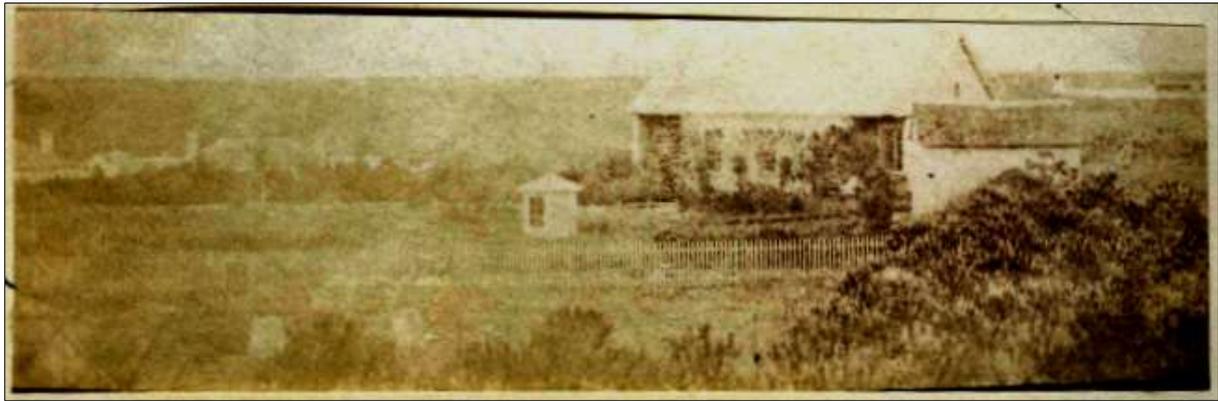


Figure 18: 74_3_1. Magnetic Observatory structures.



Figure 19: 74_4_1. Another view of the Magnetic Observatory structures.

Now we have a group of eight calotypes, positives and negatives that are in page 75 in *South African Microcosm 1835-1846. Vol. 6* in the Library at the Royal Observatory, Edinburgh. These are reproduced below as [Figures 25–32](#).

[Figure 25](#) is an interesting image showing two surveyors at the back of the East Wing of the Main Building at the Observatory. There is also a person in white sitting on the ground. On the extreme right is a part of the lower central part of the building. The structure on the left was a back porch built before the present one. A shadow of the camera or the photographer is also visible. There is also a toilet extension on the right that appears in a map from 1850 (see [Figure 45](#) in Appendix 2). It would have been destroyed around 1852 when the Transit Room was extended northwards. This is a 7.5 × 6 cm positive print made by the author from the original negative.

[Figure 26–28](#) are three close-ups of the same two surveyors behind the Main Building. The first two photographs are positive prints measuring 9.5 × 8 cm and 9 × 8.5 cm respectively by the author from the original negative. Meanwhile, [Figure 28](#) is a 9 × 7 cm positive print made by Smyth from original negative 75_1_1.

[Figure 29](#) is of an unknown subject, but appears to include part of a watermark of Whatman's paper. This is a 10 × 7.5 cm positive print made by the author from the original negative.

[Figures 30 and 31](#) are portraits of the same man, probably William Mann (1817–1873), who was the 2nd Assistant at the Observatory from 1839 to 1846, and afterwards was Chief Assistant until 1872. [Figures 30 and 31](#) are respectively 7 × 8 cm and 7 × 6 cm positive prints made by the author from the original negative (for [Figure 31](#) cf. [Warner, 1983](#)). These two images are the first photographic portraits taken in South Africa. Note that these portraits also may be the earliest surviving photographs of an astronomer taken anywhere in the world. There is an early Daguerrotype of F.W. Bessel, but this was taken in September 1843 (see [Glass, 2008](#)).

An unknown instrument is shown in [Figure 32](#), a 7 × 8.5 cm positive print by the author from the original negative. So far as can be made out, the instrument comprises a rectangular box with a thick vertical axle that carries a telescope at a particular elevation, probably adjustable. There are two microscopes, possibly for looking at an azimuth scale, which is, however, not visible. Possibly this is the “6-inch

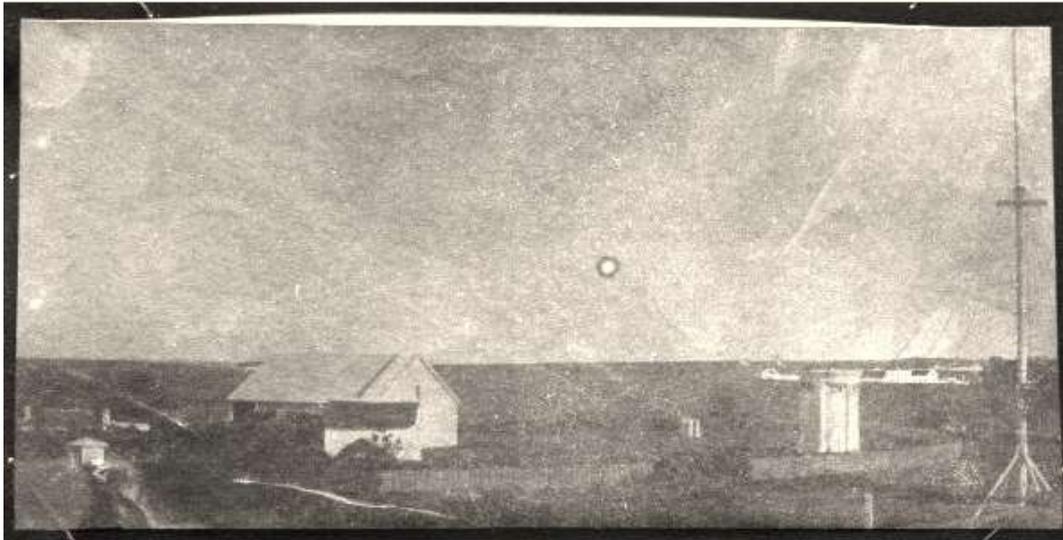


Figure 20: 74_2_2. A close-up of the Magnetic Observatory, Wind Tower and to the Flagpole.



Figure 21: 74_3_2. A close-up of the Magnetic Observatory, Wind Tower and Flagpole.



Figure 22: 74_1_3. The front of the Main Building of the Royal Observatory.

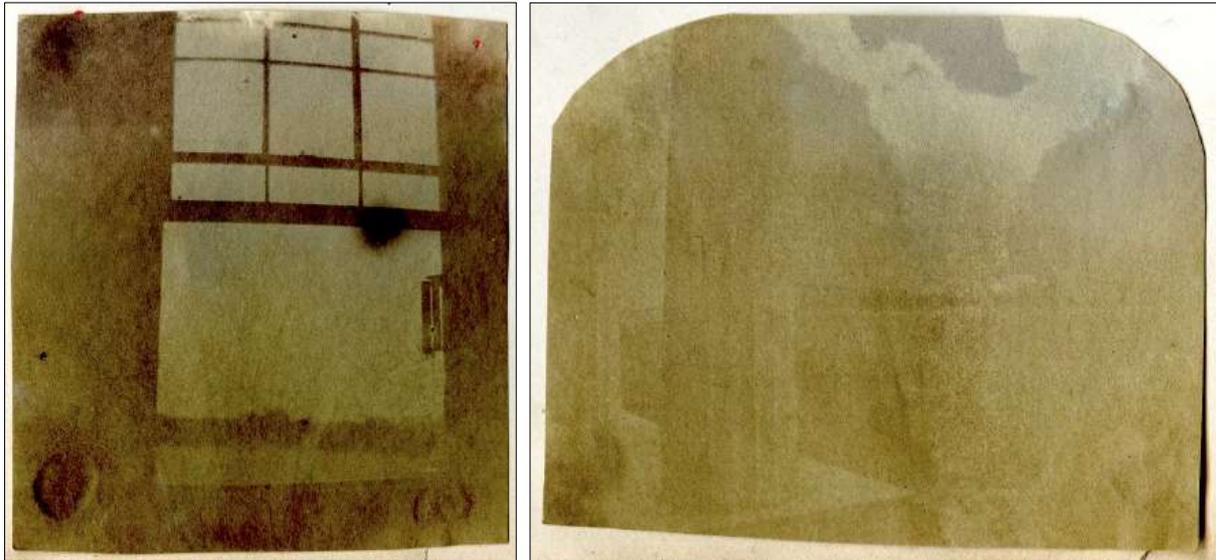


Figure 23 (left): 74_2_3. A view from an open downstairs sash window in the Main Building.
 Figure 24 (right): 74_3_3. The pillars of the portico of the Main Building of Royal Observatory.

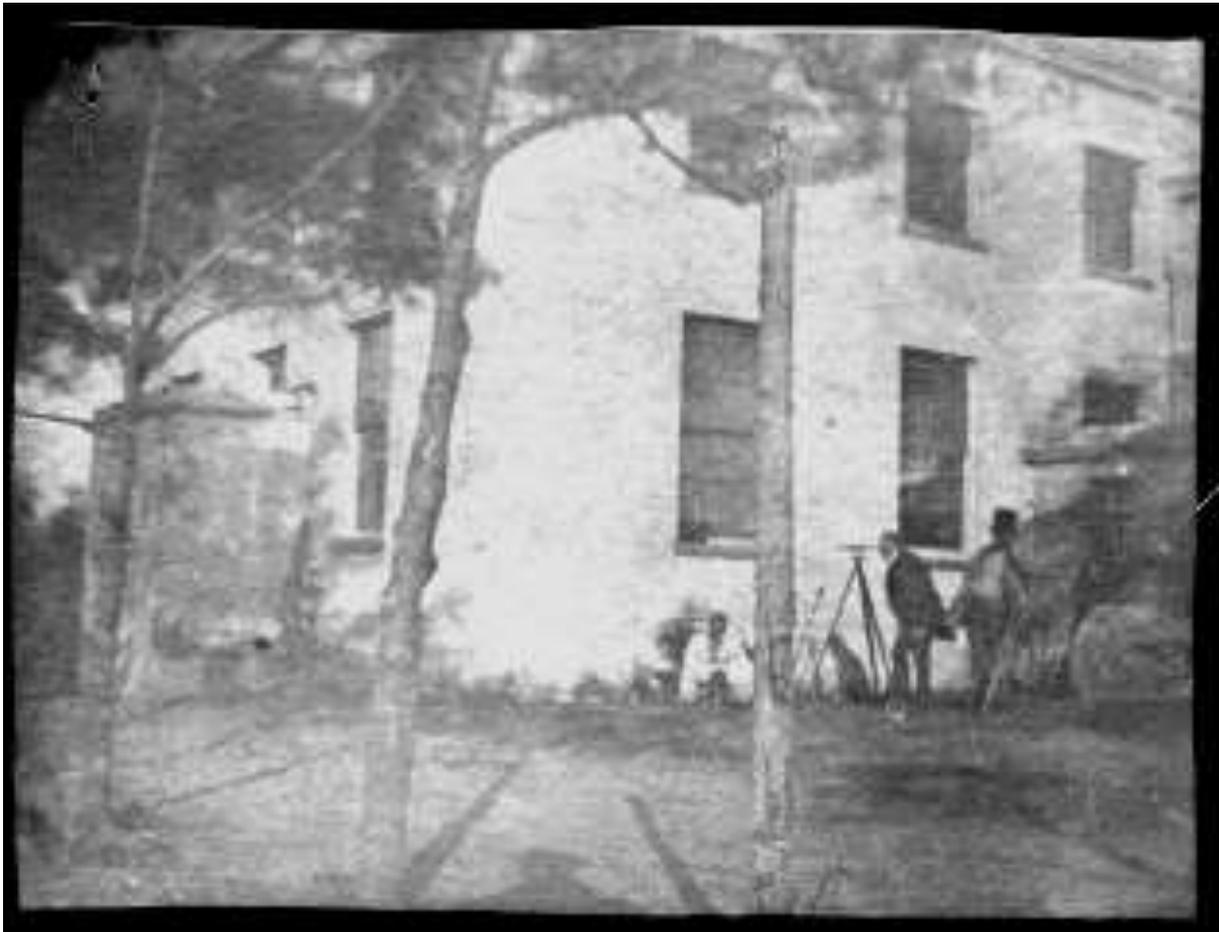


Figure 25: 75_2_1. Two surveyors at the back of the East wing of the Main Building.

theodolite by JONES, of peculiar construction ...” listed by Maclear (1851). Normally, “6-inch” would have referred to the diameter of the azimuth scale.

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in the Library at the Royal Observatory, Edinburgh also contains four calotypes of Cape Town on page 76, and these are reproduced below as Figures 33–36. Page 77 also contains two further Cape Town images (see Fig-



Figure 26: 75_1_1. A close-up of two surveyors behind the Main Building at the Observatory.



Figure 27: 75_3_1. Another view of the same two surveyors.



Figure 28: 75_1_2. A third image of the two surveyors.



Figure 29: 75_2_2. An unknown subject.



Figure 30: 75_1_3. Portrait of a male with a patterned waistcoat and gloves, probably the 2nd Assistant William Mann.



Figure 31: 75_2_3. Portrait of the same male.

ures 37 and 38, below).

Figure 33 is a view along Long Street, Cape Town, with Lion's Head in the background (the identification thanks to Jim Hislop). There is a photograph from about 1885 of this same street corner in Fransen (1993: 28). This 20 x 9 cm positive print was made by Smyth.

Figure 34 is a 13.5 x 5 cm positive print made by the author from the original negative, and shows an unidentified building.

The Groote Kerk in Cape Town is shown in Figure 35, with Signal Hill in the background. This building was reconstructed 1841 shortly before Smyth photographed it, and it is essentially unchanged today. The tower dates from 1704. This is a 13.5 x 8 cm positive print made by the author from the original negative.

Figures 36 and 37 are two views of the Military Hospital on Beach Road in Woodstock, which was in existence from ca. 1838 to 1901. There is a painting of this Hospital (see Figure 44 below), which indicates that Figure 36 has been laterally reversed. In both photographs a person is standing in front of the Hospital, with



Figure 32: 75_3_3. An unusual instrument on an adjustable three-legged mount, with two vertical microscopes.

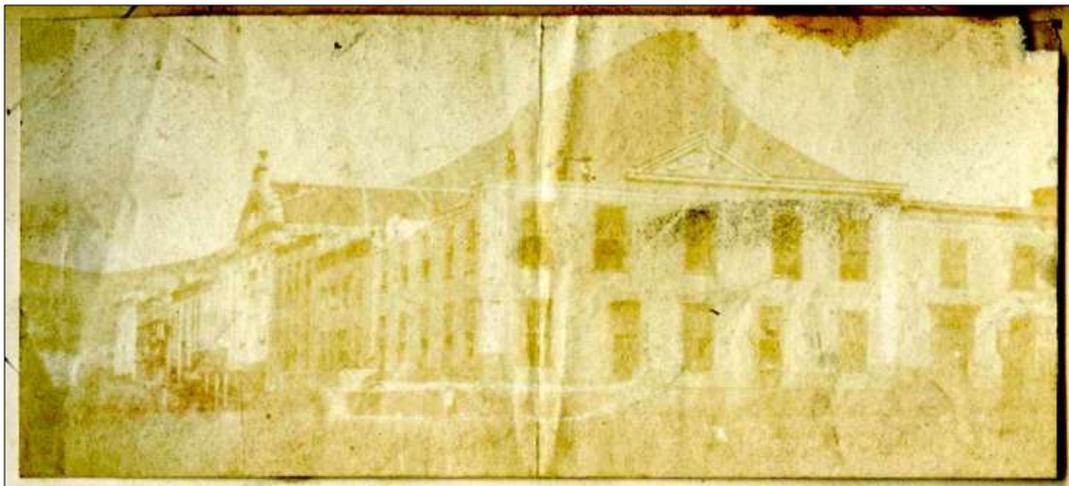


Figure 33: 76_1_1. Burg Street, Cape Town.



Figure 34: 76_2_1. Unknown building with pillasters.



Figure 35: 76_2_2. Grootekerk, Cape Town, viewed from the Church Square side.

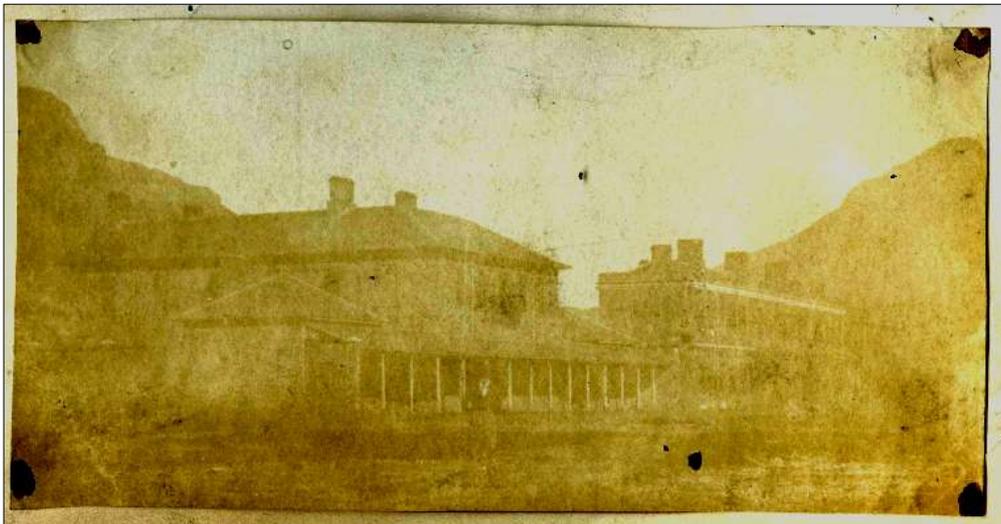


Figure 36: 76_3_1. The Military Hospital at Woodstock.

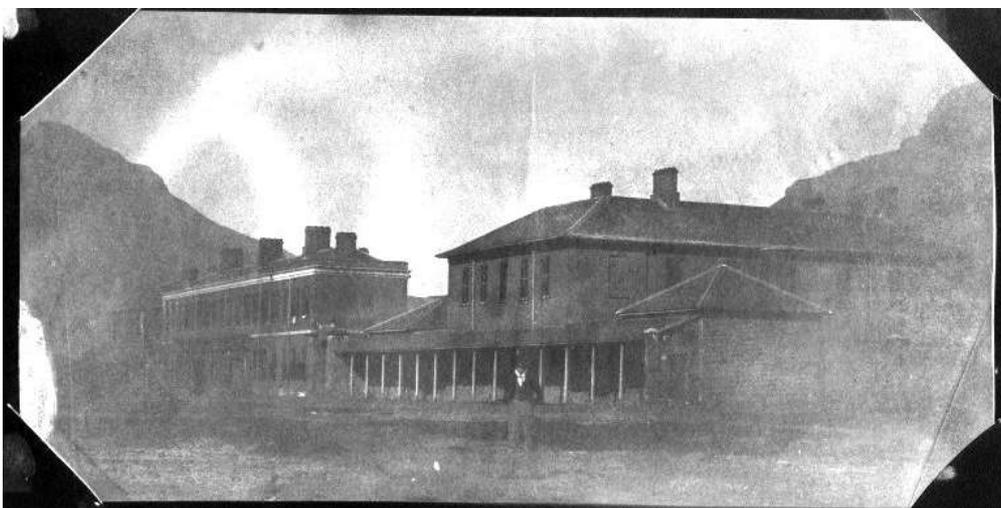


Figure 37: 77_1_1. Another photograph of the Military Hospital on Beach Road, Woodstock.

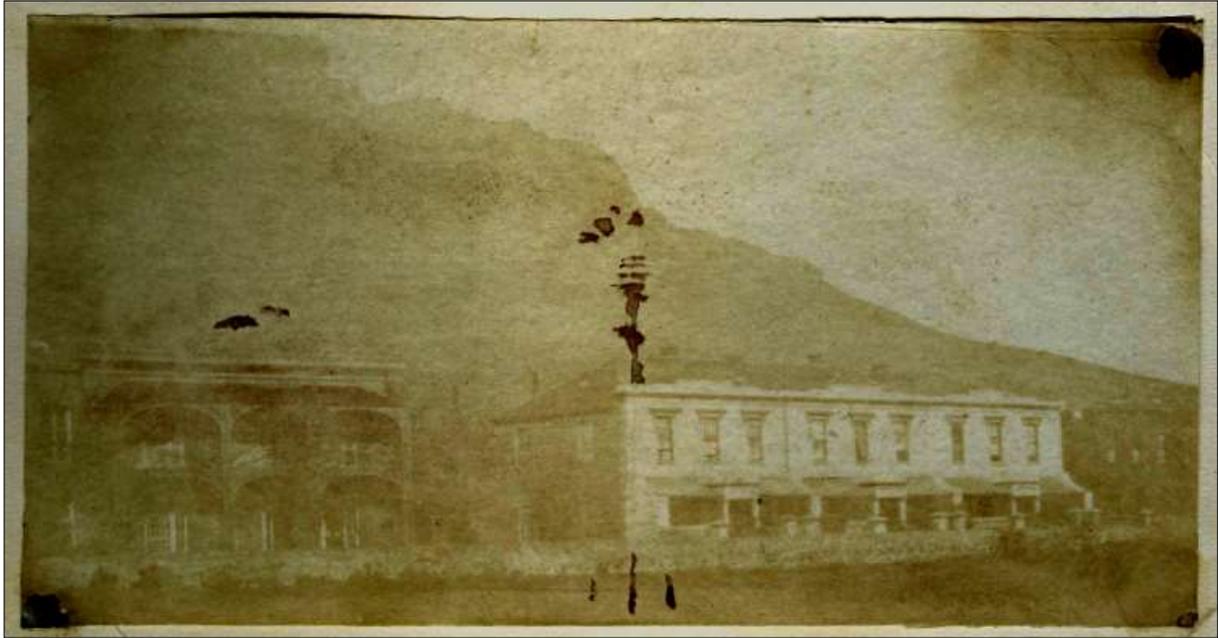


Figure 38: 77_2_1. An identified streetscape.

Devil's Peak and Table Mountain in the background. The [Figure 36](#) photograph also has glue spots at all four corners. This is an 18.5 x 9 cm positive print that was made by Smyth from negative 77_1_1, while [Figure 37](#) is an 18.9 x 9.8 cm positive print that was made by the author from the original negative.

[Figure 38](#) presents an unidentified scene, which Jim Hislop suggested is possibly Edgcombe Terrace that stood in Darling/Sir Lowry Road. In the background is the NW slope of Table Mountain. This is an 18.7 x 9.6 cm Smyth positive print.

3.4 Museum of the History of Science, Oxford (MHS)

Unfortunately, I do not have good reproductions of all of these photographs. According to one of the captions below, there should be five good photographs at the MHS but only four images were available to me. The quotations are all taken from the following website: <https://www.hsm.ox.ac.uk/collections-online#/item/hsm-narrative-11826>

Although they sometimes show the same subjects, none of the following photographs is identical to any of the photographs listed above.

It is also curious that none of these MHS photographs is very large. All of them are included in

From the Astronomical Scrapbooks of John Lee of Hartwell. Presented by Dr A. E. Gunther in 1986. Part of the collections of his father R. T. Gunther, founding Curator of the Museum, previously on loan to the Museum. R. T.

Gunther purchased various Hartwell House manuscripts and books from the Hartwell House sales in 1939. The photographs were given to John Lee of Hartwell House by the photographer in 1843.

[Warner \(1983\)](#) quotes these words from Dr Lee's Astronomical Scrapbook: "Calotypes presented by Charles Piazzi Smyth and prepared by himself – Feb'y 1843." The Museum's inventory number for the Astronomical Scrapbook as a whole is 11894 (MHS).

Unfortunately, I do not have a copy of MHS Photo 1, which is described as follows:

In MS Gunther 36, f.113r top, Hartwell House astronomical scrapbook, volume 2. Shows a shed with verandah right, a larger building with trellis verandah left, and indistinct buildings including a small pyramid-roofed instrument shelter centre. Very pale sepia, dark brown borders top and bottom. Slight damage from adhesive at left. The photograph at ff.114-115 captioned 'Magnetic Observatory buildings, erected 1842' is a better view of the same group of buildings. One of five good and two decayed photographs contributed by Smyth to John Lee's astronomical scrap-books. They are the earliest known photographs to have been taken in South Africa. (1843; 7.5 x 10.4 cm).

The first MHS photograph shown here is [Figure 39](#), which is dated to February 1843 and is described as follows:

In MS Gunther 36, f.113r bottom, Hartwell House astronomical scrapbook, volume 2. Shows the Royal Observatory, Cape of Good Hope, with central classical portico, tower, and two large, flat-roofed side wings each with a dome, seen from slightly below and to the right. Sepia, darker sepia border, the bottom border showing the apparently crumpled bottom of the negative. Damaged along left side from adhesive, and top right corner torn. One of five good and two decayed photographs contributed by Smyth to John Lee's astronomical scrapbooks. They are the earliest known photographs to have been taken in South Africa.

This is somewhat similar to 73_4_2 above ([Figure 13](#)), but taken from a slightly different angle, perhaps from a higher position. The reproduction measures 11.5 × 9.1 cm and is taken from the MHS website.

[Figure 40](#) is a 12.2 × 9.3 cm photograph that also dates to February 1843 but presents a different view of the Main Building at the Observatory:

In MS Gunther 36, f.114r top, Hartwell House astronomical scrapbook, volume 2. Shows the Royal Observatory, Cape of Good Hope, with central classical portico, and chiefly the large, flat-roofed left wing with dome, seen from the left. Very pale sepia, dark brown border.

To the left are seen the stables, which were constructed in 1836. This image is from a print found in the SAAO collection, PB059_P6706, which was probably made during the preparation of the [Warner \(1983\)](#) book.

[Figure 41](#) is a 10.9 × 6.1 cm reproduction from the MHS web site, and also dates to February 1843. It is described as follows:

In MS Gunther 36, between ff.114 and 115, Hartwell House astronomical scrapbook, volume 2. It is a superior view of the same group of buildings shown in the companion photograph on f.113 captioned 'New buildings ...' (and probably also the completely decayed photograph on p.110 bottom). It shows a shed with verandah right, a larger building with trellis verandah left, a tower-like building centre, and a small pyramid-roofed instrument shelter left of centre, with a pointed mountain in the background. The magnetic observatory was newly built in 1842, and represented a programme of magneti-

cal observations promoted by Sir John Herschel. Pale sepia, but good clear image. Mounted on a piece of light card or stiff paper, cream in colour, with framing lines drawn in ink. The photograph itself has part of a Whatman watermark; and Smyth's caption is written on the mount. The mounting and position, and the fact that it repeats one of the earlier views, suggest that this one was added to the group slightly later.

This photograph was taken from a position close to that used for [Figure 4](#).

The "tower-like building" in the centre of the picture was the 'Wind Tower' that contained an automatic weather station. The anemometer wind vane can be seen on the top. In 1882 this tower was converted to carry a dome, which housed a 6-inch refractor. A few years later that telescope was replaced by the photographic telescope that was used for the *Cape Photographic Durchmusterung*. The entire structure was demolished in 1966 (see the Appendix, and [Glass, 2015](#)).

The final photograph in this series is shown in [Figure 42](#). This also dates to 1843, and has been described as follows:

In MS Gunther 36, f.114r bottom, Hartwell House astronomical scrapbook, volume 2. Shows the interior of a room with central desk and an equatorially-mounted refracting telescope on a tripod; the tripod incorporates a quadrant, and the desk contains drawing boards and instruments, including a parallel ruler (indicating that 'Drawing room' in the caption is to be taken literally). Brown, darker border. Slight damage from adhesive at left.

The refractor would appear to be the "... excellent 46-inch achromatic telescope, with an aperture of 3½ inches, by DOLLOND, mounted on an equatorial stand ..." that is mentioned by [Maclear \(1851\)](#). This 11.4 × 9.3 cm photograph, PB056_P6540, was found in the SAAO photo collection. Its provenance is unknown, but it must have come originally from the Hartwell astronomical scrapbook.

4 NOTES

1. Details of the windmills in the Observatory area can be found in [Hislop \(2014\)](#).

5 ACKNOWLEDGMENTS

I wish to thank the following for kindly providing access to the photographs discussed in this



Figure 39: MHS Photo 2. The Royal Observatory, Cape of Good Hope (courtesy: History of Science Museum, University of Oxford).



Figure 40: MHS Photo 3. "The Royal Observatory, Cape of Good Hope (courtesy: History of Science Museum, University of Oxford).

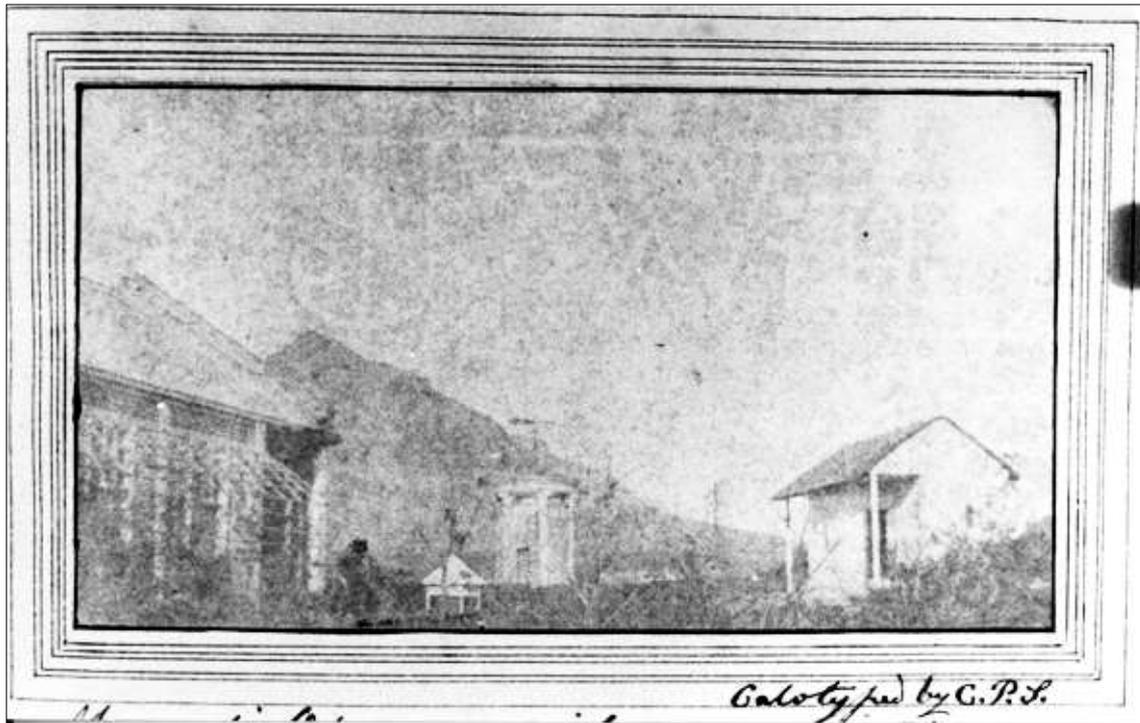


Figure 41: MHS Photo 4. Buildings associated with the Magnetic Observatory (courtesy: History of Science Museum, University of Oxford).

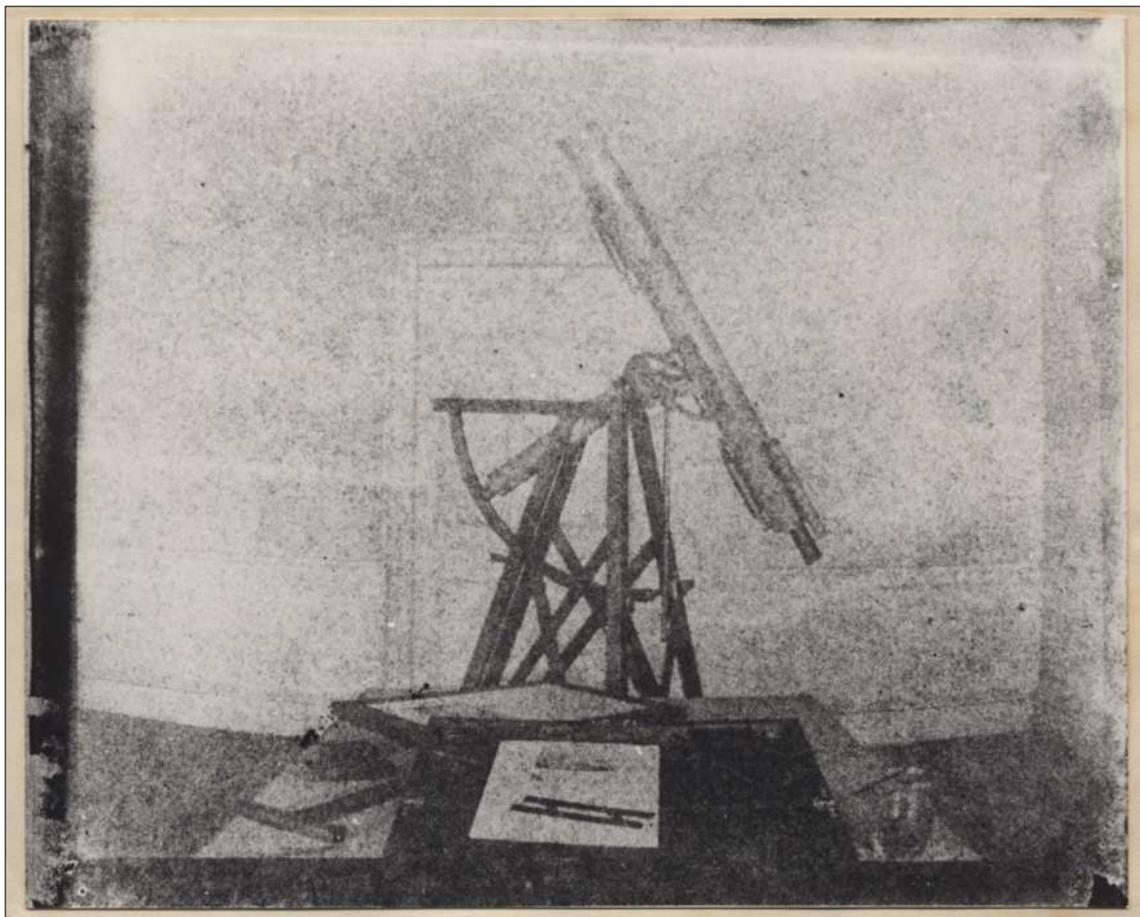


Figure 42: MHS Photo 5. An equatorially mounted refractor on a tripod (courtesy: History of Science Museum, University of Oxford).

paper: Karen Moran (UKATC), Royal Observatory, Edinburgh; Fiona M. Neale, Senior Library Assistant, Archives and Special Collections, University of Glasgow Library; and Emma Saunders, RGO Archivist, Cambridge University

Library.

I also am grateful to Anthony Simcock, Oxford (formerly of MHS) for helpful information, and to Jim Hislop, Cape Town, for local identifications.

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7 APPENDICES

7.1 Appendix 1: Other Early Photographers

Many artists have taken the Royal Observatory at the Cape of Good Hope as their subject. While the Main Building is essentially unchanged, almost nothing remains of the Magnetic Observatory except for the 'Cottage'. Fortunately, the SAAO possesses a picture dated 1843 that shows Magnetic Observatory buildings when they were quite new. This is shown below in [Figure 43](#).

The British artist Thomas William Bowler (1812–1869) came to Cape Town in 1834 and



Figure 43 (left): The Magnetic Observatory from a contemporary painting in the possession of SAAO. Signed Lt William Dixon RA (Royal Artillery) 19 x 29.5 cm, 1843.

Figure 44 (right): A painting by Thomas Bowler of the Military Hospital in Woodstock (from an Artnet auction catalogue, November, 2007).

worked briefly at the Royal Observatory. During more than 30 years in South Africa he painted pictures of many Cape Town buildings, including the Military Hospital at Woodstock, shown here in [Figure 44](#). This Hospital, which was the subject of one of Smyth's calotypes, no longer exists. A web search revealed that Bowler's painting dates to 1853.

7.2 Appendix 2: Map of the Royal Observatory, Cape of Good Hope

The following 1850 map ([Figure 45](#)) shows the layout of buildings and other features at the Royal Observatory, Cape of Good Hope.



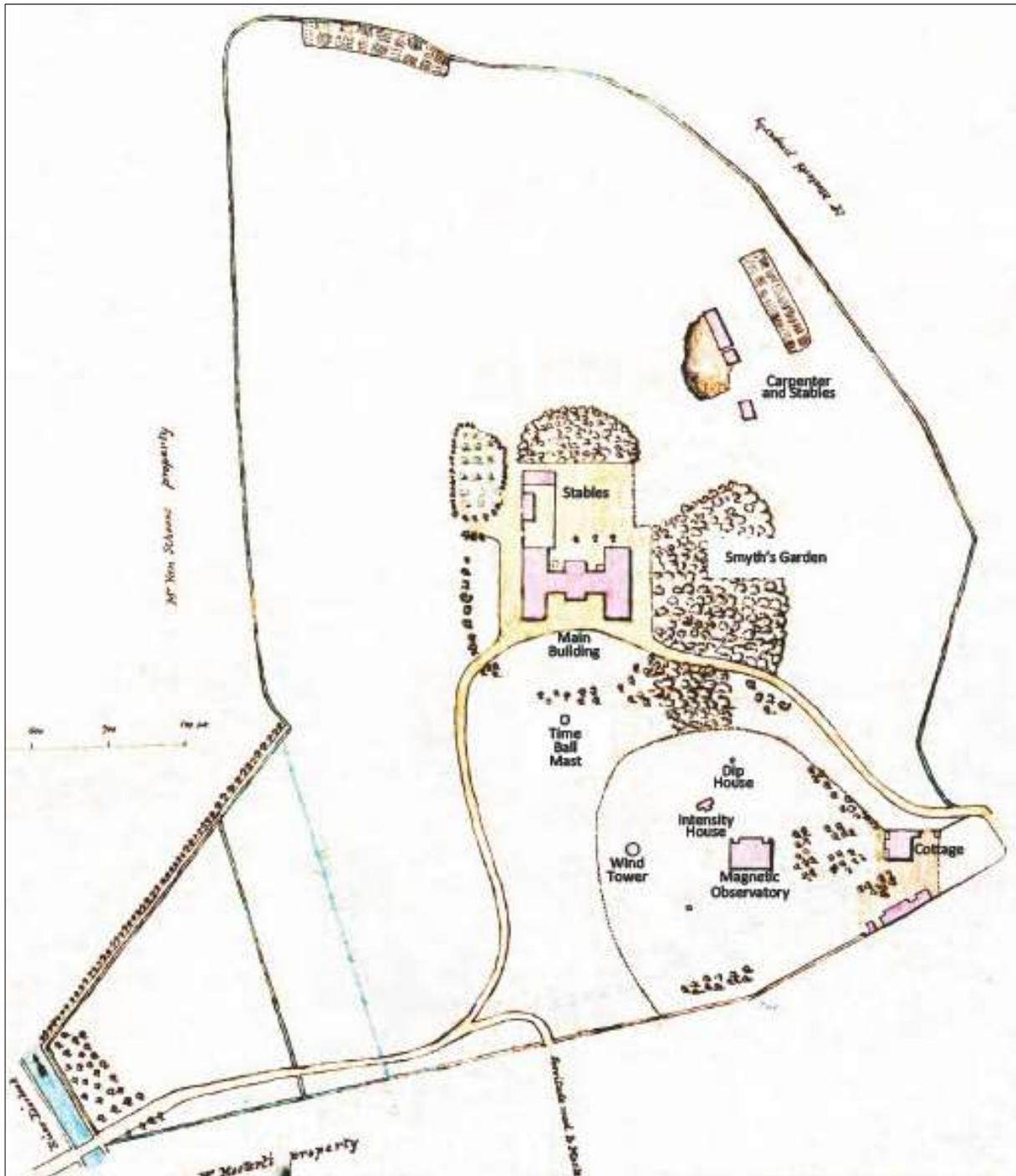


Figure 45: A map of the Royal Observatory dated November 1850, with modern labels superimposed. North is at the top. The position of the 'Time Ball Mast' has been estimated from early paintings and sketches. The Magnetic Observatory was at bottom right, surrounded by a paling fence, and the Main Building is in the middle. The vegetation to the East of the Main Building was Piazza Smyth's garden.

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In recent years Ian has concentrated on the history of astronomy and the conservation of heritage items at the South African Astronomical Observatory. He has published a succession of research papers and the following books: *Victorian Telescope Makers: The Lives and Letters of Thomas and Howard Grubb* (1997); *Revolutionaries of the Cosmos: The Astrophysicists* (2006), *Proxima: The Nearest Star (Other than the Sun!)* (2008), *Nicolas-Louis de La Caille: Astronomer and Geodesist* (2013), and *The Royal Observatory at the Cape of Good Hope: History and Heritage* (2015).