

## VISITORS TO THE HERSCHELS BETWEEN 1777 AND 1822

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**Abstract:** This paper summarizes the results of the first comprehensive study of the many people who visited William and Caroline Herschel at their homes in Bath, Datchet, Clay Hall and Slough. It covers the period from 1777 to William's death in 1822. The research is based on various documents, notably the three *Visitors' Books* written by Caroline and others. The investigation resulted in a large dataset that was statistically analyzed. It contains information about the times and places of the visits, as well as biographical data on the guests, and their professions, status and nationalities. A particular focus is on visits by astronomers, physicists and musicians, and the observations that they made with Herschel's telescopes.

This study provides an insight into scientific life at the turn of the eighteenth and nineteenth centuries, in which the Herschels played an important role due to their astronomical discoveries, innovative instruments and new observing techniques.

**Keywords:** William Herschel, Caroline Herschel, Bath, Slough, Windsor Castle, Uranus, astronomers, musicians, telescopes, visual observations

### 1 INTRODUCTION

William and Caroline Herschel welcomed guests from all over the world at their different places of residence in England. The German-born astronomer, discoverer of the planet Uranus, and his large telescopes were a major attraction. His talented sister became famous for her comet discoveries. It was not only scientists who made pilgrimages to the Herschels, but there were also nobles, members of the church or the military, and of course some musicians. The large number of visitors, including many celebrities, shows the enormous popularity and admiration that William and Caroline Herschel enjoyed over a long period of time.

Most visits are documented in the *Visitors' Books* kept by Caroline and others. There is overlap between them, with the later editions being partly transcriptions. There are other sources, albeit less extensive, but often more informative. For example, Caroline's *Temporary Index* mentions visitors who were privileged to observe celestial objects with her brother's telescopes.

The author conducted the first systematic study on this topic.<sup>1</sup> It is based on an enormous amount of data that can only be processed in a structured form. The subsequent statistical analyses covered a wide range of different aspects. The present work is a continuation of a larger study dealing with the observations of William and Caroline Herschel; the results have already been published (Steinicke, 2021).<sup>2</sup>

It was a challenge to put the information contained in around 2500 documented visits into a readable form. The aim was to give a comprehensive overview of guests, times, places and occasional observations. A total of 470 people are named here, which of course is only

a small selection. Biographical data, nationality, occupation, status and other information are given. Of course, because of relationships or joint visits, there is some redundancy (admittedly, reading can be exhausting at times). Important people are presented in more detail. The study yielded many new revelations, such as the visit by young Mary Somerville to Slough.

### 2 EARLY VISITS

The first documented visitor was Nevil Maskelyne (1732–1811),<sup>3</sup> who came to Bath probably in late 1777. The Astronomer Royal took about 18 hours travelling from Greenwich by stage-coach. William Herschel (1738–1822) and Caroline Herschel (1750–1848) greeted him (at that time they were about 39 and 27 years old, respectively). Caroline mentions the event in her first *Autobiography* of 1779 (see Table 1 for the cited sources):

Hitherto I do not remember any living Astronomer with whom my brother could have any communication except every now and then a stranger introduced by some of his Scholars to have a look through his telescopes or otherwise to satisfy their curiosity, among whom Dr. Maskelyne who I remember came with Dr. Lysons when we lived at Walcot on 1777.78; but not being introduced as Ast. Royal, my brother only pronounced him (after having had several hours of spirited conversation with him) to be a devil of a fellow, after he had seen him to the door. Sr. Harry Englefield also paid some Visits at Walcot and another year he called in New King Street. (Hoskin, 2003: 60).

Daniel Lysons (1727–1800) was a Bath

physician and Henry Charles Englefield, 7<sup>th</sup> Baronet (1752–1822), an English antiquary and amateur astronomer. In the *Memoirs*, we learn from Caroline about the Maskelyne visit and that William

... was engaged in a long conversation, which to me sounded like quarrelling, and the first words my brother said after he was gone was: 'That is a devil of a fellow.' (Herschel, Mrs. J., 1876: 41).

Among the early guests was another Bath physician, William Watson (1744–1824).<sup>4</sup> He came across in late December 1779 when Herschel was observing with a 7-foot Newtonian reflector in front of his home in River Street. He has documented the event in his *Memoirs*:

About the latter end of this month [December 1779] I happened to be engaged in a series of observations on the lunar mountains, and the moon being in front of my house, late in the evening I brought my seven-foot reflector into the street, and directed it to the object of my observations. Whilst I was looking into the telescope, a gentleman coming by the place where I was stationed, stopped to look at the instrument. When I took my eye off the telescope, he very politely asked if he might be permitted to look in, and this being immediately conceded, he expressed great satisfaction at the view. Next morning the gentleman, who proved to be Dr. Watson, jun. (now Sir William), called at my house to thank me for my civility in showing him the moon, and told me that there was a Literary Society then forming at Bath, and invited me to become a member of it, to which I readily consented. (Herschel, Mrs. J., 1876: 42).

Herschel later joined the Bath Philosophical Society and his first papers were read at their meetings (Ring, 2012). It is interesting to compare this text with Caroline's version of the visit, later written down in her first *Autobiography* (Hoskin, 2003: 61):

For some times past he had spent the nights for the purpose of carrying on his observations with less interruptions than in front of the house in River Street, w[h]ere amongst others he was one night observed by Sir William Watson who left his carriage (coming by late from an entertainment) and was gratifying by a look through the 7 ft telescope, and a conversation which lasted

till near morning; and from that time Sir William never missed to be waiting at our house against the hours he knew my brother to be disengaged.

The Watson visit is also the first entry in Caroline's list 'Visitors and Sundry's', contained in the *Temporary Index* (C. Herschel, 1780–1808). This extensive document collects information about a wide range of events, objects and persons relating to the observations made by her brother. Actually, there are two versions, and although the second is called a 'copy', it contains additional data and corrections. The visitor list covers the period from 1780 to 1808. The 60 entries mainly concern persons, who had the privilege of observing with William. Caroline gives names and dates, and occasionally the objects that they observed.

Another important document was William's *Journal*, starting with his observations in March 1777 (W. Herschel, 1774–1799). Next, we have the *Fixt Stars*, written by Caroline and containing information about the three 'star reviews', mainly a search for double stars (C. Herschel, 1775–1784). Both series also describe guests' observations; generally, they are more detailed than the *Temporary Index*. However, there are events, which are not listed in the latter. For instance, on 16 June 1782 we read in the *Fixt Stars*: "Mr. Linley took the above by the equatorial sector; no exactness was intended." (C. Herschel, 1775–1784: 213). This was an observation of the double star 54 Ophiuchi by Thomas Linley (1733–1795), a Bath musician and former Director of the Assembly Rooms, where William had given concerts.<sup>5</sup> Also not registered was the first guest in Datchet, the Swiss geologist Jean-André De-Luc (1727–1817), a neighbour of the Herschels at their new home near Windsor. He was also the first visitor from Switzerland. When William checked an obscure "... nebula or apparent comet" with the 7-foot reflector on 9 August 1782, he noted: "Mons. De Luc observed it with me." (W. Herschel, 1774–1799: 22). This object later turned out to be the globular cluster M 5 in Serpens (Steinicke, 2021: 51).

### 3 THREE VISITORS' BOOKS

The main sources of the study are three *Visitors' Books* (their cover pages are shown in Figure 1). The first and third books are located at the Herschel Museum, Bath, and the second one is at the National Maritime Museum in Greenwich. None contains visits to Bath.

The first *Visitors' Book* was begun by Caroline in 1783 and covers visits until September 1792. Due to the celebrations of the 200<sup>th</sup> anniversary of Herschel's death, it currently is

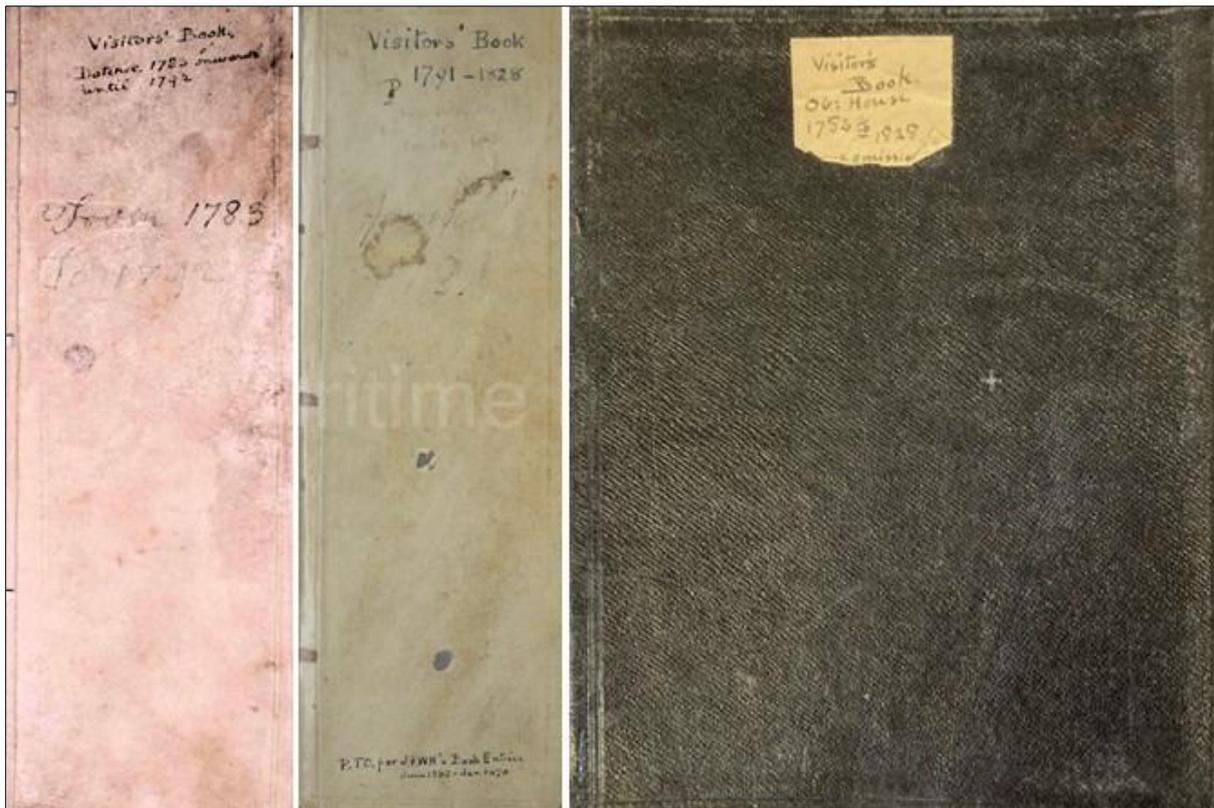


Figure 1: Covers of the three *Visitors' Books* discussed in this paper (not to scale).

on display at the Herschel Museum (Figure 2).<sup>6</sup> Caroline's *Visitors' Book* (C. Herschel, 1783–1792; here called A) contains 540 entries; 15 concern Datchet, 5 Clay Hall and 520 Slough. Given the clear form, it seems to be a transcript from original notes, made by her at the time of the visit, which did not survive (at least there is no indication of them). When hearing the name and status of an unknown person upon their greeting, Caroline sometimes wrote down the information incorrectly. Minor errors are forgivable given her outstanding accuracy in all of her manuscripts.

In contrast to the *Temporary Index*, her *Visitors' Book* lists guests, regardless of whether or not they made observations. It starts with the visit of George III in Datchet. However, the first 99 entries only give the year (1783 to 1786). Thus, the sequence of the early entries does not reflect the actual chronological order (the same goes for the other *Visitors' Books*). Fortunately, in 27 cases the exact dates can be determined from other sources. For instance, the King's visit is listed in the *Temporary Index* (C. Herschel, 1780–1808: 52) and *Fixt Stars* (C. Herschel, 1775–1784: 375) under the date 28 April 1783.

The second *Visitors' Book* (Anonymous, 1791–1828; here called B) is in the possession of the National Maritime Museum. Although it

begins in Datchet and covers the period from 1791 to 1828, only the years until William Herschel's death on 25 August 1822 are treated in

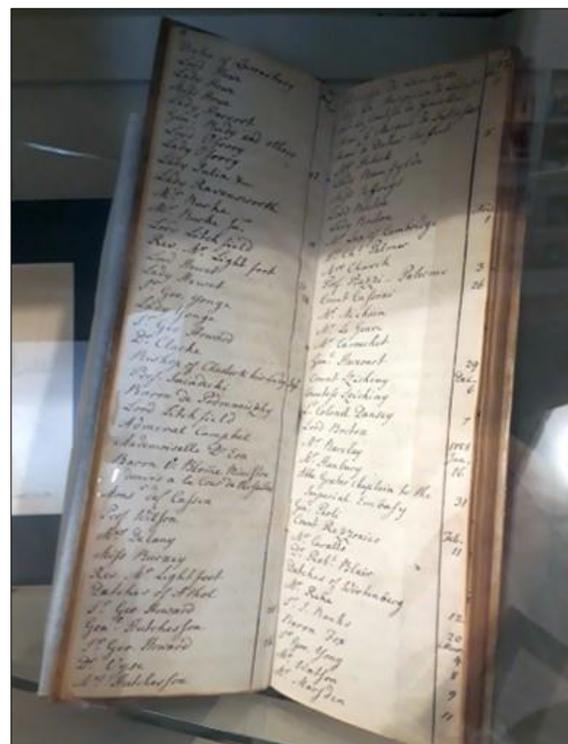


Figure 2: Caroline's *Visitors' Book*, on display at the Herschel Museum, Bath.

in this study. Up to that date, the document contains 1880 entries, all concerning Slough. None shows Caroline's hand-writing. Undoubtedly, the text is due to different persons. For the overlapping period with her own *Visitors' Book* (1791–92), one would expect that B is a mere transcript, but this is not the case, as we will see in Section 4. What was the reason for this?

On 8 May 1788, William Herschel married the rich widow Mary Pitt (1750–1835), née Bald-

August 29<sup>th</sup> 1803  
 Mrs Carbonell  
 Sir William Parsons  
 Lady Parsons  
 Miss Parsons  
 Miss Carbonell  
 Mr. Douglas  
 Mr. Harington  
 Mr. David  
 Mr. J. Carbonell  
 Capt. Miller  
 J. B. Phipps

Le Prince Guillaume  
 de  
 Hesse Philippsthal,  
 35, Chapel Street, Grosvenor Place.

Figure 3 (top): The entries for 29 August 1803 in the second *Visitors' Book* (B) were made by the guests (note the different handwritings). Below is an example of a visitor's personal card.<sup>8</sup>

win. She lived in Upton, about half a mile from Observatory House in Slough. A few months later, Lady Herschel moved in. Caroline was assigned rooms in a separate house (called 'The Cottage') on the property, and although its flat roof was ideal for her own observations she never was happy with this arrangement. She lived there for more than nine years.<sup>7</sup> Although still William's astronomical assistant, Caroline now only had the status of a guest and thus Mary took over the registration, especially for

non-astronomical visitors. Therefore, a book was laid out in the reception area. It differs from A, which is evident from the entries made by guests in writing down their names, status and the dates—sometimes barely legibly. Some handed in business cards (Figure 3). Caroline might have copied visitor information into her own document. However, this procedure would change in autumn 1792.

From 29 May to 9 August 1792, William was travelling (see Table 8 in Section 5, below). He visited Wales and Scotland with his friend Jean-Baptiste Komarzewski (1744–1810); see Section 12. Mary had to take care of young John, born on 7 March. Thus, Caroline had more freedom in the house. But when William returned, she thought it was about time to stop keeping her own *Visitors' Book*. Her last entry is of 26 September 1792, when nine persons visited Slough, among them Komarzewski and the English publisher Joseph Johnson (1738–1809).

The third *Visitors' Book* (Anonymous, 1783–1924; here called C) is in the possession of the Herschel Museum. It covers the period 1783–1924. The text was written probably much later by a single person, who had fairly clear handwriting. None of the entries in *Visitors' Book* B looks like the handwriting in C, where there are 1419 entries until 1822. Of these, 12 concern Datchet, 2 Clay Hall and 1405 Slough. At first glance, this would seem to be a final transcript, based on the earlier documents (*Visitors' Books* A and B), but this is not the case.

This is to be demonstrated using the entries for 10 April 1792, concerning a visit at Slough (Figure 4). In Caroline's *Visitors' Book* (A) we see two lines: "Dr Priestly" and "Genl Komarzewsky & Spanish Ambassador to Poland" (C. Herschel, 1783–1792). The first person is the English physicist Joseph Priestley (1733–1804). The other two are Komarzewski and the Spanish Ambassador to Poland Pedro Normande y Mericán (1742–1809); note the incorrect names. In the second *Visitors' Book* (B) we have two entries for this date: "Lord Mulgrave, Dr. Priestly two Ladies and four Gentlemen" and "General Komarzewskie, Chevalier De Normandis Minister from the King of Spain". (Anonymous, 1791–1829). Firstly, we see a person who is missing in A: Henry Phipps, 1<sup>st</sup> Earl of Mulgrave (1755–1831). Furthermore, we have six unknown ladies and gentlemen. A "Chevalier" is identical to an "Ambassador". There are two entries in the third *Visitors' Book* (C). The first is a copy of A, although there is an odd second date at the end of the second line: "2" (April?). On the next page

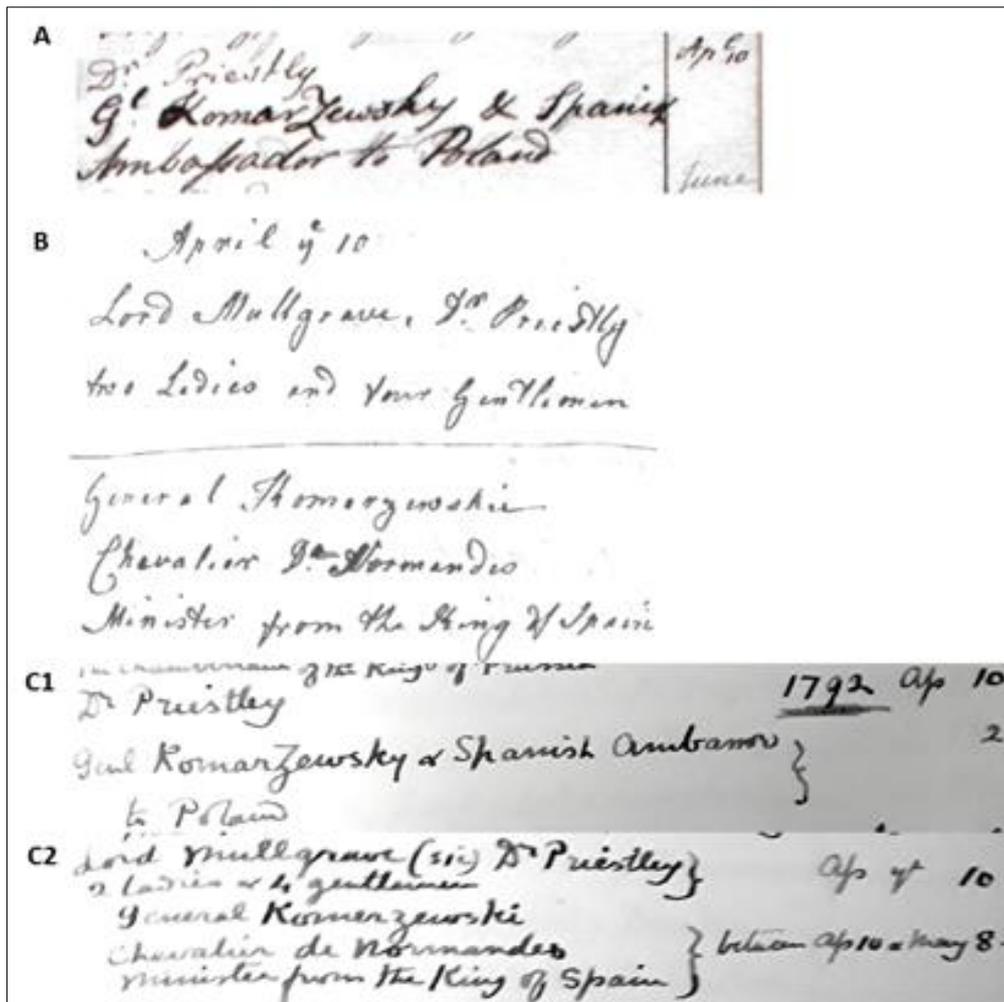


Figure 4: The entries for 10 April 1792 differ in the three *Visitors' Books* A, B and C (see text).

we find another entry. The first part is identical to that in B. At the end of the second, the date is questioned: "... between April 10 and May 8 ..." (Anonymous, 1783–1924). On the night of the 10<sup>th</sup>, William made some observations, probably after the guests had left Slough.

The *Visitors' Books* were sold at auction by Christie's in 1958. However, there seem to exist even more versions, probably all copies. Their whereabouts and contents are still under investigation.

Figure 5 shows matching entries for visits at Slough according to different sources, including an unknown *Visitors' Book* (X), of which only one page is available. In A and X we see the "Duke of Milan" and the "Dutches of Milan", who are Ferdinand Karl von Österreich-Este (1754–1806) and his wife Maria Beatrice (1750–1829); C gives only the former. The "Duke of Saxe Gotha" is Ernest II, Duke of Saxe-Gotha (1745–1804), and "Prince Charles" is Charles II, Grand Duke of Mecklenburg-Strelitz (1741

–1816).<sup>9</sup> In the copy of the *Temporary Index* we read (later inserted):

Prince Charles of Strailitz, Duke of Saxe-Gotha, Duke of Montagu came in the forenoon to see the instruments, July 20, 1786. (C. Herschel, 1780–1808: 58).

The latter is John Montagu, 4<sup>th</sup> Earl of Sandwich (1718–1792); he is only mentioned in C. At the time of their visit, William and Alexander were in Germany; Caroline wrote in her *Memoirs*:

20<sup>th</sup>. – Prince Charles (Queen's brother) Duke of Saxe-Gotha and the Duke of Montague were here this morning. I had a message from the King to show them the instruments. (Mrs. J. Herschel, 1876: 61).

There is no date for the visit of the Österreich-Este nobles. We only know the year 1786, due to the *Memoirs* (entry of 14 October 1818):

We having had the honour of seeing her Imperial Highness at Slough, in 1786, when on a visit to the King, with

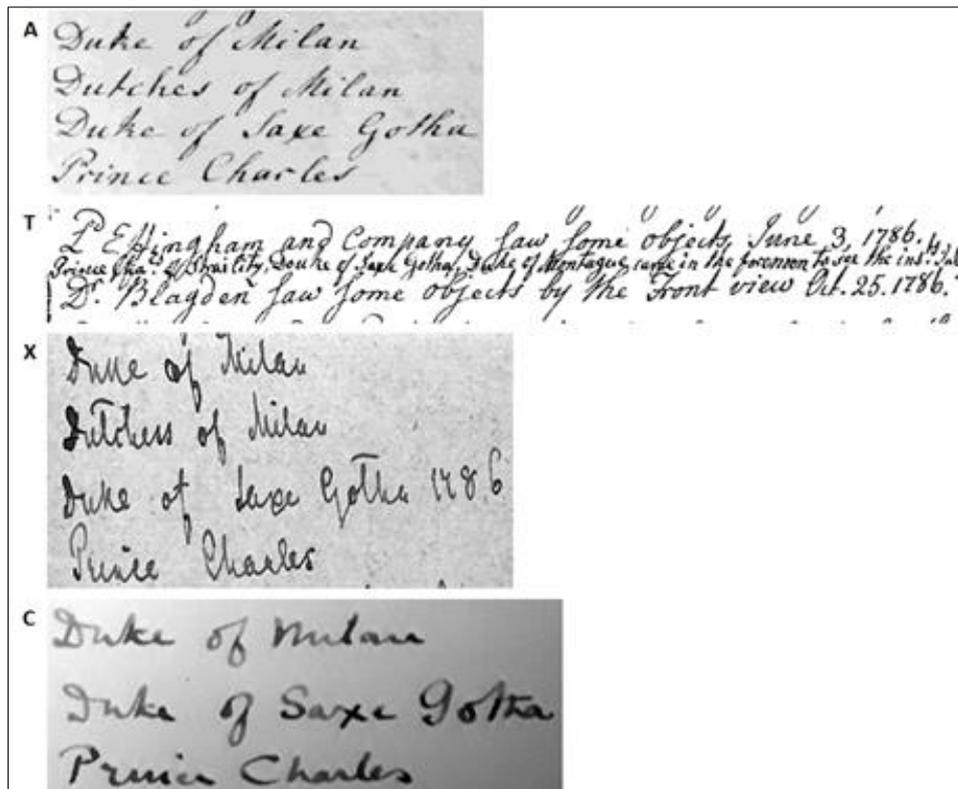


Figure 5: Matching entries in *Visitors' Books* A and C, the *Temporary Index* T and an unknown book X (see text).

Table 1: Historic and modern sources containing information about visitors. The numbers in 'Entries' and 'People' refer only to the period from 1777 until William's death in 1822. The column 'Persons' allows multiple visits.<sup>10</sup>

Document	Author	Location / Source	Period	Entries	Persons
<i>Visitors' Book</i> (A)	Caroline	Herschel Museum, Bath	1783–1792	540	602
<i>Visitors' Book</i> (B)	Multiple	National Maritime Museum, Greenwich	1791–1924	1880	2265
<i>Visitors' Book</i> (C)	Unknown	Herschel Museum, Bath	1783–1829	1419	1693
<i>Memoirs</i>	Mrs Herschel	<a href="#">Herschel, Mrs J. (1876)</a>	1675–1848	95	144
<i>Temporary Index</i> (2 versions)	Caroline	RAS C.3/1.1–2	1780–1808	93	133
<i>Autobiography</i> (2 parts)	Caroline	<a href="#">Hoskin (2003)</a>	1777–1787	30	30
<i>Sweep Records</i> (series)	Caroline	RAS W.2/3.1–8	1783–1802	28	28
<i>Fixt Stars</i> (series)	Caroline	RAS W.4/1.1–7	1775–1784	25	25
<i>Journal</i> (series)	William	RAS W.2/1.1–13	1774–1799	23	24
<i>Observation Book</i> (series)	Caroline	RAS C.1/1.1–4	1782–1824	20	22
<i>Chronicle</i>	C. Lubbock	<a href="#">Lubbock (1933)</a>	1797–1799	8	8
<i>Review</i> (series)	Caroline	RAS W.2/2.1–8	1779–1819	6	6
<i>Memorandum</i>	William	RAS W.7/8	1779	1	1
	M. Hoskin	<a href="#">Hoskin (2014a)</a>	1784–1790	25	25
	W. Steinicke	<a href="#">Steinicke (2021)</a>	1784–1813	4	4

her husband the Archduke of Milan. ([Mrs. J. Herschel, 1876: 128](#)).

Thus, they did not join the other persons. This also shows the different order in the *Visitors' Books*, mainly for those giving no specific date.

[Table 1](#) gives an overview of all sources used in this study. The basic documents are the *Visitors' Books*. The additional sources

mainly come from Caroline, but two are due to modern authors (Hoskin; Steinicke).

#### 4 THE VISITOR DATABASE

The information extracted from the documents in [Table 1](#) has led to an extensive database with 2538 entries.<sup>11</sup> The creation of the file was a difficult and time-consuming task, and was done

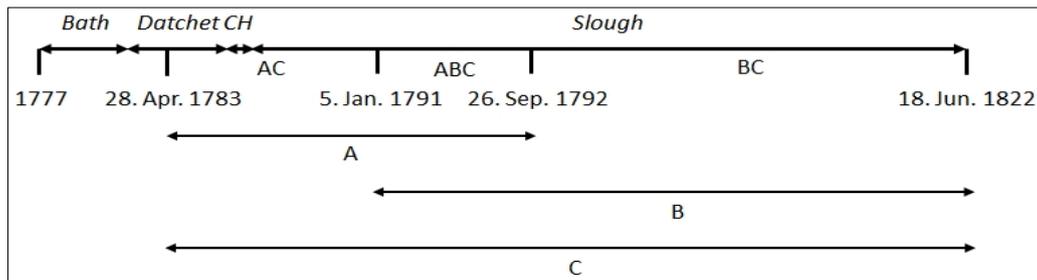


Figure 6: The three *Visitors' Books* (A, B, C), their periods and overlaps. The time in Bath is not covered. A and C show dates in Datchet, Clay Hall (CH) and Slough; B shows only Slough (diagram: Wolfgang Steinicke).

in several steps. However, the treatment of the additional sources was comparatively easy. The data in the *Temporary Index*, *Sweep Records* etc. were already known from previous work (Steinicke, 2021).

The *Visitors' Books* were *terra incognita*. First, the entries had to be deciphered. Caroline's handwriting is very clear, but this is not the case for writers of the other books. Worst of all were guests who wrote down their names and status themselves (Figure 3). Next, one can try to identify the persons. Some names were obvious, but others required some effort, which did not always produce successful results. Often even the names were missing, e.g. "An Italian Lady with her Governess & a Gentleman", "Two Spanish Deputies and their interpreter" or merely "a Gentleman". Three identification categories were defined: (1) people who were clearly identified; (2) those whose names were known, but where no associated person could be identified; and (3) those where the names were not given.

In the *Visitors' Books* (especially B) the personal data, listed under a certain date, are presented in separate parts. There are two types: a row showing a single name, like "Mr. Collins", or names grouped together, like "Mr., Mrs. & Miss Grahame from White Hill near Glasgow". Obviously, the persons in the latter example were related. Here we have Robert Grahame (1759–1851), the Lord Provost of Glasgow, his wife Helen (1760–1825) and their daughter Anne (1787–1847), visiting Slough on 30 June 1810 (according to B and C). After identifying the persons in different parts of the entry, it often turned out that there was a non-familial relationship between them, such as "Dr. Haydn" and "Mr. Solomon", listed for 14 June 1792 in Caroline's *Visitors' Book* (see Section 9).

Often the written name was incorrect or the given information was incomplete. Of course, every identification had to be checked for consistency. Critical cases were supposed visitors,

who turned out to be too young or too old to be visiting (or even were already dead). Finally, one had to look for matching data in the sources. This served also as a cross-check for fixing the identifications. There could be no contradictory information. This may look like a straightforward process, but in reality it could be a time-consuming puzzle. One ended up with a list of persons who were most likely guests on the noted date.

The columns in the database can be divided into categories. This information is basic for the statistical analysis presented in Section 5.

#### 4.1 Sources

Each database entry is based on one or more sources (up to five). Generally, we must distinguish between the three *Visitors' Books* and the other documents. They cover different periods (Figure 6). In all, 22 visits were made between the start of 1777 and 28 April 1783.

Do the entries match in the overlapping periods? In fact, this is not the case—there are astonishing differences (Table 2). Because C

Table 2: Listed (+) and missing entries (–) in the three *Visitors' Books* A, B and C (see text).

Overlap	A	B	C	Number
ABC	+	+	+	53
	+	+	–	21
	+	–	+	13
	+	–	–	18
	–	+	+	42
	–	+	–	90
	–	–	+	1
	–	–	–	4
AC	+		+	307
	+		–	130
	–		+	6
	–		–	66
BC		+	+	955
		+	–	721
		–	+	47
		–	–	44

covers the whole period from 1783 to 1822, we only need to check the overlap between all three *Visitors' Books* (A, B, C), that between A and C and that between B and C. To compare the documents, one must distinguish two cases: whether they list the same entry (+) or not (–), even though they should, due to the overlap. [Table 2](#) shows the numerical result.

Here are some examples. According to the first row, there are 53 cases where the same visit appears in all three books. Row six concerns 90 cases, in which the visit is only listed in B, though it should appear also in A and C. The third row of BC shows that there are 47 visits (outside the range of A), appearing in C, but not in B.

What about the single case in the seventh row? It concerns “Mr. Vince & Mrs. Vince from Cambridge”, visiting Slough on 23 April 1791. The guests were the astronomer Samuel Vince (1749–1821) and his wife Mary (1749–1847). Both persons are mentioned in C, while A only gives the former and in B the visit is missing entirely. Thus, we have “– – +” for Mary Vince.

What about the four cases where a visit is not listed in any of the three books, even though it should be? On 17 August 1787, John Moore (1730–1805), the Archbishop of Canterbury, was among 19 persons who visited the Herschels. However, he is only mentioned in a remark, made by Joseph Banks. Likewise, on 29 December 1791, Philip Stanhope, 5<sup>th</sup> Earl of Chesterfield (1755–1815), and his wife Anne (1759–1798) visited Slough. These two people are only documented in Caroline’s *Observation Book*. The last case concerns the visit of Joah Bates (1741–1799) on 13 September 1792 in Slough (see Section 9), which is only listed in the *Temporary Index* and in William’s *Journal*.

The analysis clearly shows that the third *Visitors' Book* is by no means a summary of A and B, in the sense that it is a transcript. There are 981 entries that appear in A and/or B, but are missing in C; the largest contribution (722) comes from those, listed in B after closing A. The reason is unknown. Finally, there are 112 entries, contained in the other sources, which should at least be in one of the *Visitors' Books* but are entirely missing (and this includes the four cases just mentioned).

#### 4.2 Date of Visit

For 2326 database entries the full dates (day, month and year) are known. However, in 72 cases the days are given differently in the documents. For 113 entries, only the month is listed and for 96 we just know the year; for nine of them it is not well defined (1783–1784) or

doubtful. An example is the “Duke of Gendarle” in Caroline’s *Visitors' Book*; this is John Crosbie, 2<sup>nd</sup> Earl of Glandore (1753–1815), the first Irish visitor. Generally, only the arrival date is listed, regardless of the length of the stay (which is only known in a few cases). The number of entries and visitors for each date is given. It is further noted that when William was on tour Caroline (or later Mary) would greet the guests. This was, for instance, the case when Joseph Haydn tried to meet William in June 1792 (see Section 9).

#### 4.3 Location

The database informs about the place of the visit: Bath, Datchet, Clay Hall or Slough. Except Bath, all are near Windsor Castle ([Figure 7](#)) and thus easily accessible for nobles.

#### 4.4 Person and Identity

First, the noted name and information is presented, like “Prince William, Duke of Clarence”. If the identity could be determined, the result (full name, title) is given in an extra column. The entry was split into separate rows if it contained more than one person, like “Dr. & Mrs. Maskelyne”. Relations (e.g. wife, son, daughter, brother) are mentioned. A column shows the number of visits.

#### 4.5 Personal Data

The year of birth and death and the lifetime is given, if known. Additional columns list the person’s age at the time of the visit and the number of years until death. These values must be plausible and thus are important for the identification. Furthermore, gender and nationality are given. For unidentified persons the original notes can provide hints, like “a French Gentleman”.

#### 4.6 Status and Profession

Scientists (e.g. astronomers, physicists, mathematicians), FRSs (Fellows of the Royal Society), musicians and nobles are marked. Further, their professions and positions are given, if known.

#### 4.7 Observations

For those persons who had the privilege of observing, the instruments and objects are given if known. It is further noted, if the night (on the given date) was also used by William and/or Caroline for their own observations, such as sweeping.<sup>12</sup> This would exclude a guest’s observation, which shows that the visit took place during the day; other sources (e.g. *Fixt Stars*, *Sweep Records*) can provide clarification.



Figure 7: Herschel's three homes near Windsor Castle: Datchet (D), Clay Hall (C, near Old Windsor) and Slough (S); the inset shows the main attraction, the Herschel Telescope (source: Ordnance map of the Windsor area in 1830).

## 5 STATISTICAL ANALYSIS

From 1777 to 1822, a period of 45 years, the total number of visitors is 2990 (including multiple visits). Of course, the mean number per year (66) is not meaningful. More interesting is the annual frequency (Figure 8).

The numbers prior to 1786, when the Herschels lived in Bath, Datchet and Clay Hall, were low. In 1784 and 1785, the siblings were absorbed with sweeping. The boom came with the move to Slough. The peak years were 1791,

1793, 1807, 1808 and 1811. The high numbers of observations in 1807 and 1811 are due to the Great Comets of those years. In 1808 there was no Herschel family summer holiday (the last was in 1817). There were no visits in 1805, for reasons that are not known.<sup>13</sup> The numbers naturally decreased in the final years, when William was old. There is no correlation with his astronomical activity, in the sense that there were fewer visits at times when he made extensive observations. It would seem that most visits happened without prior notice.

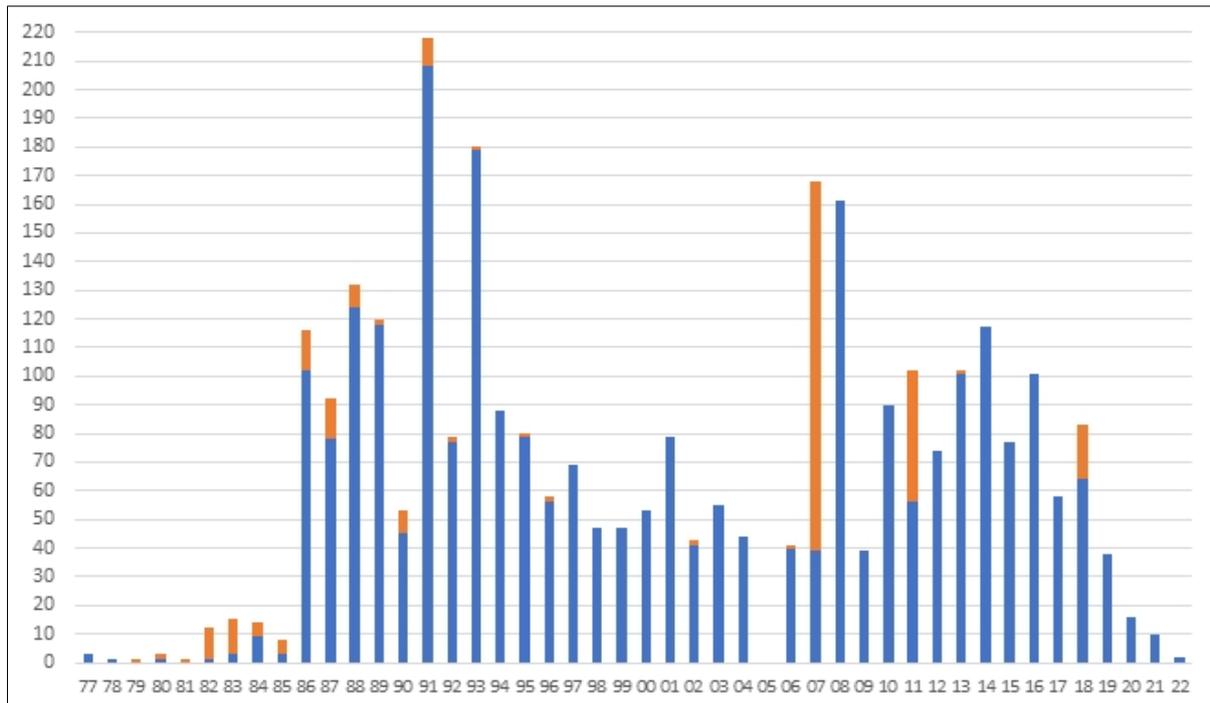


Figure 8: Annual visitor frequency from 1777 to 1822; blue = normal visit, orange = observation (plot: Wolfgang Steinicke).

The visitor could be identified in 1333 cases (53%). For 901, the identification failed, although a name is given. The first case concerns a “Mr. Hawkings” in Datchet on 4 July 1783. Of course, an identification is impossible when there is too little information or the name is too common. There are 24 cases where different people share the same surname. However, of the nine different “Mr. Smith” seven could be identified. In the *Memoirs*, we read “Professor Johnes, from Cambridge”. Taking ‘Jones’ in this case (assuming William’s notes to be more reliable), the dataset lists five different ‘Jones’ and one ‘Johnes’ (from Bath); none was identified. In 304 cases there is even no name, like “A physician” (1788) or “An Italian Prince” (1803). This often happens, when several people appeared together. Obviously, the host was stressed and unable to write down the information completely.

Both the years of birth and death are known for 841 persons; for 26 we have only one of the years. Number mystics should be interested in the fact that there are 75 pairs of people sharing the same years of birth and death (there are even eight trios). Among the hits are Jacob Herschel and Jakob Ludwig Schürer (1734–1792), Alexander Herschel and Elizabeth Planta (1745–1821), Dietrich Herschel and Rufus King (1755–1827); all persons are treated in the text. William Herschel’s years of birth and death (1738–1822) were nearly identical to those of George III (1738–1820).

In all, 692 identified persons appear only once; 141 made two visits and there are 81 with three or more. Table 3 lists the most frequent male (8 or more visits) and female (6 or more) visitors. Alexander Aubert was the only person who visited the Herschels at all four of their homes.

A total of 203 couples visited the Herschels, 179 only once and 21 twice. Four couples appeared three times: Bertie Greatheed (1759–1826) and his wife Anne (1750–1822); Philip Stanhope, 5<sup>th</sup> Earl of Chesterfield, with his wife Anne; George Yonge, 5<sup>th</sup> Baronet (1731–1812), and his wife Anne (1745–1833); and William Watson and his wife (name is unknown). Between 1784 and 1803, Nevil Maskelyne was joined five times by his wife Sophia in Datchet and Slough.

The Herschels were visited by 10 families and their relatives (four or more persons); the members did not always come together (some of these people are presented in other sections). These 10 families are listed below.

**Baillie:** Agnes Baillie (1760–1861), their sisters-in-law Joanna (1762–1851) and Sophia (1771–1845), and her niece Elizabeth Margaret (1794–1876); for Joanna, the well-known novelist, see Section 12.

**Batavus:** Wilhelm Batavus, Prince of Orange (1748–1806), his wife Wilhelmine von Preußen (1751–1820), the sons Wilhelm Friedrich von Oranien-Nassau (1772–1843) and Wilhelm

Table 3: The most frequent visitors; the persons are sorted by the number of visits (N); Remarks: in brackets = see section; O = the number of observations; Visits: B = Bath, D = Datchet, C = Clay Hall (all other visits in Slough); bold = observation, italics = William was absent; brackets = more than one visit in the year. The male persons are shown in Figure 9.

Name	Born–Died	Nation	Remarks	N	O	Visits
William Watson Jr.	1744–1824	England	Physician, Bath Philosophical Society, FRS (6)	14	4	<b>B1779, B1780(2)</b> , 1786, 1788, <b>1788</b> , 1788(2), 1789(2), 1791, 1792, 1796, 1799
James Lind	1736–1812	Scotland	Physician, FRS (6)	13	6	<b>D1783(2), D1784(2)</b> , D1784(2), <i>1786(2)</i> , <b>1790</b> , 1793, 1800, <b>1807</b> , 1807
Charles Blagden	1748–1820	England	Physician, FRS (6)	10	6	<b>D1783, D1784, C1785, 1786</b> , 1786, <b>1786, 1787</b> , 1790, 1791, 1795
Patrick Wilson	1743–1811	Scotland	Astronomer (7)	9	3	<b>D1783, 1787, 1793</b> , 1795, 1799(2), 1800, 1803, 1806
Joseph Banks	1743–1820	England	President of the Royal Society (12)	8	3	<b>D1783, 1786</b> , 1786, 1788(2), 1802, 1803, 1807
King George III	1738–1820	England	The King (11)	8	5	<b>1782(3), 1783</b> , 1787, <b>1793</b> , 1796, 1799
Alexander Aubert	1730–1805	England	Astronomer, FRS (7)	8	4	<b>B1782, D1783, C1785</b> , 1786, <b>1790</b> , 1795(2), 1800
Hans Moritz von Brühl	1736–1809	Germany	Astronomer (7)	8	2	<b>C1785</b> , 1789, <b>1790</b> , 1791, 1792, 1793, 1795(2)
Janet Wilson	?–1819	England	Daughter of Patrick Wilson	8		1786, 1795, 1800, 1801, 1803, 1806, 1815, 1816
Sophia Maskelyne	1752–1821	England	Wife of Nevil Maskelyne	6		D1784, 1786, 1789, 1793, 1803, 1817



Figure 9 (clockwise from top left): The most frequent visitors are Charles Blagden, Joseph Banks, Alexander Aubert, King George III, Hans Moritz von Brühl, Charles Burney, Nevil Maskelyne and John Playfair (public domain images).

Georg Friedrich, Prinz von Oranien-Nassau (1774–1799); the latter died at the early age of 25. For Wilhelm Batavus, see Section 11.

Boyle: George Boyle, 4<sup>th</sup> Earl of Glasgow (1766–1834), and his sons John (1789–1818), James

Carr-Boyle, 5<sup>th</sup> Earl of Glasgow (1792–1869), and William (1802–1819); William died at the early age of 17 and John at 29.

King: Robert King, 2<sup>nd</sup> Earl of Kingston (1754–1799), his wife Caroline (1754–1823) and their

Table 4: The homes of the Herschels and the years of their stay (for the last three places see [Figure 7](#)). From / to = first / last visit. The number of visits and persons (includes multiple visits) are given.

Place	From / To	Visits	Persons	First / Last Visitors
Bath (4.5)	1777	17	17	Nevil Maskelyne
	16 June 1782			Thomas Linley
Datchet (2.5)	9 August 1782	32	32	Jean-André DeLuc
	6 January 1785			Jean Hyacinthe de Magellan
Clay Hall (1)	6 May 1785	7	7	Hans Moritz von Brühl, Franz Xaver von Zach, Alexander Aubert
	1 November 1785			John Smeaton
Slough (36)	22 April 1786	2477	2929	Charles Blagden
	18 June 1822			Christian Frederik & Caroline Amalie of Denmark

two daughters Margaret Jane (1773–1835) and Mary Elizabeth (1778–1818).

**Harley:** Jane Elizabeth Harley, Countess of Oxford (1774–1824), and her four daughters Jane Elizabeth (1796–1872), Charlotte (1801–1880), Anne (1803–1874) and Frances (1805–1872).

**Hervey:** Frederick Augustus Hervey, 4<sup>th</sup> Earl of Bristol (1730–1803), his son Frederick William, 1<sup>st</sup> Marquess of Bristol (1769–1859), his brother William (1732–1815) and his wife Sarah.

**Howard:** George Howard (1718–1796) and his second wife Elizabeth, Countess of Effingham (1720–1791), the son from her first marriage Richard Howard, 4<sup>th</sup> Earl of Effingham (1748–1816), and his wife Harriet Elizabeth (1750–1815).

**Manners:** Mary Isabella Manners, Duchess of Rutland (1756–1831), her son John Henry, 5<sup>th</sup> Duke of Rutland (1778–1857), and the two daughters Elizabeth Isabella (1776–1853) and Katherine Mary (1779–1829). The 5<sup>th</sup> Duke was a cousin of Charles Manners-Sutton (1755–1828), the Archbishop of Canterbury; see Section 12.

**Parry:** Caleb Hillier Parry (1755–1822), his wife Sarah, son William Edward (1790–1855) and the two daughters Mary (1780–1848) and Elizabeth Emma (1790–1880); for William Edward, the well-known Arctic explorer, see Section 7.

**Spencer:** George John Spencer, 2<sup>nd</sup> Earl Spencer (1758–1834), his wife Lavinia (1762–1831) and daughter Sarah (1787–1870). In another line of nobility, we have George Spencer, 4<sup>th</sup> Duke of Marlborough, 6<sup>th</sup> Earl of Sunderland (1739–1817), and his son George Spencer-Churchill, 5<sup>th</sup> Duke of Marlborough, Marquess of Blandford (1766–1840), who was authorized to take the additional name Churchill; he came with his sons George, 6<sup>th</sup> Duke of Marlborough (1793–1857), George Henry (1796–1828) and Charles (1794–1840). For George John Spencer, 2<sup>nd</sup> Earl Spencer, see Section 11, for George Spencer, 4<sup>th</sup> Duke of Marlborough see

Section 7.<sup>14</sup>

There are 777 dates where the day, month and year are known. As expected, the months with the most visitors were July and August, and those with the least December and February. The number of visitors per date ranges from 1 to 58. On 208 dates there was only one person, on 183 we have two, and there are 30 dates with more than 10. The front-runners are: 23 visitors on 20 May 1793 and 19 October 1807, 32 on 15 September 1793 and 58 on 14 October 1807. There was no special reason for the gatherings in 1793. In 1807 the Great Comet of that year was viewed in the garden of Observatory House, and many nobles came over from Windsor Castle.

[Table 4](#) shows the four homes of the Herschels and related data. It is interesting that 19 different persons living in Bath visited them in the Windsor area; they came to Slough between 1786 and 1817.

Word about William's achievements spread widely and rapidly, so Observatory House was an attraction, with the giant 40-foot as a major land-mark. In the *Annals of Windsor*, we read ([Tighe and Davies, 1858: 596](#)):

The framework of Herschel's telescope formed a conspicuous object for many years, as travellers on the coach road between London and Oxford, by way of Henley-on-Thames, may remember.

The mean age of the persons at the time of their visit was 44 years. [Table 5](#) shows the youngest (under 10) and oldest guests (80 and over). [Figure 10](#) shows the age structure of the visitors.

Margaret Maskelyne came with her parents Nevil and Sophia. The family returned on 19 November 1803. On 14 June 1817, Margaret was joined by her mother; her father had died in 1811. Józef Teleki de Szék came with his 22-year-old brother László (1764–1821), a Hungarian politician and writer; Caroline only noted

Table 5: Youngest and oldest visitors at the time of their visit; all came to Slough.

Name	Born–Died	Visit	Age	Nation	Remarks
Margaret Maskelyne	1785–1858	15 September 1793	7	England	Daughter of Nevil Maskelyne
Józef Teleki de Szék	1778–1818	1786	8	Hungary	Brother of László Teleki de Szék
Frances Harley	1805–1872	10 June 1813	8	England	Daughter of Jane Elizabeth Harley, Countess of Oxford
Bertie Greatheed Jr.	1781–1804	23 October 1791	9	England	Son of Bertie Greatheed
Charles Wellesley	1808–1858	14 April 1818	9	England	Son of Arthur Wellesley, 1 <sup>st</sup> Duke of Wellington
Charles-François du Périer Dumouriez	1739–1823	29 June 1820	80	England	General, 2 <sup>nd</sup> visit
Jacob de Budé	1737–1818	12 November 1817	80	Switzerland	General, 3 <sup>rd</sup> visit
Peter Dollond	1731–1820	27 September 1812	82	England	Instrument maker, son of John Dollond, 2 <sup>nd</sup> visit
James Watt	1736–1819	22 September 1818	82	Scotland	Engineer, FRS, 5 <sup>th</sup> visit
William Heberden	1710–1801	18 October 1795	84	England	Physician, FRS, 5 <sup>th</sup> visit
Mary Delany	1700–1788	September 1787	86	England	Artist

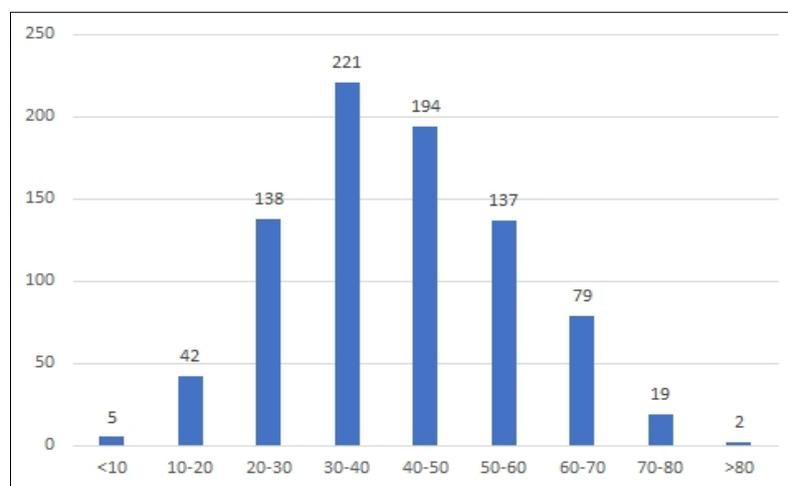


Figure 10: The age structure of the visitors (age at the time of their visit) (plot: Wolfgang Steinicke).

“Les Comtes Teleki”. In the case of Frances Harley, we read in the third *Visitors’ Book*: “June 10 in the evening. Lady Oxford with four daughters accompanied by Lord Byron.” (Anonymous, 1783–1822). The young girl appeared with her mother Jane Elizabeth Harley, Countess of Oxford, and her elder sisters Jane Elizabeth, Charlotte and Anne. At that time, the Countess was a lover of Lord Byron (see Section 11). The family might have arrived already a day before at Observatory House, but the *Visitors’ Book* only notes “Lady Oxford with Lady Jane, her daughter” for the 9<sup>th</sup>. In the case of Bertie Greatheed Jr., Caroline incorrectly wrote in the *Temporary Index* for 23 October and 5 November 1791: “Mr. Greatheed and his younger brother.” (C. Herschel, 1780–1808: 53). Bertie Greatheed, had only one brother, who died in 1766. Thus, the son is meant (see Section 6). Charles Wellesley was the youngest son of Arthur Wellesley, 1<sup>st</sup> Duke of Wellington (1769–1852), victor of Waterloo in 1815. Charles came with his 10-year-old brother Arthur, supervised

by their tutor (see Section 11).

The French General Charles-François du Périer Dumouriez had already visited Slough on 23 August 1807; William was on tour in south-east England. Jacob de Budé had formerly met him on 17 August 1787 and 26 April 1806. For James Watt see Section 12. The English physician William Heberden (FRS) visited the Herschels on 26 October 1786 and on 6 and 18 July and 14 September 1791. On 18 July, William was on tour with Mary. In 1786, Heberden was joined by Francis Wollaston (1731–1815); see Section 6. About 1754, William Heberden had married Wollaston’s sister Mary. In 1802, their father William Hyde Wollaston (1766–1828) has discovered the absorption lines in the solar spectrum. The oldest visitor was the English artist Mary Delany (1700–1788), known for her botanic collages and drawings, which earned her the admiration of the botanist Joseph Banks, President of the Royal Society (see Section 12).<sup>15</sup>

Table 6: Visitors in Slough in March 1791 (the source names are given). Different days (11, 12, 13) are noted in the *Temporary Index* (T) and the three *Visitors' Books* (A, B, C).

Person (source)	T	A	B	C
Lord Pembroke & company		11	10	11
King of Poland's brother	11		12	12
Chevalier St. Michael		11	12	12
Polish Ambassador		11	12	12
2 Barons & 2 Gentlemen		11	12	12

As mentioned above, there are 72 cases for which the dates in the *Visitors' Books* and other sources differ. A striking example is that of 10–12 March 1791, involving 11 visitors in Slough (Table 6). Three could be identified: George Augustus Herbert, 11<sup>th</sup> Earl of Pembroke (1759–1827), Michał Jerzy Poniatowski (1736–1794), brother of the King of Poland, and the Polish Ambassador Franciszek Bukaty (1747–1797). Caroline's *Temporary Index* lists an observation: "The King of Polands brother saw many objects, Mar. 11, 1791." (C. Herschel, 1780–1808: 53). Except for Lord Pembroke, *Visitors' Book C* copied the information in B.

The visitors came from 27 different nations

(Figure 11). Of course, England dominates with 41.3%, followed by Germany (13.6%), Scotland (9.2%), France (7.7%), and Ireland (5.0%). Altogether, 51 visitors were from the United States; among them was Chief Bowles (1765–1839), leader of the Cherokee Nation, who visited Slough on 19 March 1791 (see Section 12). He was the second visitor from overseas after the politician William Franklin (1730–1813) on 4 April 1789. Other exotic guests were Saleh Shirazi (1790–1845) and his brother Jafar (d. 1841). The *Visitors' Book B* notes "Mirza Jafar and Mirza Salih, two Persians of rank, introduced by Dr. Gredyard of Woolwich." (Anonymous, 1791–1828). The identity of "Dr. Gredyard" is unknown, but 'Mirza' is an historical royal and noble title used in Persia. The two students travelled through England in 1815–1818, arriving in Slough on 2 December 1818 (when Saleh was already 28 years of age).

Armenia, Lithuania, Luxembourg, Slovakia and Turkey were represented by one person. On 3 September 1819, the Armenian businessman and Ambassador to Great Britain, Set Khan Astvatsaturian (1780–1842), visited Slough.

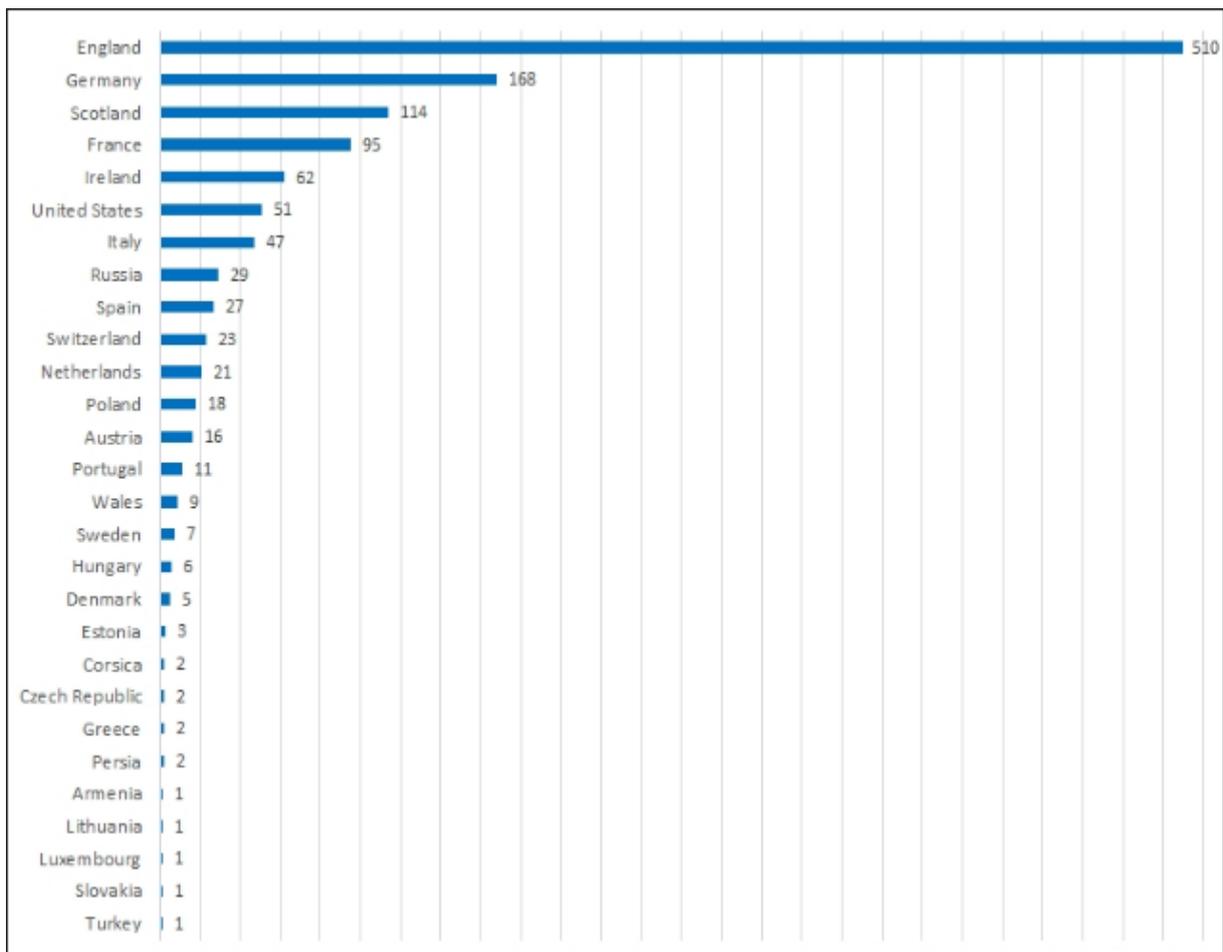


Figure 11: The visitors came from 27 nations. England clearly dominates (plot: Wolfgang Steinicke).

On 19 July 1788, we see the poet and Chancellor of Lithuania Joachim Chreptowicz (1729–1812) in Slough. The story of the Luxembourg astronomer Peter Ungeschick (1760–1790) is tragic. The Director of Mannheim Observatory was 30 years old when he visited Slough on 8 and 17 August 1790, and he died in November on his way back to Mannheim (see Section 7). The Slovakian visitor was Julianna Széchényi (1753–1824), the wife of Ferenc Széchényi (1754–1820), founder of the Hungarian National Library. The Turk was the diplomat Ahmed Asmi Efendi (1740–1820), who visited Slough on 14 August 1808.

Peter Ungeschick was not the only person who died shortly after his visit (in this case it took about 3 months). The Dutch stockbroker Abraham Goldsmith (1756–1810) appeared on 5 August 1810 and died 54 days later, on 28 September. Edward Disbrowe (1754–1818), Vice-Chamberlain to Queen Charlotte, died on 29 November 1818, 113 days after his visit in Slough on 8 August (just 12 days before Disbrowe's death, his Royal mistress passed away). Finally, Charles William Molyneux, 1<sup>st</sup> Earl of Sefton (1748–1795), died on 31 January 1805, 173 days after his visit on 11 August 1794.

Due to Herschel's activities and talents, astronomers, physicists and musicians are most interesting, and they are presented below in separate sections. Table 7 lists the major categories concerning the profession and status of the visitors. Note that astronomers are the second largest homogeneous group after physicians. Of course, the number of noble visitors is high, due to the proximity of Windsor Castle and London. The only one who visited William in Bath was Charles Englefield, 7<sup>th</sup> Baronet. Many guests were associated with the church or the military. Sixteen persons were bishops (including the Archbishop of Canterbury, John Moore, and his successor Charles Manners-Sutton). Among the military personnel were 32 Generals and 12 Admirals.

Although 94 persons were Fellows of the Royal Society, 49 of them were not scientists (in the period treated here, many noblemen were Fellows of the Society). England dominates with 60 Fellows, followed by Scotland (20) and Ireland (4); with one each from France, Greece, present-day Netherlands, Portugal, Russia and Spain.

Our analysis showed that 78% of the guests were male and 22% were female. We have three women scientists, all of whom visited Slough: the English botanist Emma Colebrooke (1752–1836) on 28 June 1792; the Scottish

botanist Henrietta Liston (1751–1828) on 27 March and 4 April 1817, together with her husband, the diplomat Robert Liston (1742–1836); and Mary Somerville (see Section 7).

In the period 1777–1822 treated here, Herschel made 40 tours (the first was in 1781, the last in 1817). One would expect no visitors to come, but that was not the case. During 20 tours guests arrived at his house (see Table 8), all of them at Slough. They apparently were unaware of William's absence. Many of them simply dropped in—after all, Slough was on the main westbound thoroughfare from London. A total of 239 people missed him on 110 dates, but they were usually greeted by Caroline, and occasionally she showed them the telescopes in the garden at Observatory House.

Table 7: Major categories concerning profession and status of the visitors (multiple mentions are allowed).

Profession / Status	Number
Nobility	344
Member of the military	190
Politician, Diplomat, Statesman	184
Fellow of the Royal Society (FRS)	94
Member of the church	87
Physician	44
Astronomer	41
Writer, Poet, Dramatist	35
Engineer, Inventor	27
Chemist	21
Physicist	18
Musician	18
Painter	17
Jurist	14
Merchant	14
Instrument-maker	14
Geologist	13
Publisher, Bookseller	12
Actor, Artist	10
Mathematician	9
Philosopher	7
Teacher, Tutor	6
Sheriff	6

On 11 tours, William was travelling with Mary, and from 1798 John joined the couple. These were the regular summer trips, lasting up to 59 days. Often Mary's niece Sophia Baldwin (1783–1820) was with them. Eight times, William travelled without a family member. On the split journey in 1792 (returning to Slough for a week), leading to Wales, Scotland and south-west England, he was joined by his Polish friend Jean-Baptiste Komarzewski (see Section 12). On the trip to Germany in 1786, he travelled

Table 8: Herschel's tours when guests visited his home; all concern Slough. D = number of days (whole tour); G = number of days when guests visited his home; N = total number of guests involved.

Year	Dates	D	Main Destinations	Fellow Travellers	G	N
1786	3 July–19 August	48	Hanover, Göttingen	Alexander	14	30
1791	13–20 July	8	Leicester, Derby	Mary	1	2
1792	29 May–15 July	48	Wales, Birmingham, Scotland, Devon, Thornhill	Komarzewski	8	23
1792	22 July–9 August	19	Southwest England, Birmingham	Komarzewski	3	5
1794	1–10 September	10	South Coast	Mary	1	1
1796	30 July–3 September	36	Bath, Glastonbury, Exeter, Dorchester, Salisbury		1	2
1797	1–24 August	24	Dartford, Rochester, Canterbury, Dover		2	10
1798	30 July–3 September	36	Bath, Exeter, Salisbury	Mary, John, Miss Baldwin	1	1
1801	29 July–31 August	34	Wales	Mary, John	10	39
1807	12–14 August	3	Tunbridge Wells		1	3
1807	18–28 August	11	Hastings, Eastbourne, Brighton, London		2	5
1809	12 July–3 September	54	Lakes, Yorkshire	Mary, John, Miss Baldwin	14	26
1810	12 July–3 September	54	Newcastle, Lakes, Glasgow, Edinburgh, Leeds	Mary, John, Miss Baldwin	10	22
1811	22 July–18 September	59	Leicester, Sheffield, Lakes, Edinburgh, Glasgow	Mary, John, Miss Baldwin	7	25
1812	4 September–2 October	29	Devon	Mary, John, Miss Baldwin	9	24
1813	30 August–23 September	25	Hastings, Eastbourne, Southampton	Mary, John, Miss Baldwin	5	33
1814	17 August–5 September	20	Bath, Exeter		2	4
1815	12 August–September?	20?	Bath, Dawlish, Exeter	John	2	6
1816	17–27 June	11	Cambridge	Mary, Miss Baldwin	4	13
1817	12 August–20 September	40	Bath, Dawlish, Exeter	Mary, John, Miss Baldwin	3	7

with his younger brother Alexander. In 1815, 23-year-old John was alone with his father. Occasionally, celestial objects were observed with the transportable 7-foot 'skeleton reflector'.

In all, 115 of the persons who visited his home when he was absent could be identified. Of these, 59 came only once and thus never met him. Two visitors came twice, missing him twice: the Manx Scholar John Kelly (1750–1809) and his wife Louisa (1767–1800), daughter of the eminent instrument-maker John Dollond (1706–1761). Their visits took place on 5 and 18 July 1786 when William was in Germany. For the 5<sup>th</sup>, we read in the *Memoirs*: "In the evening Dr. and Mrs. Kelly (Mr. Dollond's daughter) and Mr. Gordon came to see me." (*Mrs. J. Herschel, 1876: 60*). On the latter date, the Kellys were joined by Sarah Ramsden (1743–1796):

I spent the whole day in ruling paper for the register; except that at breakfast I cut out ruffles for shirts. Mr. and Mrs. Kelly and Mrs. Ramsden (Dollond's sister) called this evening. I tried to sweep, but it is cloudy, and the moon rises at half-past ten. (*ibid.*)

Sarah was married to Jesse Ramsden (1735–1800), an eminent English instrument-maker.

## 6 OBSERVATIONS

Caroline's *Temporary Index* and other documents (e.g. *Sweep Records, Fixt Stars*) show guest observations from 1779 to 1818 (*Figure 8*). There is a significant gap between 1793 and 1806. Later there were peaks in 1807, 1811 and 1818. The first two were due to bright comets. The last concerns only two nights, on 16 July and 8 August 1818, but with 12 and 7 visitors, respectively. On the first date, the crowd was led by the 20-year-old Michael Pavlovich Romanov, Grand Duke of Russia (1798–1849), on the second by Princess Sophia Matilda of Gloucester (1773–1844), a niece of George III. This was William's last public presentation—he was now 79 years old.

Which instrument was used depended on the status of the visiting person. Less qualified guests could only glimpse through the 7-foot Newtonian with its 6.2-inch mirror, the easy-to-use reflector that became famous through William's discovery of Uranus in 1781. The 9-inch reflector of 10 feet focus was of the same

kind, and Jupiter and Saturn offered impressive views. Astronomers had a different status. Some of them were allowed to observe with the 18.7-inch reflector of 20 feet focal length, the standard telescope to sweep for new nebulae and star clusters. To reach the eye-piece one had to climb up the wooden stand, a dangerous task at night, and a few people could even make a short sweep.

It was essentially William's job to observe with select guests. Generally, none of his telescopes was used when he was absent. Caroline was not allowed to use an instrument for a 'star party' and in any event, she was not able to manage the difficult task of setting up either of the larger telescopes. There is only one recorded exception, which happened on 13 August 1807. While William was on a short trip to Tunbridge Wells in Kent,<sup>16</sup> Prince Edward Augustus, Louis Philippe Joseph d'Orléans and his brother Louis Philippe visited Slough. Caroline used the 7-foot to show them the Moon and Jupiter, assisted by her 15-year-old nephew John. However, the general rule did not apply to her own instruments, such as the small sweeper (see below).

There are documented telescopic observations by guests on 75 nights, and in all 146 persons were present. Various instruments were used (Table 9), sometimes more than one on a single night. In October 1786, the 20-foot was changed from a Newtonian design into a front-view (secondary mirror removed, primary slightly tilted), equipped with an observing gallery, to reach the eye-piece in a comfortable manner (see Figure 12). The first visitor to use the converted instrument was Charles Blagden on 25 October 1786, and soon afterwards William and Caroline performed sweep 523.

The 'small 20-foot' was used on 28 August 1780 in Bath; William Watson was shown Jupiter. The second observation took place on 30 April 1783, when Joseph Banks visited Dat-

Table 9: Instruments used for guest observations and numbers of observations; the design, aperture (inches) and focal length (feet) are given. The small sweeper was Caroline's instrument. Abbrev. = the short name used here; N = nights; P = persons.

Instrument	Abbrev.	N	P
Newtonian 6.2-in, 7-ft	7-ft	32	82
Front-view 18.7-in, 20-ft	20-ft (fv)	21	38
Newtonian 18.7-in, 20-ft	20-ft	12	20
Newtonian 9-in, 10-ft	10-ft	11	24
Newtonian 4.5-in, 2.3-ft (small sweeper)	SS	4	13
Front-view 48-in, 40-ft	40-ft	2	3
Newtonian 12-in, 20-ft (small 20-foot)	s20-ft	2	2
'achromatic' 18 inches focal length	a18	1	2

chet. Uranus and deep-sky objects were viewed with this uncomfortable instrument. The 'achromatic', a small refractor of 18 inches focal length, was used by William and Caroline. The instrument was made by Edward Nairne (1726–1806), who visited Datchet on 29 November 1783 (see Section 12).

When in the autumn of 1789 the giant 40-foot front-view reflector of 48 inches aperture with its convenient observing platform became operational at Slough, many persons came to see it, especially nobles from nearby Windsor Castle.

Interestingly, we only have notes about two guest observations. The first concerns William's brother Alexander (see Section 10). The other was made on 5 November 1791; the visitors were Bertie Greatheed and his son. William wrote about observing Saturn in his *Journal*:

Mr. Greatheed saw the dark division, or rather opening in the ring. We followed the planet with the horizontal motion for about 40'. Mr Greatheed's brother saw all the six satellites very plainly. (*W. Herschel, 1774–1779: 70*).

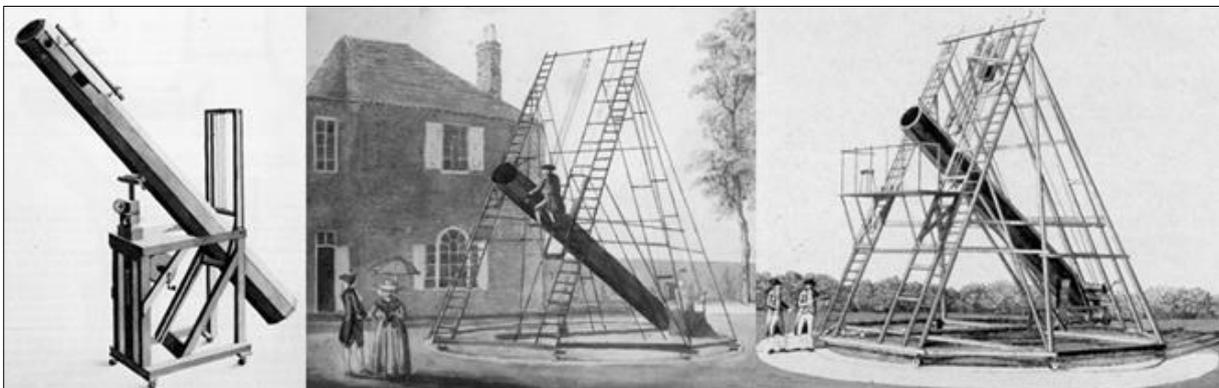


Figure 12: Herschel's most commonly used reflectors: the 7-foot Newtonian (drawing by William Watson), and the 20-foot Newtonian and its front-view version, equipped with a front gallery (public domain images).

Table 10: Telescopic objects shown to guest (for abbreviations see the previous table).

Object	Telescopes	Dates	Persons
Nebulae and Star Clusters	7-ft, 10-ft, s20-ft, 20-ft, 20-ft (fv)	34	55
Comets	SS, 7-ft, 10-ft	14	36
Uranus with moons	7-ft, 10-ft, s20-ft, 20-ft, 20-ft (fv)	13	21
Stars (single, double)	7-ft, 10-ft, s20-ft, 20-ft, 20-ft (fv)	12	18
Jupiter with moons	7-ft, 10-ft, s20-ft, 20-ft	9	38
Saturn with moons	10-ft, 20-ft (fv), 40-ft	8	16
Moon	a18, 7-ft, 10-ft	6	11
Mars	7-ft, 20-ft	2	3
Sun	7-ft	1	2

As already mentioned above, the son Bertie Greathead Jr. is meant (see [Table 5](#)); he died at the early age of 23. We see a similar error in the *Journal* entry of 23 October 1791:

Mr. Greathead and his brother saw all the six satellites of Saturn, and the black division upon the ring as well as a belt and the shadow of the ring upon the planet. ([W. Herschel, 1774–1799: 69](#)).

Here the 20-foot front-view was used. In the *Visitors' Book* the family name is incorrectly written as "Greathead".

When William was absent, Caroline sometimes was forced to interrupt her observations when visitors appeared. In a few cases, they could join, taking a look through the small sweeper, built for her by William mainly to hunt for comets. There are three documented examples. A few days after the discovery of her first comet on 1 August 1786, Caroline was visited by Henry Temple (FRS), 2<sup>nd</sup> Viscount Palmerston (1739–1802), Joseph Banks and Charles Blagden. She was observing with her handy Newtonian when the trio appeared on 6 August to see her spectacular find. On 29 December 1791, her 5<sup>th</sup> comet was shown to Philip Stanhope, 5<sup>th</sup> Earl of Chesterfield, and his wife Anne (see Section 11). On 12 January 1791, Karl Felix von Seyffer (1762–1822) could even measure its position (see Section 7). When Caroline found her 8<sup>th</sup> comet on 14 August 1797, she wrote in her *Memoirs*:

I went down from my observatory to call my brother Alexander that he might assist me at the clock. On my way in the garden I was met & detained by Lord Storker and another Gentleman who came to see my brother and his telescopes. By way of preventing too long an interruption I told the Gentlemen that I had just found a comet and wanted to settle its place. I pointed it out to them and after having seen it they took their leave. ([C. Herschel, 1782–](#)

[1824: 147](#)).

The identity of "Lord Storker" is unknown. The *Visitors' Book* shows seven other guests for 14 August, among them the Frenchmen Claude-Constant-César de Houdetot (1724–1806) and his brother César Louis Marie François Ange de Houdetot (1749–1825).

Another case concerns the Great Comet of 1811, when William, Mary and John were travelling through England and Scotland. The event of 9 September is documented in Caroline's third *Observation Book*: "Lord & Lady Harcourt came in the evening with Col. and Mrs. Harcourt and saw the comet through my sweeper." ([C. Herschel, 1782–1824: 106](#)). The guests were William Harcourt, 3<sup>rd</sup> Earl Harcourt (1743–1830), his wife Mary (1750–1833), Colonel George William Richard Harcourt (1775–1812) and his wife.

[Table 10](#) lists the observed objects. William's showpieces were nebulae and star clusters. Fifteen of these were chosen from Messier's catalogue, like the globular clusters M 2, M 3, and M 5, and the galaxies M 31, M 51 and M 64. But he also liked to present his own finds. There were 11 such objects, among them the conspicuous planetary nebulae NGC 1535, NGC 3242 and NGC 7662. In second place were comets, especially the bright appearances of those of 1783, 1807 and 1811. Uranus and its two moons were often observed with the 20-foot reflector (for the moons with the front-view). Then we have stars, mainly double stars, like Castor and Polaris. Of course, the ringed planet Saturn left a lasting impression on the guests, and its six known moons were viewed in the 20-foot. Finally, we have Moon and Mars, observed with smaller apertures.

There were three dates with a maximum number of five observers at the telescope: 15 June 1782, 19 October 1807 and 9 September 1811. The two latter concerned the Great Comets of those years. At these events, naked-eye observations also are documented: thus, 123 persons came to Slough on nine nights

between 4 and 21 October 1807. The comet moved from 6° to 16° above the western horizon in Serpens and Hercules while its brightness decreased from magnitude 1.7 to magnitude 2.7. Between 8 September and 25 October 1811, there were 43 visitors on nine nights. The comet moved from 19° to 34° above the western horizon in Ursa Major, Canes Venatici and Hercules, and its brightness decreased from magnitude 1.1 to magnitude 1.6. William explained the impressive cosmic visitors to his guests. He was always friendly and knowledgeable.

Six observing nights took place in Bath, three in Clay Hall, 16 in Datchet and 48 in Slough, and 20 astronomers and 7 physicists/mathematicians were allowed to observe. Further, we have 21 FRS, 22 nobles and two musicians (Joah Bates, Thomas Linley). The most frequent guest observers were Charles Blagden (6 times), James Lind (6), George III (5), Alexander Aubert (4) and William Watson (4)—see [Table 3](#). The three physicians Watson, Lind and Blagden, and the President of the Royal Society, Joseph Banks, will be treated below, Aubert in [Section 7](#) and the King in [Section 11](#).

After the guests had left the house or if they stayed inside during the evening (entertained by Mary), William often used a clear night for his own observations. This was the case on 151 dates; on 45 of them he even performed a sweep, assisted by Caroline. But there were also mixed scenarios: in 31 cases guests observed with William before he started his own regular work; in 12 cases the observations were interrupted for guests or they even took part in it. Such joint sessions, occasionally including a sweep, are discussed below. William also made observations during the day when guests were present. His target was the Sun. Although some visitors may have taken a look, only one case is documented. Agnes and Joanna Baillie saw the Sun on 6 April 1807 with the 7-foot. To guarantee a safe observation, William always used strong darkening glass as filters ([Steinicke, 2021: 15](#)).

For three dates (all concerning Slough), we must differentiate between day and night guests. For the latter an observation was noted, while the former either had left early or stayed in the house. The first case happened on 3 June 1786. According to the *Temporary Index* and the *Journal*, John Roger Arnold (1769–1843), the eminent English clockmaker, and Richard Howard, the 4<sup>th</sup> Earl of Effingham, Secretary of the Household to Queen Charlotte, observed with the 7- and 20-foot Newtonian reflectors. His wife, Harriet Elizabeth, is only mentioned in

Caroline's *Visitors' Book*. Obviously, she stayed in the house, perhaps due to the advanced time (in June it gets dark late). Afterwards, William performed sweep 572. The two other cases concerned de Lalande and Wollaston on 2 August 1788 and Salvador Jiménez Coronado on 13 April 1789 (see [Section 7](#)).

Seven persons, divided into two trios and a single, were allowed to sweep with the 20-foot Newtonian. For this task, one had to climb the front ladder to reach the observing chair at the Newtonian focus, about 3.5 m above the ground (see [Figure 12](#), middle). For inexperienced people, this action in the dark was a challenge. The first trio consisted of Alexander Aubert, Hans Moritz von Brühl (1736–1809) and Franz Xaver von Zach (1754–1832), sweeping on 6 May 1785 in Clay Hall. They were not only the first visitors at Herschel's third home, but Count Brühl and von Zach were also the first from Germany and Hungary. William, traumatized from his homeland experiences, generally spoke English. Whether this also extended to German guests is not known.<sup>17</sup>

While sweeping, Count Brühl found a nebula in Virgo, which turned out to be M 58. Each astronomer could even perform a 'star gage', counting the number of stars in the field of view while sweeping ([Steinicke, 2021: Chapter 4.1](#)). Afterwards, William and Caroline performed sweep 409. The second trio was active on 22 April 1786, and were the first Slough visitors: Charles Blagden, Joseph Banks and Henry Cavendish. Caroline's record for sweep 555 describes the event: when Leo crossed the meridian, several known nebulae appeared in the field of view. Blagden saw NGC 3389, Banks NGC 3593 and Cavendish NGC 3968. Finally, Banks made a 'star gage'. After an hour, the observation was terminated due to haze. The single person was John Smeaton (1724–1792), who used the 20-foot Newtonian in Clay Hall on 1 November 1785. When William and Caroline made sweep 468 in Eridanus, he noted "Partly Mr. Smeaton's observation." ([C. Herschel, 1783–1802](#)). For this prominent English engineer, see [Section 8](#).

Several persons who met the Herschels at different locations wrote accounts of their visits ([Hoskin, 2014a](#)). They are presented in [Table 11](#). The reports of Faujas, Magellan and Smeaton contain information about William's instruments, observing methods and Caroline's contribution.<sup>18</sup> However, Magellan's text is the only longer one, showing astronomical knowledge. That of Fanny Burney is part of her diaries, written under her later name Frances d'Arbly. Marie Sophie von La Roche is also known under her maiden name Gutermann (and after her

Table 11: Authors of reports, written after visiting the Herschels in Datchet, Clay Hall and Slough (column L); persons sorted by date. The publication (Publ.) years in brackets concern letters.

Author	Born–Died	Nation	Visit	L	Publ.	Remarks
Barthélemy Faujas de Saint-Font	1741–1819	France	15 August 1784	D	1799	Geologist
Jean Hyacinthe de Magellan	1723–1790	Portugal	6 January 1785	D	1785	Physicist
John Smeaton	1724–1792	England	1 November 1785	C	(1785)	Civil engineer
Frances ‘Fanny’ Burney	1752–1792	England	July & 30 December 1786	S	1842–1846	Novelist
Marie Sophie von La Roche	1730–1807	Germany	18 September 1786	S	1788	Novelist
Marc Auguste Pictet	1752–1825	Switzerland	July 1787	S	1787	Science journalist
Nevil Maskelyne	1732–1811	England	15 September 1793	S	(1793)	Astronomer
Giovanni Battista Rodella	1749–1834	Italy	Summer? 1794	S	>1794	Telescope maker

visit, William made sweep 588). She travelled through England with an anonymous female companion. Two accounts were taken from letters: Smeaton wrote to John Michell on 4 November 1785,<sup>19</sup> and Maskelyne to Nathaniel Pigott on 6 December 1793.<sup>20</sup> Rodella visited Slough in 1794, probably in the summer; his report is dated 4 November. The publication date is unknown, but must have been later.

We finally treat important visitors, who frequently met the Herschels and were able to make observations. These people are discussed individually below.

#### William Watson

The first of Watson’s 14 visits, made in December 1779, was already mentioned in Section 1. The physician and member of the Bath Philosophical Society was knighted in 1796 and became the Mayor of the city in 1801. He was a close friend of the Herschels and made fine drawings of their instruments (see [Figure 12](#)). The second meeting is dated 28 August 1780, with Herschel now living at 19 New King Street. Caroline wrote: “Dr. Watson saw Saturn through the 20 feet telescope.” ([C. Herschel, 1780–1808: 52](#)). Here the 12-inch Newtonian is meant. Still in Bath, he saw the Moon with the 7-foot on 8 September 1780. Watson’s next visit was in Slough in 1786; unfortunately, no date is given and nothing is documented. Then on 11 March 1788, Uranus and the Moon were observed:

Dr. Watson and Mr. Marsden saw the satellites of the Georgian planet in the place my calculation represents them. They saw also the volcano in the moon evidently much brighter than the rest of its unenlighted disk. I shewed the planetary nebula preceeding b Crateris [NGC 3242 in Hydra]; and the 3<sup>rd</sup> of the Connoiss. des temps [M 3 in Canes

Venatic] resolved into stars. ([W. Herschel, 1774–1799: 15](#)).

The Irishman and FRS William Marsden (1754–1836) was a known orientalist and numismatist. A curious lunar volcano was first seen on 4 May 1783, together with James Lind (see below). Watson came again on 4 and 8 May 1788. On the 4<sup>th</sup>, he was joined by the Swedish diplomat Johan Fredrik von Nolcken (1737–1809) and the Prussian envoy Joachim Karl, Graf von Maltzahn (1733–1817). On the 8<sup>th</sup>, Watson attended the marriage of William Herschel and Mary Pitt. He was a formal witness, and Joseph Banks was the Best Man (see below).

On 28 May 1789, he came with his wife Christiana (1739–1796) for the first time. The Dutch scientist Nikolaus Joseph Freiherr von Jacquin (1727–1817) and Davidson Richard Grieve (1741–1793), the High Sheriff of Northumberland, also were present.

On 1 December 1789, Watson appeared with some nobles: the King’s daughters Princess Charlotte Auguste (1766–1828) and Princess Augusta Sophia (1768–1840), and Mary Darcy, Countess of Holderness (1720–1801), Lady of the Bedchamber to Queen Charlotte. On 6 March 1791, he was joined by his wife Christiana.

Watson appeared in Slough on 8 May 1792 and 3 April 1796; on the former date, he met John Montagu (FRS), 5<sup>th</sup> Earl of Sandwich (1744–1814), and the diplomat John Coxe Hippley, 1<sup>st</sup> Baronet (1746–1825). On the latter date, he was correctly called “Sir William Watson” in the *Visitors’ Book*. Herschel observed during the night. On 4 January 1799, Watson came with Patrick Wilson. The last visit took place on 10 May 1817, when Watson was 73 years old. Caroline wrote in her *Memoirs*:

I met Sir William and Lady Watson at dinner at my brother’s, but was grieved

to see the sad change in Sir William's health and spirits, and felt my only friend and adviser was lost to me. (*Mrs. J. Herschel, 1876: 126*).

Because Christiana had died 11 years earlier, Lady Watson must have been Watson's daughter. William Watson joined the Astronomical Society of London, founded in 1820; he died on 15 November 1824 in Bath at the age of 80.

#### James Lind

The physician James Lind was a close friend of the Herschels, visiting them 13 times. He later taught at Eaton College. The first six visits were in Datchet, his hometown. Lind met William on 1 January 1783 and was allowed to observe.<sup>21</sup> We read in the *Fixt Stars*:

Dr. Lind saw A & 52 Orionis, the star preceeding the 37 nebula of Messier [M 37 in Auriga], 39 Lyncis, ζ Cancri, Rigel. All which he marked down upon paper, by which it appeared, on comparing them with my own observations that they perfectly agreed together. He also saw the Geo. Sidus with the 7 ft & with the 20 ft reflector, likewise the nebula of Orion, which was remarkably beautiful in the 20 ft reflector. (*C. Herschel, 1775–1784: 296*).

Five observing nights would follow. For 4 May 1783, William wrote in the *Journal*:

I perceived in the dark part of the moon a very luminous spot which I took to be Mons Porphirites. Mrs. Lind also ... said she saw a star upon the moon. I shewed it to Dr. Lind who looked for it afterwards with the achromatic but could not see it. I tried the same instrument and could just perceive it, but the great quantity of light of my new 10ft reflector shewed it immediately. (*W. Herschel, 1774–1799: 14*).<sup>22</sup>

Obviously, Lind was joined by his wife Anne Elizabeth, born in Austria). She was the first female visitor and it was the only documented meeting of the couple with the Herschels. In Fanny Burney's diary she was derogatorily described as "... a fat handsome wife who is as tall as himself [James Lind] and about six times as big." (*Sidney, 1893: 273*). William's spot on the Moon was interpreted as a 'volcano'.<sup>23</sup> This phenomenon was again seen on 19 and 20 April 1787. It was shown to Bishop Richard Watson on 11 March 1788 and a month later, on 8 April, to William Marsden and William Watson (see above). Besides the latter, Richard Watson is the only other Watson in the *Visitors' Books*.

The exact date of Lind's next visit is not known, but it followed Caroline's accident on 31 December 1783, which needed the help of a doctor. On a rather cold night, her leg was badly injured by a hook that was lying near the telescope, as recounted in her *Memoirs*:

The workman's wife was called, but was afraid to do anything, and I was obliged to be my own surgeon by applying aquabusade and tying a kerchief about it for some days, till Dr. Lind, hearing of my accident, brought me ointment and lint, and told me how to use them. (*Mrs. J. Herschel, 1876: 55*).

For 14 March 1784 we read in the *Sweep Records*: "Interrupted. Dr. Lind, Duke of Gordon etc." (*C. Herschel, 1783–1802*). Obviously, William and Caroline stopped sweep 168 at about 8:15 pm to greet their guests (it was a very windy night). They started the next one about 50 minutes later. The noble visitor was Alexander Gordon, 4<sup>th</sup> Duke of Gordon, Marquess of Huntly (1743–1827). The *Temporary Index* says "Duke of Gordon with some company saw some objects." (*C. Herschel, 1780–1808: 56*). The identity of the companions is unknown.

Lind's next visit was on 19 May 1784, documented in the *Fixt Stars*:

I shewed Dr. Lind the 3<sup>rd</sup> nebula of the Connoissance des temps [M 3 in Canes Venatici], which he immediately perceived to be nothing but stars. (*C. Herschel, 1775–1784: 619*).

Sweep 220 was interrupted. The same appeared for sweep 241 on 19 July, when Lind and Henry Temple (FRS), 2<sup>nd</sup> Viscount Palmerston, inspected the Milky Way with the 20-foot Newtonian, and "... admired a great number of the stars." (*C. Herschel, 1783–1802*).

On the next three visits, made in Slough on 3 and 8 August 1786 and 18 January 1790, Lind was joined by the Italian physicist and FRS Tiberius Cavallo (1749–1809); see Section 8. For 3 August 1786, we read in the *Memoirs*:

I went in the afternoon to Dr. Lind, who, with Mr. Cavallo, accompanied me to Slough, with the intention of seeing the comet, but it was cloudy, and remained so all night." (*Mrs. J. Herschel, 1876: 65*).

The missed comet was Caroline's first (of eight), discovered two days earlier. For 8 August, she noted: "Dr. Lind and Mr. Cavallo came on the 8th, and Mr. Paradise in the afternoon, but the evening was cloudy." (*Mrs. J. Herschel,*

1876: 72). The latter person is the Greek-born linguist John Paradise (1743–1795). Lind and Cavallo stayed overnight in the guest rooms of Observatory House. After they had left Slough on 18 January 1790, William and Caroline observed the comet in Cetus that was recently discovered by Méchain.

On 22 June 1793, Lind was joined by “Miss Fanshaw” and “Miss Hinley”. On 1 May 1800, he dined in Slough, as noted in the *Memoirs*. On the last two visits, made on 7 and 18 October 1807, he was joined by his eldest daughter Anne Elizabeth (1787–1866). They observed the Great Comet of that year, on the former date using the 7-foot telescope. On the latter date the Linds were joined by William Reeve (1757–1815); see Section 9. James Lind died in London on 17 October 1812 at the age of 76.

#### Charles Blagden

Blagden was a scientist who conducted important chemical and physiological experiments, initially in collaboration with Henry Cavendish (1731–1810). He visited the Herschels 10 times and made observations on six dates. The first two visits took place in Datchet on 29 September 1783 and 23 April 1784. For the former date we read:

I shewed the difference of the polar & equatorial diameters of Mars to Dr. Blagden & Mr. Aubert; the nebula between  $\gamma$  &  $\beta$  Lyrae with the dark spot in the middle [M 57],  $\zeta$  Cancri, treble star in Monoceros [ $\beta$  Monocerotis]; Georgium Sidus [Uranus]; concentric circles; nebula in Orion [M 42]; garnet star [ $\mu$  Cephei] etc. with the 20 ft & 7 ft reflectors; to Dr. Blagden also Castor with 278, 460, 932, 1504, 2176. (*W. Herschel, 1774–1799: 5*)

Note the high powers used for the double star Castor. That night, Caroline independently used her small sweeper. For the latter date, we read:

I shewed Dr. Blagden the nebulous stratum in Coma Berenices. The wind was extremely troublesome & the weather very unfavourable; we were however so far successful as to see 5 or 6 of the nebulae as they passed the meridian. (*W. Herschel, 1774–1799: 44*).

The “nebulous stratum in Coma Berenices” is part of the Virgo galaxy cluster. The 20-foot Newtonian was used (sweep 447). On 1 October 1785, we see Blagden in Clay Hall. The *Sweep Records* give: “Dr. Blagden looked with my great telescope [20-foot] and saw the stars of the 2nd of the Connoiss. des Temps [M 2 in

Aquarius].” (*C. Herschel, 1783–1802*). Two visits followed on 22 April and 6 August 1786 in Slough; on the latter date, William was in Germany.

For 25 October 1786 we read:

Shewed Dr. Blagden the planetary nebula in Andromeda [NGC 7662], the 31<sup>st</sup> and 32<sup>nd</sup> of the Connoissance [M 31, M 32], and my sister’s nebula near the former [NGC 205]. We used the front view instead of the Newtonian construction. (*ibid.*).

Blagden’s next visit was on 19 February 1787, documented in the *Journal* (after sweep 701):

Dr. Blagden saw the two satellites in the place we had delineated them before we looked at the planet [Uranus]. I shewed Dr. Blagden also the 64<sup>th</sup> of the Connoiss. where he saw the black space north of the bright point. (*ibid.*).

This is the origin of the name ‘Black Eye Galaxy’ for M 64 in Canes Venatici. Three visits followed on 17 October 1790, 2 July 1791 and 18 October 1795. Meanwhile, Blagden received the Copley Medal of the Royal Society (1788) and was knighted (in 1792). In late 1797, he retired from his position as Secretary of the Royal Society due to the loss of eyesight. Charles Blagden died in Arcueil, France, on 26 March 1820 at the age of 71.

#### Joseph Banks

Joseph Banks (Sir Joseph, from 1 July 1795), President of the Royal Society, was one of the most important persons in the life of the Herschels, visiting them nine times. At the first meeting, on 30 April 1783 in Datchet, William wrote:

I shewed him the Georgium Sidus with the 7 ft & 20 feet. The garnet star Cephei with 20 ft, Messiers 67 nebula in Cancer, the concentric circles,  $\varepsilon$  Bootis, Presepe,  $\chi$  Persei, Castor,  $\gamma$  Virginis, Algol. (*W. Herschel, 1774–1799: 12*).

On 22 April 1786, Banks came to Slough. The sweep session, joined by Charles Blagden and Henry Cavendish, was already described above. On 6 August we see him again, but now William is in Germany with Alexander. Banks was joined by Henry Temple, 2<sup>nd</sup> Viscount Palmerston, and his wife Mary, Lady Palmerston (1752–1805). He returned on 4 March 1788, and that night William observed sweep 813. On 8 May, he was Best Man at the wedding of William and Mary. Caroline was asked to be one of the two formal witnesses and when

William Watson volunteered to be the other, she eventually agreed. Mary's first son Paul Adey Pitt (1773–1793), and her brother Thomas Baldwin, also joined the ceremony. Paul died five years later at the early age of 20.

On 20 May 1793, Banks was accompanied by his wife Dorothea (1758–1818), and although there was no evident reason for the gathering, 23 persons were present at Observatory House. Among the guests were Algernon Percy, 1<sup>st</sup> Earl of Beverley (1750–1830), and his wife Isabella Susan (1750–1812); the English painter George Howland Beaumont, 7<sup>th</sup> Baronet (1753–1827); Cust Brownlow (FRS), 1<sup>st</sup> Baron Brownlow (1744–1807), and his wife Frances (1756–1847); Gilbert East, 2<sup>nd</sup> Baronet (1764–1828); Sigismund Ehrenreich Johann von Redern (1761–1841); and Bertie Greatheed, with his wife Ann and son Bertie.

On 26 April 1802 and 9 August 1803, Sir Joseph Banks was again in Slough. On the latter date he was joined by Ludwik Michał Pac (1778–1835), a Polish General in Napoleon's army. The next visit on 9 August 1807 was Banks' last. He was joined by John Charles Villiers, 3<sup>rd</sup> Earl of Clarendon, and a "Mr. De Tanville". Not mentioned in the *Visitors' Books* was the presence of Alexander Rogers, John Herschel's tutor (see Section 10). Joseph Banks died in London on 19 June 1820 at age 78.

## 7 ASTRONOMERS

Between 1777 and 1815, 41 astronomers visited the Herschels (Table 12). In all, 96 visits are documented, some of them are listed in the *Temporary Index*, mainly in connection with an observation. Of these visitors, 31 persons were professional astronomers (often they were also physicists or mathematicians), the rest amateurs. Some of the latter worked as an optician, an antiquarian, a businessman, a diplomat—even prison governor. The astronomers came from England (16), Scotland (5), France (5), Germany (5), Italy (2), Spain (2), with one each from Hungary, Luxembourg, Poland, Portugal and Sweden. Of the 41 astronomers about half (i.e. 21) visited only once. The most frequent astronomical visitors are presented in detail: Patrick Wilson (9 times), Alexander Aubert (8), Hans Moritz von Brühl (8), Nevil Maskelyne (7) and Francis Wollaston (6). Ten were FRSs, two (Henry Englefield and George Spencer) were nobles, and one (Mary Somerville) was the only woman.

### 7.1 Nevil Maskelyne

The Astronomer Royal at Greenwich, Nevil Mas-

kelyne (FRS), was a frequent guest of the Herschels, meeting them seven times in Bath, Datchet and Slough. Often his wife Sophia (1752–1821) joined him, later also their daughter Margaret (1785–1858). Caroline enjoyed a long friendship with the Maskelyne family, meeting them also in London. In 1775, Nevil had received the Copley Medal of the Royal Society.

Maskelyne was the first Herschel visitor in Bath (in 1777). On 15 June 1782, he was joined by the professional astronomer Anthony Shepherd and the amateur Alexander Aubert (see below); further guests were John Playfair (see Section 8) and the instrument-maker John Arnold (see 12). William organized a 'star party' in the back-yard of his house in Bath with the 7-foot Newtonian, the instrument used for the discovery of Uranus a year before. We read in the *Fixt Stars*:

I shewed Mr. Maskelyne, Dr. Shepherd, Mr. Playfair & Mr. Arnold [the star] h Draconis, they all saw it completely well, after they had seen it a sufficient number of times pass thro' the field of view. The same gentlemen saw  $\epsilon$  Bootis,  $\xi$  Librae,  $\xi$  Ursae majoris,  $\gamma$  Andromedae,  $\alpha$  Herculis, 55 Cassiopeiae. Mr. Aubert saw  $\gamma$  Leonis. The colours of  $\gamma$  Andromedae were esteemed extremely beautiful. (C. Herschel, 1775–1784: 212).

This was Maskelyne's only observation at the Herschels. In 1784 in Datchet, he was joined by his wife Sophia for the first time. The physician and FRS Petrus Camper (1722–1789) accompanied them. The naturalist was the first visitor from the Dutch Republic (now Netherlands). In 1785, he was twice in Clay Hall (but Caroline's *Visitors' Book* gives no date).

The first visit of the Astronomer Royal in Slough took place on 14 July 1786. Again, he was joined by Sophia, and Anthony Shepherd was with them. Because William was in Germany, the Maskelynes tried again on 23 November 1789.

On 15 September 1793, the couple were joined by their daughter Margaret, then only 8 years old (see Table 5). Observatory House was very crowded on that day, with the Herschels greeting 32 persons. Among them was the prominent engineer James Watt (see Section 12). Maskelyne wrote a report about his visit (see Table 11). The family visited again on 19 November 1803. Nevil died on 9 February 1811, and nearly six and a half years later Sophia and Margaret returned to Slough for a last time, on 14 June 1817. With six visits, Sophia Maskelyne is the female with the second highest num-

Table 12: Herschel was visited by 41 astronomers (A = amateur); they are sorted by their first visit. N = number of visits (sum = 97); B = Bath, D = Datchet, C = Clay Hall, none = Slough (more than one visit per year is marked); bold = observations, italics = William was absent.

Name	Born–Died	Nation	Remarks	N	Visits
Nevil Maskelyne	1732–1811	England	5 <sup>th</sup> Astronomer Royal at Greenwich, FRS	7	B1777, <b>B1782</b> , D1784, 1786, 1789, 1793, 1803
Henry Charles Englefield (A)	1752–1822	England	7 <sup>th</sup> Baronet, FRS	5	B1777, B1778, 1786, 1787, 1788
Anthony Shepherd	1721–1796	England	Plumian Professor of Astronomy in Cambridge	4	B1782, 1786, 1791, 1794
Alexander Aubert (A)	1730–1805	England	Loampit Hill Observatory, FRS	8	<b>B1782</b> , <b>D1783</b> , <b>C1785</b> , 1786, <b>1790</b> , 1795(2), 1800
Patrick Wilson	1743–1811	Scotland	Regius Professor of Practical Astronomy in Glasgow	9	D1783, <b>1787</b> , <b>1793</b> , 1795, 1799(2), 1800, 1803, 1806
Jean Hyacinthe de Magellan	1723–1790	Portugal	Physicist, FRS	1	D1785
Hans Moritz von Brühl (A)	1736–1809	Germany	Diplomat	8	<b>C1785</b> , 1789, 1790, 1791, 1792, 1793, 1795(2)
Franz Xaver von Zach	1754–1832	Germany	Director of Gotha Observatory	1	<b>C1785</b>
Thomas Hornsby	1733–1810	England	Savilian Professor of Astronomy in Oxford, FRS	2	1786, 1791
Samuel Vince	1749–1821	England	Plumian Professor of Astronomy in Cambridge, FRS	4	1786, 1791, 1798, 1799
Barnaba Oriani	1752–1832	Italy	Brera Observatory, Milan, FRS	2	1786, 1788
Jan Śniadecki	1756–1830	Poland	Director of Kraków Observatory	2	1786, 1787
Francis Wollaston (A)	1731–1815	England	Reverend, FRS	6	<b>1786</b> , 1788, 1791, 1791, 1795, <b>1795</b>
William Lax	1761–1836	England	Lowndean Professor of Astronomy in Cambridge, FRS	1	1787
Giuseppe Piazzi	1746–1826	Italy	Director of Palermo Observatory	3	1787, 1788(2)
Jean Dominique Cassini	1748–1845	France	Paris Observatory	1	<b>1787</b>
Pierre Francois Méchain	1744–1804	France	Paris Observatory	1	<b>1787</b>
Robert Blair	1748–1828	Scotland	Regius Professor of Astronomy in Edinburgh	2	1788, 1793
Antoine Darquier de Pellepoix	1718–1802	France	Toulouse Observatory	1	1788
Joseph-Jérôme Lefrançois de Lalande	1732–1807	France	Hôtel de Cluny, Paris	3	1788(3)
Edward Charles Pigott (A)	1753–1825	England	Variable star observer	1	1788
Johann Tobias Mayer	1752–1830	Germany	Göttingen University	1	1788
Salvador Jiménez Coronado	1747–1813	Spain	Director of the first Madrid Observatory, FRS	2	<b>1789</b> , 1789
Jøns Matthias Ljungberg	1748–1812	Sweden	Mathematician, Copenhagen	1	1789
Alexis-Marie de Rochon	1741–1817	France	Maritime optician	1	1790
Peter Ungeschick	1760–1790	Luxembourg	Director of Mannheim Observatory	2	<b>1790</b> , 1790
Stephen George Demainbray	1760–1854	England	King's Astronomer at Kew Observatory	1	<b>1791</b>
John Mortimer Brinkley	1763–1835	England	1 <sup>st</sup> Astronomer Royal of Ireland, Bishop of Cloyne, FRS	4	1791, <b>1791</b> , 1792, 1808
Karl Felix von Seyffer	1762–1822	Germany	Professor of Astronomy in Göttingen	1	1792

Pál Sárváry	1765–1846	Hungary	Collegio Debrecinense	1	1795
Patrick Copland	1748–1822	Scotland	Professor of Physics, Aberdeen	1	1799
William Sayers		England	“a young astronomer”	1	1802
Patrick Kelly	1756–1842	England	Metrologist, Finsbury Square Observatory	1	1803
George Spencer (A)	1739–1817	England	4 <sup>th</sup> Duke of Marlborough, FRS	1	1806
James Dinwiddie	1746–1815	Scotland	Physicist, science populariser	1	1807
Mary Somerville (A)	1780–1872	Scotland	Honorary Member of the Royal Astronomical Society	1	1812
Julián Ortiz Canelas	1767–1825	Spain	Director of the Spanish Naval Observatory, Cadiz	1	1813
William Edward Parry (A)	1790–1855	England	Arctic explorer, FRS	1	1814
John Merryweather (A)		England	Prison Governor, Lincoln Castle	1	1814
Dr. Reiner		Germany	“Dr. Reiner from Munich, astronomer royal of Bavaria”	1	1815
Thomas Catton	1760–1838	England	St. John’s College, Cambridge	1	1815

ber (after Janet Wilson).

## 7.2 Alexander Aubert

This English amateur astronomer and businessman met the Herschels eight times at all of their homes. He came from a Huguenot family and owned a notable observatory at Highbury House (Loampit Hill, Deptford), about a mile southwest of Greenwich. Aubert was elected a Fellow of the Royal Society in 1772. He was in regular contact with William, discussing observations and observing methods. Aubert’s first visit was on 15 June 1782 to Bath, ending in a star party, as mentioned above. The next two meetings, on 29 September 1783 in Datchet with Charles Blagden, and the sweep on 6 May 1785 performed at Clay Hall with Count Brühl and von Zach, were described above in Section 6.

Aubert first visited Slough in 1786. On 5 June 1790, Brühl and the French astronomer Alexis-Marie de Rochon were present. They were shown objects with the 7-foot and the 20-foot front-view telescopes. On 4 October 1795, Aubert was joined by Alexander Wedderburn, 1<sup>st</sup> Earl of Rosslyn (1733–1805), and Philip Stanhope (FRS), 5<sup>th</sup> Earl of Chesterfield. On the 18<sup>th</sup>, we see him again in Slough with 14 other guests, among them William Heberden, Charles Blagden, Anne Yonge, the American Colonel Benjamin Andrew Coleman (1765–1813) and Edward Adolphus St Maur (FRS), 11<sup>th</sup> Duke of Somerset (1775–1855); for the latter see Section 8. Aubert’s last visit was on 11 July 1800, together with a “Monsieur Otto from France”. Aubert died in London on 19 October 1805 at the age of 75.

## 7.3 Patrick Wilson

On 27 September 1783, Patrick Wilson, Regius Professor of Practical Astronomy at Glasgow

University, came to Datchet. He was the son and successor of Alexander Wilson (1714–1786), known for his solar research.<sup>24</sup> This was the first of nine visits, which extended to 1806. William noted in the *Fixt Stars*:

I shewed Mr. Wilson the revolution of Mars on its axis, the new division in the nebula of Orion, Geo. Sidus & many double stars with 278, 460 & 932. 7ft and 20ft reflector. We seemed always to agree perfectly in the appearance of the objects we examined together. (C. Herschel, 1775–1784: 441).

That same night, Caroline independently observed with her small sweeper. In 1786, Wilson’s daughter Janet met the Herschels alone in Slough; Charles Burney (1726–1814) was also present (see Section 9).

On 19 September 1787, the Scottish astronomer met William’s brother Jacob, and an observation was made (see Section 10). On 10 September 1793, the 7-foot and the 20-foot front-view telescopes were extensively used. There is a longer report in the *Journal*, describing observations of Saturn and its moons, the planetary nebulae NGC 7009 in Aquarius and NGC 7662 in Andromeda, the globular cluster M 15 in Pegasus and double stars. Wilson observed again the following night (M 51 in Canes Venatici was seen).

On 18 July 1795, Wilson came with his wife and daughter Janet, and John Playfair joined them. On 4 January 1799, we see him with Watson in Slough and on 13 September he returned with his wife. A “Doctor Micklesham from Scotland” also was present. The family again came to Slough on 3 April 1800, together with “Miss White”; Sarah (?) White lived in Newbury and joined the Herschel family on four

tours in 1793–1795. During the day, William observed the Sun.

On 19 March 1801, Janet Wilson came without her parents, and was joined by Sophia Baldwin and a “Miss Lindsay”. Again, William observed the Sun. There were nine other guests present, among them the Irish printer and publisher George Abraham Grierson (1763–1820). William observed during the evening. Wilson and his daughter were again in Slough on 3 April 1803. We read in the *Review*:

Dr. Wilson and the Rev. Mr. Jones from Cambridge saw the shadow of the 1<sup>st</sup> satellite of Jupiter upon the disk and also the satellite itself a little north preceding of the shadow. We saw it emerge afterwards. (C. Herschel, 1779–1819: 8).

Wilson’s last visit was on 22 September 1806, staying with Janet in Slough until the 30<sup>th</sup>. He died in London on 31 December 1811 at the age of 68. His daughter met the Herschels another two times, on 10 August 1815 and 2 January 1816. With seven visits, Janet Wilson was the most frequent female guest; she died in 1819.

#### 7.4 Hans Moritz von Brühl

The German diplomat and amateur astronomer, known as Count Brühl (FRS), was a good friend of the Herschels. Around 1787 he built a small observatory at his villa in Harefield, later setting up a Ramsden circle, one of the first instruments of the kind made in England. Brühl first visited the Herschels on 6 May 1785, at Clay Hall. The sweep session, in which Alexander Aubert and Franz Xaver von Zach also participated, has already been discussed in Section 6. This was the only visit by the well-known Hungarian astronomer von Zach, who for a long time had lived with the 18 years older Brühl in London as a partner, teacher and collaborator before being appointed Director of the Seeberg Observatory in Gotha. Brühl had recommended von Zach for this position to his chess friend Ernest II, Duke of Saxe-Gotha; the latter came to Slough on 20 July 1786.

Brühl’s second visit was on 28 September 1789 in Slough, and a “Dr. Willis” was also there. Next, he came on 5 June 1790, observing with Aubert and the French astronomer Alexis-Marie de Rochon; the 20-foot front-view was used (see below). On 19 June 1791, Brühl was joined by a “Count & Countess” and on 28 August 1792 we see him with the Royal Navy officer John Colville, 9<sup>th</sup> Lord Colville of Culross (1768–1849), and the Italian balloon driver Paolo Andreani (1763–1823); for the latter see Sec-

tion 12.

On Brühl’s next visits, he was one of many guests. On 23 June 1793, there were nine, among them the politician Henry Herbert, Lord Porchester, 1<sup>st</sup> Earl of Carnarvon (1741–1811), and his wife Elizabeth (1741–1811), the Royal Navy officer William Wellesley-Pole, 3<sup>rd</sup> Earl of Mornington (1763–1845), and Jean de Dieu-Raymond de Cucé de Boisgelin (1732–1804), Archbishop of Aix-en-Provence. On 23 April 1795, we see 15 persons in Slough. Those identified were Charles Talbot, 15<sup>th</sup> Earl of Shrewsbury (1753–1827), Robert Grosvenor, 1<sup>st</sup> Marquess of Westminster (1767–1845) and his wife Eleonor (1770–1846), the Russian General Christopher Reinhold von Nolcken (1728–1802), the Prussian Ambassador Sigismund Ehrenreich Johann von Redern, and Edward Adolphus St Maur, 11<sup>th</sup> Duke of Somerset (see Section 8).

On 28 May 1796, Brühl was one of 12 guests. We again see Christopher Reinhold von Nolcken, joined by the English writer Frederick Eden, 2<sup>nd</sup> Baronet (1766–1809), the Danish diplomat Christian Detlev von Reventlow (1748–1827), and the Swedish diplomat Lars von Engeström (1751–1826), who was later Chancellor of Lund University. There were four visits by members of the von Nolcken lineage. Besides the two by Christopher Reinhold von Nolcken, we have one by the Swedish diplomat Johan Fredrik von Nolcken on 4 May 1788 (together with Watson) and one by his son Reinhold Diedrich von Nolcken (1772–1842) on 17 December 1817. The latter is called “Baron Nollekin’s son” in the *Visitors’ Book*. This cannot be the sculptor Joseph Nollekens (1737–1823), who lived in London, because his father, the Flemish painter Josef Frans Nollekens (1702–1748), was not a nobleman.

Times were quieter on Brühl’s final visit (11 November 1804), as only “Mr. & Mrs. Hill from Edinburgh, friends to Dr. and Miss Wilson” are mentioned in the *Visitors’ Book*. After his death on 9 June 1809 in London, his second wife Mary (1741–1811) took over, visiting Slough twice, on 22 August 1809 and 26 April 1810. A year later she also died.

#### 7.5 Francis Wollaston

The Reverend Francis Wollaston (FRS) was owner of a private observatory with a fine 3.5-inch refractor by Peter Dollond. In 1802, the amateur astronomer received the Copley Medal of the Royal Society (he was also a member of its Council). He was the first to present objects from Herschel’s first catalogue of nebulae and star clusters (published 1786). The objects ap-

peared in his innovative star catalogue of 1789 (the objects were arranged in declination zones). Caroline used Wollaston stars to determine the positions of new deep-sky objects (Steinicke, 2021: 209). On 26 October 1786, the first visit of six, he was joined by his brother-in-law, William Heberden. An observation was made with the 20-foot, and Herschel, interrupting sweep 588, wrote:

Shewed Dr. Heberden and the Rev. Mr. Wollaston the planetary nebula [NGC 7662 in Andromeda]. They saw it by the front view. (C. Herschel, 1783–1802).

There were four more visits. On 2 August 1788, Wollaston was in Slough; Caroline noted in the record for sweep 851: “The Rev. Mr. Wollaston saw some of the nebulae of the *Connaissance des temps* resolved.” (*ibid.*). The 20-foot front-view telescope was used for Messier objects. Curiously, another guest, the well-known French astronomer Joseph-Jérôme Lefrançois de Lalande, is only mentioned in the *Visitors’ Books* (see below). Obviously, he did not join the observing session, which started at 10 pm. If he had been there at that time, he would certainly have attended. Thus, de Lalande must have been in Slough only during the day.

Wollaston appeared again on 22 April and 18 July 1791. On the latter date, he was again joined by Heberden (William and Mary made a trip to Leicester and Derby). The next visit was on 20 July 1795, together with eight other guests, among them the American Captain Benjamin Andrew Coleman with his wife Elizabeth (1755–1820) and the Spanish Ambassador Bernardo del Campo (1728–1800). On his last visit, on 14 December 1795, he observed with William, who noted in the *Review*: “Mr. Wollaston remarks that my double star in the cluster [M 35 in Gemini] may be the same as the preceding.” (C. Herschel, 1799–1819: 20). Probably the 7-foot reflector was used. Wollaston died in Chislehurst, Kent, on 31 October 1815 at the age of 83.

## 7.6 Others

The English amateur Harry Englefield (FRS), 7<sup>th</sup> Baronet, was one of two noblemen among the astronomers. The well-known antiquarian visited Bath in 1777, shortly after Maskelyne. He returned the same year and again in 1778. In 1786, we see him in Slough for the first time. On 12 April 1787, Englefield was shown Uranus with the 20-foot front-view telescope. Two other noble guests were present: Theophilus Hastings, 11<sup>th</sup> Earl of Huntingdon (1728–1804),

and Robert Jocelyn, 2<sup>nd</sup> Earl of Roden (1756–1820). We read in the *Journal*:

Lord Huntingdon saw the Geo. Sidus but could not perceive the satellite. Lord Roden saw the planet & one of the satellites but could not perceive the other. Sir Harry saw the planet. (C. Herschel, 1779–1819: 24).

In 1793, Englefield published the book *On the Determination of the Orbits of Comets*. A last visit took place on 11 December 1788. Long before his death in 1822, he lost his eyesight and thus did not meet Herschel again.

Anthony Shepherd, Plumian Professor of Astronomy in Cambridge, was among the illustrious participants of the Bath ‘star party’ on 15 June 1782, described above. On 14 July 1786, he joined Nevil and Sophia Maskelyne in Slough. On 6 July 1791 we see him there with William Heberden. On 22 June 1794, he was joined by the English engineer and FRS William Strutt (1756–1830), his wife Barbara (1761–1804) and daughter Elizabeth.

On 6 January 1785, the astronomer and physicist Jean Hyacinthe de Magellan (FRS) came to Datchet; he was the first visitor from Portugal and also the last at that place. The telescopes and observational methods were demonstrated by William and Caroline after finishing sweep 351. The guest wrote a competent report, see Table 11 (Steinicke, 2021: Chapter 2.3.2).

In 1786, new astronomical guests appeared in Slough, all were professionals (no exact date is given in the *Visitors’ Books*): Thomas Hornsby, Barnaba Oriani, Samuel Vince, and Jan Śniadecki. Śniadecki was the first guest from Poland.

Thomas Hornsby (FRS) was Savilian Professor of Astronomy at Oxford University, and one more visit by him is documented. On 29 June 1791 he was in Slough, joined by the Dutch politician Baron Frédéric Auguste August van Leyden (1768–1821) and five other guests. Among them were “Mr. & Mrs. Elid and daughter”. According to the *Memoirs*, the “Elds” visited Caroline at her Slough lodgings on 14 May 1799, together with James and Anne Elizabeth Lind.

On 6 August 1788, Barnaba Oriani, Director of Brera Observatory in Milan, observed some objects with the 20-foot front-view telescope. He was joined by Giuseppe Piazzi and Edward Pigott (see below). Afterwards, William and Caroline made sweep 854. This visit is only mentioned in the *Temporary Index*.

Samuel Vince (FRS), Plumian Professor of

Astronomy in Cambridge, had received the Copley Medal from the Royal Society in 1780 (Herschel got this award a year later). After 1786, he returned three times to Slough. On 23 April 1791, he was joined by his wife Mary (1749–1847), his colleague John Mortimer Brinkley (see below) and the German organist Johann Wilhelm Hässler (see Section 9). Vince appeared again on 29 May 1798, staying for two days; the *Memoirs* read: “Was mostly spent at the Observatory, Professor Vince being there.” (Mrs. J. Herschel, 1876: 98). On his final visit (13 September 1799), he was again joined by Mary, who died at the age of 98 in 1847.

Jan Śniadecki, Director of Kraków Observatory, met the Herschels again on 19 September 1787. This was a special date for William. Three other persons were present in Slough: William’s brother Jacob (see Section 10), Patrick Wilson and John Charles Lochée (1751–1791), the Royal Sculptor. During the day, Lochée took William’s bust, which is exhibited at the National Portrait Gallery, London. Caroline wrote in her *Memoirs*:

My brother’s bust was taken by Lockie, according to Sir Wm. Watson’s order. Professor Wilson and my brother Jacob were present. (Mrs. J. Herschel, 1876: 75).

Only the *Journal* mentions the nightly observation, made with the 20-foot front-view telescope: “Professor Sniadeki saw the Georg. Planet and its satellites as described. My brother Jacob Herschel saw the same.” (W. Herschel, 1774–1799: 10). Sweep 759 had been interrupted for the guests.

On 1 November 1787, William Lax (FRS), Lowndean Professor of Astronomy and Geometry in Cambridge, visited the Herschels. He was joined by the High Sheriff of Leicestershire, Charles Grave Hudson (FRS), 1<sup>st</sup> Baronet (1730–1813). Two days later, on 3 November, we see Giuseppe Piazzi, Director of Palermo Observatory, in Slough. William and Caroline observed during the night (sweep 773). Piazzi may have joined them and, possibly, the session ended with an injury. In the *Memoirs*, we read a remark by Caroline which points to such an event, but no date is given:

Even poor Piazzi did not go home without getting broken shins by falling over a rack-bar, which projects in high altitudes in front of the telescope, when in the hurry the cap had been forgotten to put over it. (Mrs. J. Herschel, 1876: 55).

The Italian astronomer returned twice in 1788.

On 6 August, he observed some objects with the 20-foot telescope, together with Barnaba Oriani and Edward Pigott (see below). During the day on 3 December (William and Caroline made sweep 889 that night), Piazzi appeared one last time in Slough, joined by the Ambassador of the Kingdom of Naples, Francesco Maria Venanzio d’Aquino, Prince of Carmanico (1738–1795). The Prince had already been in Slough in 1786. He made Piazzi Professor of Astronomy on 19 January 1787 and commissioned him to build an observatory in Palermo. Later, Piazzi caused some problems for Herschel. After the Italian discovered the minor planet Ceres on New Year’s Eve 1801, Herschel only received a letter about the find on 2 September. He was quite upset at the unnecessary delay and had some trouble finding Ceres (Steinicke, 2021: Chapter 3.3.2).

On 26 November 1787, four well-known Frenchmen visited Slough: the astronomers Jean Dominique Cassini and Pierre Francois Andre Méchain from Paris Observatory, the eminent mathematician Adrien-Marie Legendre (1752–1833), and the instrument-maker Noël Simon Carochet (1740–1813). It was their only meeting with Herschel. The guests observed on two nights with the 20-foot front-view telescope. On the first night Herschel wrote:

I shewed this nebula [NGC 1535 in Eridanus] to Messrs. Cassini, Mechain, Le Genre and Carochet, but moonlight being too bright, we did not see it well. (C. Herschel, 1783–1802).

The night of the 27<sup>th</sup> was much better, and other targets were selected:

Messrs. Cassini, L Genre and Carochet saw this nebula [NGC 7662 in Andromeda], and the moon being absent it appeared in its unusual planetary view; these Gentlemen saw it very well and admired it as a great curiosity. Mr. Cassini observed that a very small fixt star nf [north-east] the nebula appeared not unlike a satellite to it. I shewed the Gentlemen the 15<sup>th</sup> of the Connoissance des temps resolved into stars. The moon appearing permitted us not to go on with other objects. (*ibid.*).

Cassini assumed an ‘orbital motion’ of the star around the nebula (Steinicke, 2021: 303). He later died at the advanced age of 97.

On 11 February 1788, Herschel was visited by the Scot Robert Blair (FRS), the first Regius Professor of Astronomy at Edinburgh University. Three other persons were present: the Corsican politician Pasquale Paoli (1725–1807),

the Italian physicist and FRS Tiberius Cavallo and his compatriot, the writer Carlo Gastone della Torre di Rezzonico (1742–1796). The latter is called “Personico” in the *Visitors’ Book*; he was the first Italian visitor (24 July 1786). Blair, known as inventor of the aplanatic lens, returned to Slough on 6 January 1793. On 8 June, Antoine Darquier de Pellepoix had his only meeting with Herschel. In 1779, the astronomer at Toulouse Observatory had discovered one of William’s favourite targets, the Ring Nebula M 57 in Lyra.

On 2 August 1788, Herschel could greet Joseph-Jérôme Lefrançois de Lalande at Observatory House. The astronomer worked at the Hôtel de Cluny Observatory in Paris, together with Charles Messier (1730–1817). The famous French comet-discoverer never met Herschel (they communicated only by letter). De Lalande was joined by Francis Wollaston. Both were experts in star catalogues, used by Caroline to determine the positions of objects. The French astronomer stayed until the 4<sup>th</sup> and returned to Slough again on the 19<sup>th</sup>. Five other guests were present on the latter date, among them the Irishman Archibald Maclaine (1722–1804), court preacher to George III, and Joachim Rendorp (1728–1792), the Mayor of Amsterdam. De Lalande had a long friendship with Caroline ([Winterburn, 2017](#)).

The English amateur Edward Charles Pigott visited Slough on 6 August 1788. The talented son of the astronomer Nathaniel Pigott was famous for the discovery and observation of variable stars. In the *Sweep Records* we read:

I shewed Mr. Pigott junr. The nebula in Hercules [M 13] resolved into stars, and my planetary nebula near the 13<sup>th</sup> Andromeda [NGC 7662]. ([C. Herschel, 1783–1802](#)).

It is strange that the two other guests that night, Guiseppe Piazzi and Barnaba Oriani, are not mentioned, as it is almost certain that they also observed with Herschel and Pigott. Pigott never returned to Slough, and he died in Bath in 1825.

The final astronomical guest in 1788 was Johann Tobias Mayer, who visited the Herschels on 8 September. Mayer, from Göttingen, was the son of the well-known astronomer Tobias Mayer (1723–1762), famous for his studies of the Moon.<sup>25</sup> During the evening, William and Caroline carried out sweep 857.

For 13 April 1789, we read in Caroline’s *Temporary Index* “Abbe Ximenes, Ast. Sp.” There is also an observation, documented in the *Sweep Records*:

The Abbe Ximenes from Spain saw the

planetary nebula near b Crateris [NGC 3242 in Hydra]; the 53<sup>rd</sup> and 67<sup>th</sup> of the Connoiss, des temps [M 53 in Coma Berenices, M 67 in Cancer] and the Georgian Planet [Uranus]. With the 7 feet he also saw Jupiter; double stars etc. ([C. Herschel, 1783–1802](#)).

The identification of this person took some time. It is the astronomer Salvador Jiménez Coronado, Director of the first Madrid Observatory. He was the first identified Spanish visitor: according to Caroline’s *Visitors’ Book*, “two Spanish & one French Gentlemen” came to Slough on 19 August 1788 ([C. Herschel, 1783–1792](#)). On the mentioned day, the Herschels were visited by six other persons, but they did not join the observing session. Among them were the English politician George Nugent-Temple-Grenville, 3<sup>rd</sup> Earl Temple (1753–1813), the Welsh politician Thomas Bulkeley, 7<sup>th</sup> Viscount Bulkeley (1752–1822), his wife Elizabeth Harriet (1760–1826), and the Dutch officer Samuel Johannes Holland (1728–1801) and his son John Frederick (1764–1845). Salvador Jiménez Coronado made a second visit to Slough on 23 June 1789, which is only recorded in Caroline’s *Visitors’ Book* as “Abbe Ximenes, 4 or 5 Spanish Gentlemen”.

On 18 August 1789, the Swedish astronomer and mathematician Jøns Matthias Ljungberg visited Slough. Working in Copenhagen, he was known for his studies of Mercury. He was joined by Louis François Elie Camus de Pontcareé (1746–1810), first President of the Parliament of Normandy, and his wife Marie Paule de Vienne, who died shortly afterwards. William and Caroline independently observed the following night, which was marked by a strong Aurora Borealis. On 5 June 1790, Alexis-Marie de Rochon came to Slough. The French astronomer worked on lens design and crystal optics. He was accompanied by Count Brühl and Aubert (see above).

The Luxembourgish astronomer Peter Ungeschick visited Slough on 8 August 1790 and saw some objects. He then returned on the 17<sup>th</sup>. The sad story of his early death was already told above. In 1791, we see Stephen George Demainbray on 1 March and John Mortimer Brinkley on 23 April. The former was the son of Stephen Charles Demainbray (1710–1782), Royal Astronomer at the King’s Kew Gardens Observatory. After his death, Stephen George became his successor. The vacant (unofficial) position of a Royal Astronomer was first offered to Herschel, who politely declined the offer. It should not be confused with the post of Astronomer Royal at Greenwich, held by Nevil Maskelyne at that time. Demainbray was

shown Uranus and his satellites with the 20-foot front-view reflector; the *Journal* gives: “Mr. De-mainbray saw the both very well.” (W. Herschel, 1774–1799: 60). On 1 November 1783, Herschel used one of his clocks for sweeping but was not convinced of it.

John Brinkley was the 1<sup>st</sup> Astronomer Royal of Ireland at Dunsink Observatory and also Bishop of Cloyne (called “Bunkley” in the *Visitors’ Book*). In 1824, he received the Copley Medal of the Royal Society. On 23 April 1791, Brinkley was joined by his wife Esther, his colleague Samuel Vince, the English hydrographer and FRS Joseph Huddart (1741–1816) and the German organist Johann Wilhelm Hässler (see Section 9). He returned to Slough on 18 October when some objects were observed. On 4 June 1792 and 10 July 1808, Brinkley came again with his wife. On the latter date, the couple was joined by 13 unidentified persons.

According to Caroline’s *Temporary Index*, Karl Felix von Seyffer from Göttingen University visited Slough on 12 January 1792 (the second *Visitors’ Book* gives the 1<sup>st</sup>); the astronomer is called “Sifer” and “Syffar”. In the night, he measured the position of Caroline’s 5<sup>th</sup> comet with the small sweeper. The event is documented in her *Observation Book* (“Professor Seyffer’s observation”). In 1808, Seyffer became Director of Munich Observatory at Bogenhausen.

Pál Sárváry visited Slough on 9 August 1795. The Hungarian mathematician and astronomer worked at Debrecen (Collegio Debrecinense in Hungaria Celeberrimum astronomum). On 19 June 1799, the Scot Patrick Copland, Professor of Physics and Mathematics at Marischal College in Aberdeen, met the Herschels. The keen observer was responsible for building the Castlehill Observatory. Copland was joined by Alexander Gordon, 4<sup>th</sup> Duke of Gordon, Marquess of Huntly. For 2 January 1802, we read in the *Visitors’ Book*: “Wm. Sayers, a young astronomer introduced by Mr. West”. The identity of William Sayers is not known.<sup>26</sup>

On 12 July 1803, William was visited by Patrick Kelly. The Englishman was an expert in metrology and Master of Finsbury Square Academy, London (Edmunds, 2017). The institution owned a small observatory for practical instruction in astronomy and navigation. In 1796, Kelly published the textbook *A Practical Introduction to Spherical and Nautical Astronomy*. In 1820 he was one of the founders of the Astronomical Society of London (later RAS), which was able to win William Herschel over as its first President. Kelly returned twice to Slough, on 9 May 1813 and 16 August 1814.

On the former day, he was joined by “Lord Ross & sons”. This is the English peer George Boyle (FRS), 4<sup>th</sup> Earl of Glasgow, and his sons John, James and William. In 1814, there was a second visitor, “Rev. Mr. Pierson of Shean”. For 27 September 1812, the *Visitors’ Books* mention a “Mrs. Kelly, a young Lady & Mr. Dollond”. The former person could be Kelly’s wife (no biographical data are known). However, there is another possibility. The hint to the eminent instrument-maker John Dollond, could imply a connection with the other Kelly family, treated above: John Kelly and his wife Louisa, daughter of John Dollond. But this is impossible, because Louisa had already died in 1800. It is not known if there was a connection between the two Kelly families.

In July 1806, George Spencer (FRS), 4<sup>th</sup> Duke of Marlborough, 6<sup>th</sup> Earl of Sunderland, visited William. In his luxurious home, Blenheim Palace near Oxford, the rich amateur astronomer had built an observatory on the south-east tower in about 1780. It was equipped with a Ramsden transit instrument, an 18-inch Gregorian reflector by Short, a 6-foot radius quadrant and a small Tully refractor. Spencer, also known as Lord Sunderland, had learned the techniques for using the instruments from Thomas Hornsby. Later in 1789 he erected another observatory on the south-west tower. The amateur kept up a lively scientific correspondence with Count Brühl. In the *Visitors’ Book* we read about the visit: “Lord Sunderland & 3 other young Noblemen, sons of the Marquis of Blandford”. The “Marquis” was Lord Sunderland’s son George Spencer-Churchill, 5<sup>th</sup> Duke of Marlborough, Marquess of Blandford. He was not present in July 1806, but had visited the Herschels once on 2 March 1790. His three sons were George, 6<sup>th</sup> Duke of Marlborough, George Henry and Charles. The 10-, 11- and 12-year-old boys came together with their tutor “Mr. Thomas”.

On 21 October 1807, Herschel was visited by the Scottish astronomer James Dinwiddie. He was well-known as a science populariser. He resided in Calcutta, India, and travelled to China, promoting British astronomical techniques.

On 3 September 1812, the Scottish woman Mary Somerville, née Fairfax, visited the Herschels. Together with Caroline, she was the only notable female astronomer of the time. In 1835, both were elected the first female Honorary Members of the Royal Astronomical Society. When coming to Slough, Mary was 31 (Caroline was already 62). She was joined by her second husband William Somerville (1771–1860), a physician; they had just married, in

May 1812. Her first husband, Samuil Samuilovich Greig (1778–1807), the Russian Consul in London, did not think much of women’s intellectual capacities. After his death in 1807, Mary began mathematical and astronomical studies, which were eventually published under the pseudonym ‘A Lady’ (Neeley, 2001). She died in Naples on 29 November 1872 at the age of 91 (Caroline even reached her 97<sup>th</sup> year). Nothing is documented about the meeting of the eminent female astronomer in Slough.

Julián Ortiz Canelas, Director of the Spanish Naval Observatory in Cadiz, visited the Herschels on 26 August 1813, together with “Dr. Jose Espinosa, General de Marina”. William observed that night.

On 21 July 1814, William Edward Parry came to Slough, together with his wife and daughter. In 1810 he had travelled around Spitsbergen, using this time for astronomical observations at the northern latitudes. In 1816 Parry published his studies under the title *Nautical Astronomy by Night*. Two years later his career as an Arctic explorer began. Together with Captain John Ross (1777–1856), they searched for the famous Northwest Passage. During his Slough visit, Parry was joined by Frederick William Hervey (FRS), 1<sup>st</sup> Marquess of Bristol (1769–1859). In 1780, Parry’s father Caleb Hillier Parry had visited the Herschels in Bath. In Caroline’s *Autobiography* we read: “About that time an intimacy with Dr. Parry also commenced who lived in the same neighbourhood and but lately come to settle at Bath.” (Hoskin, 2003: 61). Since 1779, the physician and FRS worked at the Bath General Hospital. On 6 July 1816, Isabella Mattocks, actress at Covent Garden Theatre, visited Slough. She returned on 10 August 1815, joined by “Mr. Nun”, “Miss Barber” and “Miss Thuson”.

On 10 August 1814, we see an exceptional guest in Slough, John Merryweather (biographical data are not known). He was Governor of Lincoln Castle Prison from 1799 to 1830. Besides this position, he was an ambitious amateur astronomer who set up a small telescope on the medieval castle tower (using some of the prison’s money).

The last two astronomers visited Slough in 1815. For 9 July we read in the *Visitors’ Book*: “Dr. Reiner from Munich, astronomer royal of Bavaria”. This royal title did not exist and the identity of this German scientist remains unknown. On 3 November we see the Reverend Thomas Catton from St. John’s College, Cambridge. He was entrusted with the care of the small observatory situated on one of its towers.

The English politician Edward Smith-Stanley, 13<sup>th</sup> Earl of Derby (1775–1851), and his wife Charlotte Margaret (1778–1817) were also present.

## 8 PHYSICISTS AND MATHEMATICIANS

As Table 13 reveals, 27 physicists and mathematicians visited the Herschels (at that time, a physicist was often called a ‘natural philosopher’), and there are 47 documented events between 1782 and 1817. The scientific guests came from England (7), Scotland (7), Switzerland (4), Germany (3), Italy (2), and 1 each from Austria, France, Ireland and the Dutch Republic. John Playfair has six visits, followed by Edward Adolphus St Maur with five. The latter and Benjamin Thompson were the only nobles. Nine were FRSs, and there was no woman among the physicists and mathematicians.

John Playfair (FRS), Professor of Mathematics at Edinburgh University, visited the Herschels six times. The first meeting took place on 15 June 1782 in Bath. On 20 August 1788 he came to Slough, on 18 July 1795 he was joined by Patrick Wilson and his family. On 11 July 1799, Playfair was one of eight visitors, among them the Irish illustrator Lavinia Spencer, Countess Spencer, the Scottish geologist and FRS John Webb Seymour (1777–1819), and Sarah Parry with her daughter Mary. On 27 July 1809, he was again joined by Seymour. At Playfair’s last visit on 15 July 1811, we also see the English chemist Humphry Davy (1778–1829) and the Scottish anatomist Robert Knox (1791–1862).

In Datchet, the Herschels were visited on 9 August 1782 by their neighbour, the Swiss geologist Jean-André DeLuc. He later became Professor of Geology in Göttingen. In the *Fixt Stars* an observation with the 7-foot telescope is documented:

I took some observations of the nebula or apparent comet. There are some small stars very near it, the nearest of these is about 30" or 40 [distant]. Mons. De Luc observed with me. (C. Herschel, 1775–1784: 217).

William’s “apparent comet” turned out to be the globular cluster M 5 in Serpens. Three more visits followed in Slough. On the first (24 May 1789), DeLuc was joined by Alexander Wedderburn, 1<sup>st</sup> Earl of Rosslyn, Baron Loughborough, and Constantine John Phipps, Lord Mulgrave (see Section 11). He returned on 20 June. The last visit took place on 19 May 1797; the English historian Thomas Maurice (1754–1824) was also present. However, there is a visit by DeLuc’s wife Mary (1740–1805) on 25

Table 13: Herschel was visited by 27 physicists and mathematicians. They are sorted by the first visit. N gives the number of visits (sum = 47). The first concern Bath, Datchet and Clay Hall; bold = observations, italics = William was absent.

Name	Born–Died	Nation	Remarks	N	Visits
John Playfair	1748–1819	Scotland	Professor of Mathematics at Edinburgh University, FRS	6	<b>B1782</b> , 1788, 1795, 1799, 1809, 1811
Jean-André DeLuc	1727–1817	Switzerland	Professor of Geology in Göttingen	4	<b>D1782</b> , 1789(2), 1797
John Smeaton	1724–1792	England	Civil engineer, physicist	1	<b>C1785</b>
Henry Cavendish	1731–1810	England	Physicist, FRS	1	<b>1786</b>
Tiberius Cavallo	1749–1809	Italy	Physicist, FRS	4	<i>1786(2)</i> , 1788, <b>1790</b>
Christian Gottlieb Kratzenstein	1723–1795	Germany	Professor of Physics in Copenhagen	1	1786
Abraham Robertson	1751–1826	England	Savilian Professor of Geometry in Oxford, FRS	4	1786, 1796, 1810, 1813
Joseph Priestley	1733–1804	England	Physicist, FRS	2	1786, 1792
Marc Auguste Pictet	1752–1825	Switzerland	Scientific journalist, physicist	3	1786, 1787, 1798
Jan Hendrik van Swinden	1746–1823	Dutch Republic	Professor of Physics in Amsterdam	1	1787
Adrien-Marie Legendre	1752–1833	France	Professor of Mathematics at École Polytechnique, Paris, FRS	1	1787
Gabriel Gruber	1740–1805	Austria	Mathematician, engineer, Jesuit	1	1788
James Williamson	1725–1795	Scotland	Professor of Mathematics in Glasgow	1	1789
Jakob Ludwig Schürer	1734–1792	Germany	Professor of Physics in Strasbourg	1	1789
Simon Antoine Jean L'Huilier	1750–1840	Switzerland	Professor of Mathematics in Geneva	1	1790
Bryan Higgins	1741–1818	Ireland	Physicist, School of Practical Chemistry, London	1	1794
Thomas Young	1773–1829	England	Professor of Physics at the Royal Institution, London, FRS	3	1794, 1810, 1812
Edward Adolphus St Maur, 11 <sup>th</sup> Duke of Somerset	1775–1855	England	Amateur mathematician, FRS	5	1795, 1796, 1812, 1814, 1820
Isaac Milner	1750–1820	England	President of Queens' College, Cambridge, FRS	1	1797
Benjamin Thompson, Count Rumford	1753–1814	England	Physicist, FRS	1	1798
Giovanni Aldini	1762–1834	Italy	Professor of Experimental Physics in Bologna	1	1803
Alexander Rogers		Scotland	Tutor of John Herschel	1	1807
Thomas Jackson	1773–1837	Scotland	Professor of Physics in St Andrews	1	1810
David Brewster	1781–1868	Scotland	Professor of Physics in St. Andrews, FRS	1	1814
Johann Salomo Christoph Schweigger	1779–1857	Germany	Professor of Physics in Erlangen	1	<i>1816</i>
William Knight	1787–1844	Scotland	Professor of Physics in Belfast and Aberdeen	1	1817
Pierre Prévost	1751–1839	Switzerland	Professor of Physics in Geneva, FRS	1	1817

July 1786 in Slough, mentioned in Caroline's *Autobiography* (William and Alexander were in Germany). According to the *Visitors' Book*, Mary came again on 15 September 1800, together with a "Mrs. Snead".

John Smeaton (FRS) was an eminent civil engineer. In 1759, he had received the Copley

Medal of the Royal Society. The 'father of civil engineering' visited Clay Hall on 1 November 1785 and had the opportunity to use the 20-foot Newtonian, William noting that sweep 468 was "... partly Mr. Smeaton's observation". ([C. Herschel, 1783–1802](#)). The 61-year-old engineer wrote a report about this event (see [Table](#)

11).

On 22 April 1786, Herschel greeted his first guests in Slough. Among them was the eccentric physicist Henry Cavendish, discoverer of the element hydrogen and well-known for his determination of the Earth's density (the famous Cavendish Experiment). In 1766, he had received the Copley Medal of the Royal Society. In Slough, Cavendish was accompanied by Charles Blagden (at that time his scientific co-worker) and Joseph Banks. The trio were allowed to sweep with the 20-foot Newtonian reflector (see Section 6).

The Italian physicist Tiberius Cavallo appeared in Slough on 3 August 1786. He was accompanied by the physician James Lind, one of the most frequent visitors (see Section 6). Both returned on the 8<sup>th</sup>, joined by the Greece-born linguist John Paradise. Unfortunately, at that time William was in Germany with his brother Alexander. Two more visits are documented. On 11 February 1788, Cavallo came with Robert Blair, Pasquale Paoli and Carlo Gastone della Torre di Rezzonico (mentioned above). On 18 January 1790, we see him again with Lind, observing with William:

Mr. Méchain's comet. I viewed it in the early part of the evening, no nucleus; considerably bright, 5' or 6' diameter. I shewed it to Dr. Lind and Mr. Cavallo. ([W. Herschel, 1774–1799: 52](#)).

Pierre Méchain had found the object on the 9<sup>th</sup>. The observation, noted in the *Journal*, was made with the 10-foot reflector.

On 13 August 1786, the German Christian Gottlieb Kratzenstein, Professor of Physics and Medicine in Copenhagen, visited Slough. William was on tour in Germany with Alexander. In the same year (the date is not known), we see Marc Auguste Pictet and Joseph Priestley (FRS). The Swiss physicist and science writer Pictet returned twice. There is a report about the visit in July 1787 (see [Table 11](#)). On 11 September 1798 he was joined by the Dutch biologist Jan Ingenhousz (1730–1799), who died nearly one year after the visit. In the *Memoirs* we read: "Dined at my brother's. Professor Pictet and Dr. Ingenhouse, &c., were there. Cloudy night." ([Mrs. J. Herschel, 1876: 98](#)). In 1772, the physicist Joseph Priestley had received the Copley Medal of the Royal Society. He came again to Slough on 10 April 1792 when 11 other guests were present, among them Herschel's Polish friend Jean-Baptiste Komarzewski (see Section 12), the British General Henry Phipps, 1<sup>st</sup> Earl of Mulgrave, and Pedro Normande y Mericán, the Spanish Ambassador to Poland.

Abraham Robertson, Savilian Professor of Geometry in Oxford, was a colleague of Thomas Hornsby. He came to Slough in 1786. On 29 December 1797, he was joined by his wife and daughter. Robertson returned alone on 5 June 1810 and 4 June 1813.

The Dutch physicist Jan Hendrik van Swinden, teaching in Amsterdam and Franeker, came on 6 August 1787, together with other guests. Among them were "The Masters, Wardens and Committee of the Salters Company",<sup>27</sup> the British General William Hervey (1732–1815), the Irishman Henry Hamilton (1734–1796), Deputy-Governor of the Province of Quebec, and his brother Sackville (1732–1818), a politician.

The Austrian Gabriel Gruber appeared in Slough on 31 January 1788. We read in the *Visitors' Book*: "Abbe Gruber Chaplain to the Imperial Embassy". The mathematician and engineer was briefly Superior General of the Jesuits in Russia.

James Williamson, Professor of Mathematics at Glasgow University, met the Herschels on 21 October 1789. He was a co-founder of the Royal Society of Edinburgh. In Slough, he was accompanied by the English politicians Jacob Pleydell-Bouverie (FRS), 2<sup>nd</sup> Earl of Radnor (1750–1828), and his brother William Henry Bouverie (1752–1806); both came with their wives, Anne Pleydell-Bouverie (1759–1829) and Bridget Douglas Bouverie (1758–1842), respectively. Another guest was Herschel's Polish friend Jean-Baptiste Komarzewski (see Section 12).

On 29 December 1789, Jakob Ludwig Schürer, a German Professor of Physics at Strasbourg University, visited the Herschels, together with another "Professor" (his biographical data agree with those of Jacob Herschel). The next physicist appeared on 5 August 1794, Bryan Higgins; the Irishman was joined by a party. He had run a School of Practical Chemistry in Soho during the 1770s.

On 28 August 1794, an eminent scientist visited Slough: the English polymath Thomas Young (FRS), who later made important contributions to the wave theory of light. He became Professor of Physics at the Royal Institution, London. Young visited Slough again on 20 March 1810 and 10 August 1812. On the latter date, we also see two couples, the politician George Murray, 5<sup>th</sup> Earl of Dunmore (1762–1836), and his wife Susan (1774–1846) and Edward Adolphus St Maur, 11<sup>th</sup> Duke of Somerset, and his wife Charlotte (1772–1827). The Duke, also known as Lord Seymour (FRS), was an amateur mathematician. He met the

Herschels five times. The first visit was on 23 April 1795 when 15 persons were in Slough, among them Charles Talbot, 15<sup>th</sup> Earl of Shrewsbury, Robert Grosvenor, 1<sup>st</sup> Marquess of Westminster, his wife Eleonor, Count Brühl, Christopher Reinhold von Nolcken and Sigismund Ehrenreich Johann von Redern. Lord Seymour's next visit was on 19 March 1796. The English painter Paul Sandby (1731–1809), the English architect James Wyatt (1746–1813) and Elizabeth Lloyd (1776–1842) were also present. The latter was the wife of the Welsh politician Edward Pryce Lloyd, 1<sup>st</sup> Baron Mostyn (1768–1854); both had visited the Herschels already on 6 June 1789. After the above-mentioned visit with Thomas Young, we again see Lord Seymour and his wife Charlotte on 30 July 1814 in Slough, joined by the Estonian Adam Johann von Krusenstern (1770–1846), Admiral of the Russian fleet; he led the first Russian circumnavigation of the globe. At his last visit in November 1820, Lord Seymour came alone.

On 28 April 1797, Isaac Milner (FRS) visited the Herschels. He was Lucasian Professor of Mathematics in Cambridge and President of Queens' College. Already in 1776, Maskelyne had hired him as a computer for the Board of Longitude. From 1792 to 1820, Milner was Dean of Carlisle.

The next guest was the second nobleman among the physicists and mathematicians, Benjamin Thompson (FRS), Count Rumford. He played a significant role in the further development of thermodynamics. In his visit to Slough on 8 October 1798 he was joined by Thomas Barnard (1748–1814); the Englishman was the first Pastor of North Church at Salem, Massachusetts. A year later, Thompson established the Royal Institution of Great Britain, London, where Thomas Young later worked.

On 17 January 1803, Giovanni Aldini, Professor of Experimental Physics in Bologna, visited Slough. The Italian was followed by two Scottish Professors from St Andrews University, Thomas Jackson and David Brewster (FRS), who visited on 27 June 1810 and 22 July 1814, respectively. The latter is well-known for his research on the polarization of light. In 1815, he received the Copley Medal of the Royal Society.

On 26 June 1816, a German physicist visited Slough, Johann Salomo Christoph Schweigger, Professor at Erlangen University. His brother, the botanist August Friedrich Schweigger (1783–1821), appeared the day before. On both dates, a "Dr. Nockden" was present. Unfortunately, William and Mary were visiting Cambridge at that time.

In 1817, the Herschels would greet their last guests with a background in physics and mathematics. In May we see the Scot William Knight, Professor of Physics in Belfast, who later became Patrick Copland's successor in Aberdeen. On 6 July, the Swiss Pierre Prévost (FRS) came to Slough. The Professor of Physics in Geneva was a specialist in thermal radiation, discovered by Herschel 17 years earlier. He was joined by his wife and the English physician Alexander Marcet (1770–1822) and his wife Jane.

## 9 MUSICIANS

Sixteen musicians visited the Herschels, all but one came to Slough (members of the Herschel family are treated in Section 10), and 29 visits are documented between 1782 and 1816 (see [Table 14](#)). Seven persons were from England, six from Germany, one from Austria, France and (probably) Italy. Among the musicians we have a noblewoman and a nobleman. Due to his six visits, Charles Burney (the only FRS) is specially featured; he was often joined by his daughter, the well-known novelist Frances Burney.

### 9.1 Charles and Frances Burney

In the first half of 1786, the London music historian Charles Burney (FRS) came to Slough for the first time. The visit is only mentioned in the *Chronicle*, giving a detailed description. Janet Wilson was also present at Observatory House. At the second visit in July 1786, Burney was accompanied by his daughter Frances ('Fanny'), a well-known novelist. Unfortunately, William was on tour in Germany with his brother Alexander.

Father and daughter revisited Slough on 30 December 1786 (and now William was present). They could admire the huge 40-foot telescope that was still under construction (the man-high tube was resting horizontally on the grass). Fanny noted a curious event in her diary (see [Table 11](#)), which was later published under her new name, Frances d'Arblay (she had married in 1796):

By the invitation of Mr. Herschel, I now took a walk which will sound to you rather strange: it was though his telescope! and it held me quite upright and without the least inconvenience; so would it have done had I been dressed in feathers and a bell hoop – such is its interference. Mr. Smelt led the way, walking also upright; and my father followed. After we were gone, the Bishop and Dr. Douglas, were tempted, for its oddity, to make the same promenade.

Table 14: The Herschels were visited by 16 musicians. They are sorted by the first visit. N gives the number of visits (sum = 29). All came to Slough, except one (Bath); bold = observation, italics = William was absent.

Name	Born–Died	Nation	Remarks	N	Visits
Thomas Linley	1733–1795	England	Musical director in Bath	1	<b>B1782</b>
Christopher Papendiek	1755–1826	England	Court musician to the King	2	<i>1786, 1802</i>
Charles Burney	1726–1814	England	Music historian, FRS	6	<i>1786, 1786, 1786, 1797, 1799, 1800</i>
Maria Theresia of Thurn and Taxis	1755–1810	Germany	Cembalo, composer	1	1788
Louis Ferdinand von Preussen	1772–1806	Germany	Composer, pianist	1	1791
Johann Wilhelm Hässler	1747–1822	Germany	Organist in Erfurt	1	1791
Johann Peter Salomon	1745–1815	Germany	Composer, conductor	4	<i>1792, 1806, 1810, 1812</i>
Franz Joseph Haydn	1732–1809	Austria	Composer	1	1792
Joah Bates	1741–1799	England	Organist, conductor	2	<b>1792</b>
Jacques-Marie Charpentier	1741–1799	France	Organist, composer	1	1801
Mr. Ferara		Italy?	Singer	1	<i>1801</i>
William Robert Parsons	1745–1817	England	Master of the King's Music	1	1803
Henry Harington	1727–1816	England	Physician, Bath Harmonic Society	1	1803
William Reeve	1757–1815	England	Organist, composer	2	<b>1807, 1810</b>
Bernhard Romberg	1767–1841	Germany	Violoncello, composer	1	1814
Ferdinand Ries	1784–1838	Germany	Piano, composer	1	1814

The mentioned “Mr. Smelt” is Leonard Smelt (1719–1800), Sub-Governor to the King's second son Prince Frederick, Duke of York; further we have Richard Hurd (1720–1808), Bishop of Worcester, and the FRS John Douglas (1721–1807), Bishop of Carlisle and trustee of the British Museum. All watched the curious scene. After the guests had gone, William and Caroline made sweep 675. In September 1787, the 35-year-old Fanny came alone to Slough, writing: “Dr. Herschel is a delightful man; so unassuming, with his great knowledge, so willing to dispense it to the ignorant.” (Hoskin, 2014a: 96). Her last visit (alone) is dated 3 October 1788. In September 1797, her father was joined by the two Bishops.

Two more visits of Charles Burney are noted. On 22 July 1799, seven other guests were present, among them the Wurttemberg Ambassador Alexandre-Stanislas Baron de Wimpffen (1748–1819), a Frenchman. On 5 July 1800, again seven guests joined Burney on his last visit in Slough. Three of them could be identified: the English politician George O'Brien Wyndham (FRS), 3<sup>rd</sup> Earl of Egremont (1751–1837), his wife Elizabeth (1769–1822), and William Frankland (1761–1816), Secretary of the Duke of Portland. Charley Burney died on 12 April 1814 in London. Fanny died on 6 January 1840 in London.

On 16 June 1782, William was visited by Thomas Linley, Musical Director at the Assembly Rooms, Bath. The event is only docu-

mented in the *Fixt Stars*, due to an observation of double stars with the 7-foot reflector (see Section 6).

William was in Germany when Christopher Papendiek, Court Musician to George III, visited Observatory House on 17 July 1786. This event is only mentioned in Caroline's first *Autobiography*. He was joined by his wife Charlotte Louise Henrietta (1765–1840), Assistant Keeper of the Wardrobe and Reader to the Queen, and her father Friedrich Albert (born 1733), page at Windsor Castle. According to the *Visitors' Books*, there was a second visit of Mrs Papendiek on 15 June 1810. He was joined by Prince William Henry, 1<sup>st</sup> Duke of Gloucester and Edinburgh (1743–1805), Princess Sophia Matilda of Gloucester and a “Count from Vienna”. This time William was home.

For 2 May 1788 we read in Caroline's *Visitors' Book* about “Two Princes Tassis”. They were identified as Maria Theresia of Thurn and Taxis, a composer and clavecin (folding harpsichord) player, and her stepsister Marie Elisabeth Alexandrina (1767–1822). When meeting William, the German princesses were 33 and 21 years old, respectively.

On 13 January 1791, Prince Louis Ferdinand of Prussia met the Herschels in Slough.<sup>28</sup> The German nobleman was a talented pianist and composer. On 23 April 1791, the *Visitors' Books* mention a “Mr. Hossler, Organist”. The identification was difficult. This person is the

German musician Johann Wilhelm Hässler, who worked in Erfurt. He was known as a composer, organist and pianist. William himself had played the organ in the Octagon Chapel, Bath. Hässler spent 1790 to 1792 in London. In Slough, he was joined by Samuel Vince and John Brinkley (see Section 7); the former came with his wife Mary, and Joseph Huddart.

The visit of the next two musicians, coming in June 1792, is remarkable. This concerns both the date and the circumstances in Slough. On the 14<sup>th</sup>, Caroline noted “Dr. Hayden, Mr. Solomon” in her *Visitors’ Book*. These are the eminent Austrian composer Franz Joseph Haydn and the German musician and conductor Johann Peter Salomon, who worked in London. However, Hadyn himself dates the visit to the 15<sup>th</sup>, which is much more plausible. Unfortunately, William was on tour in Wales and Scotland. There also are wrong claims about Haydn’s visit in the literature, like an observation with the 40-foot reflector, which would inspire the maestro for his oratorio *Die Schöpfung* (*The Creation*). Moreover, the *Visitors’ Books* are ambiguous about a possible third person, the Irishman Thomas Hussey (1746–1803), Bishop of Watermore and Lismore; he is mentioned on 12 and 14 June. However, this issue has been cleared up (Steinicke, 2022): (1) the correct date is 15 June; (2) there was no observation; (3) Hussey came only once, probably on the 12<sup>th</sup>. On 14 and 15 June, Caroline observed deep-sky objects with her large sweeper, a Newtonian of 9.6 inches aperture and 5 feet focal length, built for her by William in the winter of 1789–1790.

Next, we have the English organist and conductor Joah Bates, visiting Slough on 13 September 1792. He had performed George Frederick Handel’s oratorio *Messiah* in Halifax on 7 March 1766.<sup>29</sup> William played first violin in Bates’ orchestra. On his visit, the musician would observe, probably with the 20-foot front-view reflector. In the *Journal* we read:

Mr. Bates saw the 6 satellites of Saturn, the belt upon Saturn, the shadow of Saturn upon the ring, and the division of the ring on the left and also on the right; but more distinguishable on the left. (*W. Herschel, 1784–1799: 81*).

His meeting with Herschel in 1792 is not listed in the *Visitors’ Books*, but the second in June 1798 is, made about a year before Bates’ death.

Jacques-Marie Charpentier, the French organist and composer, visited the Herschels on 4 February 1801, and the *Visitors’ Books* list the name “L’abbe Charpentier”. The French mus-

ician was Canon and Keeper of the Archives of the Amateur Chapter of Saint-Louis-du-Louvre in Paris. During the day William observed the Sun.

On 2 September 1801, we read in the *Visitors’ Books* that “Mr. Ferara sang and played delightfully”. The identity of this talented musician (perhaps an Italian), performing at Observatory House, is unknown. William Robert Parsons, a composer and Master of the King’s Music, visited Slough on 29 August 1803, joined by his wife Mary (1745–1805) and daughter; ten other persons were present. Among them was another musician, Henry Harington. The English physician and author had founded the Bath Harmonic Society in 1795.

On 18 October 1807, Herschel would greet the English organist William Reeve. He was the house composer at Covent Garden and a member of the Royal Society of Musicians. James and Mary Lind joined him, together with ten other persons. All saw the Great Comet of 1807 with the naked eye in Hercules. A second visit of Reeve is noted for 13 July 1810. Unfortunately, William was on tour in northern England and Scotland with his family.

In the *Visitors’ Books* we read for 3 July 1814: “Mr. Romberg, Violoncello, Mr. Ries, Piano forte”. That evening there was a house concert with an audience of 19 (including the Herschel family). Two well-known German composers played: Bernhard Romberg and his former student Ferdinand Ries. Romberg was living in London at the time and was a friend of Salomon, who integrated him into his Philharmonic concert series. Four guests in Slough could be identified: Ferdinand Ludwig Joseph von Hompesch-Bollheim (1766–1831), Friedrich Albert Graf zu Pappenheim (1777–1860) and Karl Wilhelm von Heideck (1788–1861) were members of the Prussian military. The fourth was the Englishman William Beechey (1753–1839), who was named as the official portrait painter of Queen Charlotte. He made monumental paintings, including some of visitors to the Herschels, such as the King and his family, Henry Phipps (1<sup>st</sup> Earl of Mulgrave), George Douglas (16<sup>th</sup> Earl of Morton), John Douglas (Bishop of Carlisle) and James Watt.

## 10 HERSCHEL FAMILY

We do not treat William, Caroline, Mary, Alexander and John here (only some remarks about observations by the last two are given). Instead, the focus is on the visits of William’s brothers Jacob and Dietrich and some other relatives. The documented observations are listed in [Table 15](#).

Table 15: Observations, made by William's brothers and his son John, sorted by date; all concern Slough, except the first (Bath).

Brother	Date	Objects	Instrument	Remarks
Alexander	20 January 1782	ζ Cnc, other stars	7-ft	In Bath, with Caroline
Jacob	8 August 1787	NGC 6818	20-ft	Planetary nebula in Sagittarius
Jacob	19 September 1787	Uranus	20-ft	Moons seen
Alexander	9 September 1788	Saturn	10-ft	5 satellites seen, Caroline present
Alexander	17 September 1789	Saturn	40-ft	Mary joined, Mimas seen
Alexander	11 September 1792	Saturn	10-ft	6 satellites seen
Dietrich	9 July 1806	Saturn	10-ft	
John	13 August 1807	Moon, Jupiter	7-ft	Caroline; William absent
John	14 August 1807	Jupiter	7-ft	With Alexander Rogers
Dietrich	8 September 1811	Great Comet 1811	Night glass	William & Mary absent
Dietrich	19 October 1811	Great Comet 1811	10-ft	German description
Dietrich	August 1813	Milky Way	Naked eye	
John (son)	18 August 1818		10-ft	With the Archbishop of Canterbury

### 10.1 Jacob Herschel

William's eldest brother Jacob (1734–1792) worked as a violinist and concert master in Hanover. He died there on 23 June 1792 by strangulation (Latusseck and Hoskin, 2003). Jacob visited Slough from April to October 1787; he was 53 years old at that time.

There are two documented observations, made with the 20-foot front-view telescope. On 8 August we read in the records for sweep 749 about the discovery of the planetary nebula NGC 6818 in Sagittarius: "My brother Jacob being in the gallery. I shewed it to him." (C. Herschel, 1783–1802). On 19 September 1787, it was noted:

Professor Sniadeki saw the Georgian Planet [Uranus] and its two satellites as described. My brother Jacob Herschel saw the same. (*ibid.*).

Two other persons were in Slough on that day: the Scottish astronomer Patrick Wilson, and the Royal Sculptor John Charles Lochée (who took William's bust—see Section 7).

### 10.2 Dietrich Herschel

Johann Dietrich (1755–1827) was William's younger brother. Like Jacob, he was a violinist and concert master in Hanover. Dietrich was also interested in zoology and etymology. Due to his frequent visits, we only discuss the four observations.

On 9 July 1806, William noted in the *Review*:

I showed my brother Johann Dietrich Herschel from Hanover Saturn, and the air happening to be very clear he saw all the phenomena on the planet in

perfection." (C. Herschel, 1779–1819: 32).

Two observations of the Great Comet of 1811 were made. On 8 September a 'night glass' was used. The 2.5 inches aperture binoculars were constructed by William. Caroline wrote in her *Observation Book*: "My brother Dietrich saw it in the night glass, which just took in the whole, but it did not extend beyond the field." The second observation of the comet was made on 19 October with the 10-foot reflector. Dietrich wrote a short report on this. He entered the German text himself in William's *Review* (C. Herschel, 1779–1819: 8; see Figure 13):

Magnification 169. The nucleus is certainly no larger than the little ball I saw this morning with this magnification and a diameter of 0.0178'; on the contrary, it is more like the ball of 0.0164' diameter. At magnification 600, the nucleus appears to be larger than the ball of 0.0178' diameter at magnification 169. Joh. Dietrich Herschel. [English translation by the author.]

On 7 August 1813, William noted in the *Review*:

Both stars were kept in the field of view when perfectly adjusted to the focus by my assistant (my brother) who alternately looked into that telescope at which I did not look in. (C. Herschel, 1779–1819: 18).

The object, observed by Dietrich with the 10-foot reflector, was the double star Polaris.

### 10.3 George Ludolf Jacob Griesbach

Griesbach (1757–1824) was a musician in the Queen's band. He was the son of Caroline's elder sister Sophia Elizabeth (1743–1803), who

handwriting. ~~Kometenbeobachtung~~  
 Das Paar ~~beobachtet~~ nicht ~~von~~ dem ~~selben~~ Levin Dreyel  
 sah ihn in dieser Nacht mit demselben Kometenbeobachtung  
 Instrumente, und sah ihn, 0178 in Dreyel'scher Zeit; im  
 Gegenstande gleich es mehr dem Dreyel von, 0164 Dreyel'scher.  
 Mit einer 60-maligen Kometenbeobachtung, findet  
 das Paar ~~größere~~ zu ~~seiner~~ Zeit Dreyel von, 0178  
 Dreyel'scher, mit der Kometenbeobachtung von 169, Jahr  
 Hof. Dreyel'scher

Figure 13: Dietrich's report of his observation on 19 October of the Great Comet of 1811 is written in Old German Sütterlin script (after [C. Herschel, 1779–1819: 8](#)).

had married bandsman Joachim Heinrich Griesbach (1730–1773) in 1755. Two visits are noted in the *Visitors' Books*, on 3 November 1807 and 18 September 1816. On the former date, three other guests were in Slough, “Mr. and Mrs. Andrews from Bristol” and a “Mr. Wibrow”. Two persons joined Griesbach on the latter date, the German Levin Anton Wilhelm Bencke (1776–1837), a writer and merchant working in Deptford, and a “Miss Christies”.

#### 10.4 Thomas and Sophia Baldwin

Thomas Baldwin (1754–1821) was the younger brother of William's wife Mary; he was present at their wedding on 8 May 1788 in Slough, together with Paul Adeo Pitt, Mary's son from her first marriage, who died in 1793 at the young age of 20. Baldwin's daughter Sophia (1783–1820) visited Slough on 19 March 1801 at the age of 18. Among the 11 other guests were the French diplomats Jules Auguste Armand Marie de Polignac (1780–1847) and Charles François de Riffardeau, Marquis de Rivière (1763–1828). Thomas came again to Observatory House on 31 May 1813. This was a special date, because William made a final sweep (1113), after terminating the campaign in 1802. Both events are listed in the *Visitors' Books*.

#### 10.5 Alexander Herschel

William's youngest brother, Johann Alexander (1745–1821), who lived in Bath, is not treated in depth due to the many visits, not all of which were documented. Four observations are mentioned here. On 20 January 1782, we read in the *Journal*: “I shewed Carolina Herschel and my brother  $\zeta$  Cancri, the star near Procyon, A,

n, and 52 Orionis; all which they saw exactly as I did and marked them upon paper.” ([W. Herschel, 1774–1799: 47](#)). The 7-foot reflector was used. On 9 September 1788, William noted in the *Journal* that his brother Alexander saw five satellites of Saturn. Caroline also was present, writing in her *Observation Book*: “My brother shewed me the five satellites of Saturn.” ([C. Herschel, 1782–1824: 48](#)). Curiously, Alexander is not mentioned.

On 17 September 1789, the *Journal* describes an observation of a ‘new’ Saturnian moon, made with the 40-foot reflector: “I shewed it to Mrs. Herschel, to my brother & sister before 21<sup>h</sup> 10”.” ([W. Herschel, 1774–1799: 32](#)). This is the only case where an observation is mentioned. The object turned out to be the 7<sup>th</sup> satellite, Mimas, which had been discovered on 8 September with the 20-foot front-view. On 11 September 1792, we read in the *Journal*: “My brother Alexander saw the 6 satellites in the same situation.” ([W. Herschel, 1774–1799: 81](#)). Meanwhile, by this time another Saturnian moon had been found by William.

#### 10.6 John Herschel

There are three documented observations of young John (1792–1871). The first two happened on 13 and 14 August 1807, as noted in the *Memoirs* (see Section 6). When William was on a short trip to Tunbridge Wells, Caroline greeted Prince Edward Augustus, Louis Philippe Joseph d'Orléans and his brother Louis Philippe (see Section 11). The 7-foot was used to show them the Moon and Jupiter, assisted by 15-year-old John. The second observation is

Table 16: The Royal Family and their visits in Datchet (D) and Slough; N gives their number (sum = 36); bold = observation.

Name	Born–Died	Remarks	N	Visits
George III	1738–1820	King of Great Britain and Ireland	8	<b>D1782(3), D1783</b> , 1787, 1793, <b>1796</b> , 1799
Sophie Charlotte of Mecklenburg-Strelitz	1744–1818	Queen	2	1787, 1793
Frederick Augustus, Duke of York and Albany	1763–1827	Prince, 2 <sup>nd</sup> son	1	1787
William Henry, Duke of Clarence and St Andrews	1765–1837	Prince, 3 <sup>rd</sup> son	3	<b>D1783</b> , D1783, 1789
Edward Augustus, Duke of Kent and Strathearn	1767–1820	Prince, 4 <sup>th</sup> son	2	1793, 1807
Augustus Frederick, Duke of Sussex	1773–1843	Prince, 6 <sup>th</sup> son	2	D1783–1784, <b>1807</b>
Adolphus Frederick, 1 <sup>st</sup> Duke of Cambridge	1774–1850	Prince, 7 <sup>th</sup> son	4	D1783–1784, 1793, 1808, <b>1811</b>
Charlotte Auguste	1766–1828	Princess, 1 <sup>st</sup> daughter	4	1787, 1789(2), 1795
Augusta Sophia	1768–1840	Princess, 2 <sup>nd</sup> daughter	2	1789, 1793
Elizabeth	1770–1840	Princess, 3 <sup>rd</sup> daughter	1	1793
Augusta Frederica	1737–1813	Princess, younger sister	1	1787
William Henry, 1 <sup>st</sup> Duke of Gloucester	1743–1805	Younger brother, FRS	4	1789(2), 1791, 1802
Henry, Duke of Cumberland and Strathearn	1745–1790	Younger brother	1	D1783–1784
Charles II, Grand Duke of Mecklenburg-Strelitz	1741–1816	Brother of the Queen	1	1786

is documented in the *Review*. William, meanwhile, had returned home, and on 14 August 1807 he wrote that:

I shewed my son and his mathematical tutor the shadow of the 3<sup>rd</sup> satellite of Jupiter, in the passage over the disk and we also saw the emersion of the 4<sup>th</sup> satellite at the time contained in the Nautical Almanac. (C. Herschel, 1779–1819: 36).

The 7-foot reflector was used. The “mathematical tutor” was the Scot Alexander Rogers, who worked at John’s school in Hitcham (see Section 8). He probably was already present on the 13<sup>th</sup> (although this is not mentioned by Caroline). On the 14<sup>th</sup>, we have an entry in the *Visitors’ Books* mentioning Joseph Banks, John Charles Villiers, 3<sup>rd</sup> Earl of Clarendon (1757–1838), and a “Mr. De Tanville”. Rogers neither appears in the *Visitors’ Books* nor in Caroline’s *Temporary Index*; her table “Visitors and Sunday’s” was closed on 6 April 1807.

Twenty-six-year-old John was also helpful on 18 August 1818, when his father felt himself “very unwell”, according to the *Memoirs*. Both entertained seven guests, who were shown objects with the 10-foot reflector; among the visitors was Charles Manners-Sutton, Archbishop of Canterbury (see Section 12). The observation is not mentioned in the *Review*.

## 11 ROYAL FAMILY AND NOBLES

Members of the Royal Family, including broth-

ers and sisters of the King and Queen, visited the Herschels between 1782 and 1811 (Table 16). There are 36 documented visits; 10 took place in Datchet and 26 in Slough. Herschel was present during all visits. Some Royal guests were able to observe with a telescope; on five days it was the King. Because of his eight visits, George III is featured separately.

### 11.1 George III

George III, always interested in astronomy and happy to have the admired discoverer of a new planet in nearby Datchet, was the first Royal visitor. He was also proud that Herschel had named his epochal find after him: ‘Georgium Sidus’. Of course, he was eager to see the 7<sup>th</sup> planet through a telescope.

The first observation took place on 30 August 1782 in Datchet. According to the *Fixt Stars*, the 44-year-old King used the 7-foot reflector: “His Majesty saw several nebulas, that in Andromeda, in Scut. Sobies.” (C. Herschel, 1775–1784: 224). Among the objects were the Andromeda Nebula M 31 and the open cluster M 11 in Scutum. He then returned on 3 September to view double stars with the same instrument: “His Majesty saw the two stars of this minute double star [near  $\mu$  Bootis] after having examined them for some time.” (C. Herschel, 1775–1784: 225). Then on 1 December George III saw ‘his’ planet for the first time:

The King came to see my 20 feet telescope and other instruments, in the

evening I shewed his majesty the Georgium Sidus with the 10 ft. reflector. His Majesty saw the body of the planet well defined and different from any fixed star. (C. Herschel, 1775–1784: 279).

The “20 feet telescope” was the ‘small 20-foot’ with its 12-inch mirror. The King came again on 28 April 1783: “10 feet Reflector. I shewed his majesty the Georgium Sidus,  $\gamma$  Virginis, and Messiers 35<sup>th</sup> nebula.” (C. Herschel, 1775–1784: 375). Here the bright double star in Virgo and the cluster M 35 in Gemini are meant. That night, Caroline observed with her small refractor.

George III, who always visiting Datchet alone, took a break of about four years. In his absence, the second son, Prince William Henry, visited Slough on 31 June and 17 July 1783. He was 18 years old at that time.<sup>30</sup> On the former date, Herschel noted in the *Fixt Stars*: “I shewed his Royal Highness Prince William Saturn & Jupiter & the construction of the 10ft reflector.” (C. Herschel, 1775–1784: 391). And on the latter date, we read:

Prince William came to see my telescopes & apparatus. His Royal Highness expressed much satisfaction on the method of managing my telescopes. (C. Herschel, 1775–1784: 393).

During the day, William observed the Sun. The King’s younger sons, Prince Adolphus Frederick and Prince Augustus Frederick, followed in 1783–1784 (no exact year is given in Caroline’s *Visitors’ Book*). They were about 10 and 9 years old, respectively. Probably they were guided by Henry, Duke of Cumberland and Strathearn, a younger brother of the King.

The next Royal visitor was Queen Charlotte’s younger brother Charles on 20 July 1786. He was accompanied by Ernest II, Duke of Saxe-Gotha, and John Montagu, 4<sup>th</sup> Earl of Sandwich (1718–1792). In the *Memoirs*, we read:

Prince Charles (Queen’s brother), the Duke of Saxe-Gotha and the Duke of Montague were here this morning. I had a message from the King to show them the instruments. (Mrs. J. Herschel, 1876: 61).

Other sources (i.e. the *Visitors’ Books* and the *Temporary Index*) give 21 July as the date of the visit. Montagu returned on 19 May 1791 with his wife Dorothy (1716–1797). His son John, the 5<sup>th</sup> Earl, visited Slough twice: on 8 May 1792 (together with William Watson) and in November 1808.

On 17 August 1787, we see the next visit of the King, joined by Queen Charlotte for the first time. Their second son Frederick Augustus (24 years old) and eldest daughter Charlotte Auguste (21) came with them, as did the Queen’s elder sister Princess Augusta Frederica. The Royals were accompanied by 13 persons, among them John Moore, Archbishop of Canterbury; Henry Scott, 5<sup>th</sup> Duke of Queensberry (1746–1812), who became President of the Royal Society of Edinburgh in 1812; Richard Howe, 1<sup>st</sup> Earl Howe (1726–1799), his wife Mary (1732–1800) and daughter Sophia Charlotte (1762–1835); the Prussian General Jacob de Budé; John Butler, 10<sup>th</sup> Earl of Ossory (1740–1795), and his wife Anne (1754–1830); Anne Liddell, Baronesse Ravensworth (1712–1794); Mary, Countess of Harcourt; and Julia Howard. George III came to see the 40-foot reflector, then under construction, which he had generously funded. When facing the wide tube, lying horizontally on the grass, he started to go inside it. When John Moore hesitated to follow, the King said (according to Joseph Banks): “Come, my Lord Bishop, I will show you the way to Heaven.” (recall that Fanny Burney had made the curious tube walk already, on 30 December 1786). No observations were made, and the following night William and Caroline made sweep 751.

On 11 April 1789, the Herschels were visited by the King’s younger brother, Prince William Henry (FRS). He was Chancellor of Trinity College, Dublin. Also present were Thomas Bulkeley, 7<sup>th</sup> Viscount Bulkeley, and his wife Elizabeth Harriet. The Prince returned to Slough on 29 April 1789, together with his brother William Henry (24) and his sister Charlotte Augusta (23). They were joined by Charles Lennox (FRS), 3<sup>rd</sup> Duke of Richmond (1735–1806), and his wife Mary (1736–1796), George Douglas, 16<sup>th</sup> Earl of Morton (1761–1827), Vice-President of the Royal Society, and John Douglas, Bishop of Carlisle.

Princess Charlotte Augusta came back on 1 December 1789, together with the King’s second daughter Princess Augusta Sophia (21). Also present were Maria d’Arcy, Countess of Holderness, and Herschel’s old friend William Watson. On 13 August 1791 we again see the King’s brother William Henry. He was joined by Princess Sophia Matilda of Gloucester, a niece of George III, and William Frederick (FRS), 2<sup>nd</sup> Duke of Gloucester and Edinburgh (1776–1834), the King’s nephew and son-in-law; in 1811 he became Chancellor of Cambridge University.

The King’s sixth visit took place on 14 Nov-

ember 1793; he came alone. On the 17<sup>th</sup> we see a new face in Slough, Prince Edward Augustus (26 years old), his fourth son, together with his brother Prince Adolphus Frederick (19). Four other people were present. On 10 December 1793, we witness the second visit of the Queen, with her daughters Elizabeth (23) and Augusta Sophia (25), and Sophia Paulett (died 1811), mother of Mary Somerset (1788–1860), who visited Slough on 8 December 1818.

The last visits of George III were on 17 April 1796 and 31 December 1799, each time accompanied by “two enquires”. On the first date he saw the Moon through the 10-foot reflector. On the second, the *Memoirs* say, “December 31st. – The King had been at the Observatory.” (Mrs. J. Herschel, 1876: 104). Herschel had observed the Sun during the day. By the way, the *Visitors’ Books* give 30 December as the date of the visit. The King was now 61 years old and suffering from increasing mental ailments (he was eventually forced to abdicate in 1811). His younger brother, William Henry, had his last visit on 15 June 1802, when he was joined by Christopher Papendiek and the King’s niece, Sophia Matilda.

Prince Edward Augustus visited Slough for the last time on 13 August 1807. Caroline wrote (*Memoirs*):

My brother, again finding it necessary to recruit his strength by absenting himself for a few days from his work-rooms, had left Slough for Tunbridge Wells just the day before, and at our return we found the Duke of Kent, with the Dukes of Orleans, &c., waiting for us, and my nephew [John, 15 years old] and myself showed them Jupiter, the Moon, &c., in the seven-foot. (Mrs. J. Herschel, 1876: 113).

The “Dukes of Orleans” were Louis Philippe Joseph d’Orléans and his younger brother Louis Philippe (see below). On 14 October 1807, the Great Comet of that year was viewed with the 7-foot by Prince Augustus Frederick, Duke of Sussex—he was not alone. The huge gathering was almost too much for poor William, as his sister described it (*Memoirs*):

My brother came from Brighton. The same night two parties from the Castle came to see the comet, and during the whole month my brother had not an evening to himself. As he was then in the midst of polishing the forty-foot mirror, rest became absolutely necessary after a day spent in that most laborious work; and it has ever been my opinion

that on the 14th of October his nerves received a shock of which he never got the better afterwards; for on that day (in particular) he had hardly dismissed his troop of men, when visitors assembled, and from the time it was dark till past midnight he was on the grass-plot surrounded by between fifty and sixty persons, without having had time for putting on proper clothing, or for the least nourishment passing his lips. Among the company I remember were the Duke of Sussex, Prince Gallitzin, Lord Darnley, a number of officers, Admiral Boston, and some ladies. (Mrs. J. Herschel, 1876: 114).

In Caroline’s *Temporary Index*, however, we read rather soberly:

The Duke of Sussex, Prince Gallitzin, Lord Darnley, Countess & Count of Oeynhausen, Admiral Boston, and some officers saw the comet and many others upwards of 50 persons were assembled in the garden during the evening. (C. Herschel, 1780–1808: 59).

People mentioned are Demetrius Augustine Gallitzin (1770–1840), a priest and the first Russian visitor; the English Admiral Frederick Paul Irby; the German officer Georg Ludwig von Oeynhausen (1734–1811), with his wife Leonor (1750–1839); and the Governor-General of British North America, Charles Lennox, 4<sup>th</sup> Duke of Richmond, Earl of Darnley (1764–1819). His uncle, Charles Lennox, 3<sup>rd</sup> Duke of Richmond, had already visited Slough on 11 April 1789.

When Prince Adolphus Frederick visited Slough on 3 February 1808, Caroline noted in the *Temporary Index*: “Duke of Cambridge came in the forenoon, saw the 40 feet mirror, machines etc.” (C. Herschel, 1780–1808: 59). In the *Memoirs* we read: “When at work in the library the Duke of Cambridge came in. We were obliged to a storm for his visit, as he came in for the shelter.” (Mrs. J. Herschel, 1876: 114). He returned on 18 September 1811 for the Great Comet of that year, viewed with the 10-foot. Caroline wrote in her *Observation Book*:

My brother arrived from his tour into Scotland and began his observations on the comet; the same evening his Royal Highness the Duke of Cambridge came with some Ladies of the court and saw the comet through the 10-foot telescope. (C. Herschel, 1782–1824: 106).

The show was joined by the extravagant Lady Albinia Hobart (1737–1816) and “Mess. Golds-

worthy & a Lady". This ended the Royal visits.

After their move to the Windsor area in 1782 the Herschels could greet many nobles. The greatest numbers of guests visited in 1786 (35), 1789 (34) and 1791 (42). Therefore, only a selection of interesting persons can be presented here (Table 17). The case of George Gordon Byron (Lord Byron) is more extensive and will be presented at the end of the section.

On 19 July 1784, the Irish politician Henry Temple, 2<sup>nd</sup> Viscount Palmerston, visited Datchet together with James Lind. We read in the *Sweep Records*:

Lord Palmerston saw the milky way through my great reflector [20-foot Newtonian], and admired the great number of the stars into which it was resolved. (C. Herschel, 1783–1802).

On 6 August 1786, Temple visited Slough with his wife Mary, Joseph Banks and Charles Blagden. They had come for a special reason: to see Caroline's famous find, her first comet, discovered in Leo with the small sweeper on 1 August. The shy Hanoverian lady had to deal with the situation on her own—William was in Germany with Alexander, still unaware of the event that would make Caroline a respected astronomer. She wrote in her *Observation Book*:

Sir Jos. Banks, Lord Palmerston and Dr. Blagden coming in, I resigned the telescope. The first look Dr. B. had, he pronounced it to be a good comet. The next care of that Gentleman was, to find its present place, and I believe it was pretty nearly determined to be not far from the 9 & 10<sup>th</sup> Coma Berenices. (C.

Table 17: Selected nobles (sorted by first visit); D = Datchet (otherwise Slough), bold = observation, italics = William was absent.

Name	Born–Died	Nation	Remarks	N	Visits
Henry Temple, 2 <sup>nd</sup> Viscount Palmerston	1739–1802	Ireland	Politician, FRS	3	<i>D1784</i> , 1786, 1788
Constantine John Phipps, Lord Mulgrave	1744–1792	Ireland	Bath Philosophical Society, FRS	2	1786, 1789
Alexander Wedderburn, 1 <sup>st</sup> Earl of Rosslyn, Baron Loughborough	1733–1805	Scotland	Lord Chancellor	4	1786, 1789, 1795, 1796
George John Spencer, 2 <sup>nd</sup> Earl Spencer	1758–1834	England	President of the Royal Institution, London, FRS	1	1786
Charles Geneviève Louis Auguste André Timothée d'Éon de Beaumont	1728–1810	France	Diplomat and spy (androgynous person)	2	1787, 1792
Charles Grave Hudson, 1 <sup>st</sup> Baronet	1730–1813	England	High Sheriff of Leicestershire, FRS	1	1787
Georgiana Dorothy Cavendish, Duchess of Devonshire	1757–1806	England	Poet	1	1788
John Ingilby, 1 <sup>st</sup> Baronet	1758–1815	England	High Sheriff of Yorkshire, FRS	1	1788
Philip Stanhope, 5 <sup>th</sup> Earl of Chesterfield	1755–1815	England	Diplomat, FRS	4	1789, 1790, 1791, 1795
Louis Philippe Joseph d'Orléans	1747–1793	France	Guillotined in Paris	3	1790(3)
Francis Reynolds-Moreton, 3 <sup>rd</sup> Baron Ducie	1739–1808	England	Navy officer	1	1791
John William Anderson, 1 <sup>st</sup> Baronet	1736–1813	England	Sheriff of London	1	1791
Willem Batavus, Prince of Orange	1748–1806	Dutch Republic	Stadtholder of the Dutch Republic	5	1795(2), 1796, 1798, 1799
Charles Stanhope, 3 <sup>rd</sup> Earl of Stanhope	1753–1816	England	Army officer, FRS	1	1802
Heneage Finch, 4 <sup>th</sup> Earl of Aylesford	1751–1812	England	Politician, artist, FRS	1	1806
James Hall of Dunglass, 4 <sup>th</sup> Baronet	1761–1832	Scotland	Geologist, FRS	1	1810
George Gordon Byron, 6 <sup>th</sup> Baron Byron	1788–1824	England	Poet	1	1813
Ludwig Carl August of Bavaria	1786–1868	Germany	Crown Prince of Bavaria	1	1814
Arthur Wellesley, 2 <sup>nd</sup> Duke of Wellington	1807–1884	England	Son of Arthur Wellesley, 1 <sup>st</sup> Duke of Wellington	2	1818(2)
Michael Pavlovich Romanov	1798–1849	Russia	Grand Duke of Russia	1	1818
Maximilian Joseph von Österreich-Este	1782–1863	Austria	Archduke of Austria	1	1818
Prince Christian Frederick of Denmark	1786–1848	Denmark	King Christian III of Denmark	1	1822

[Herschel, 1782–1824: 40](#)).

Her guess for the place of the 3.8 magnitude bright object was correct. However, it is not clear whether it was the small sweeper or the 7-foot telescope that was used for the guests. Lord Palmerston returned on 3 August 1788; the *Visitors' Book* also mentions a “Mr. Davonport”. In the *Sweep Records* we read: “Lord Palmerston saw a planetary nebula [NGC 6818 in Sagittarius], and many of the Connaiss. des temps resolved.” ([C. Herschel, 1783–1802](#)).

On 22 July 1786, Constantine John Phipps (FRS), Lord Mulgrave, a member of the Bath Philosophical Society, met William in Slough. The Irish noble returned on 24 May 1789, joined by the Swiss geologist Jean-André Deluc, the Lord Chancellor Alexander Wedderburn, 1<sup>st</sup> Earl of Rosslyn, and the President of the Royal Institution, George John Spencer, 2<sup>nd</sup> Earl Spencer. The latter had first been at Slough in 1786 (no date is given). Phipps, DeLuc and Wedderburn came back on 24 May 1789. On 4 October 1795, the latter returned to Slough, joined by Philip Stanhope (see below), Alexander Aubert and a “Mr. Lee”. Wedderburn’s last visit took place on 28 August 1796; Rufus King, the American Ambassador, was present (his biographical data agree with those of Dietrich Herschel). William was on tour in south-west England.

In September 1787, a rather unforgettable person visited the Herschels in Slough: Charles Geneviève Louis Auguste André Timothée d’Éon de Beaumont. The French diplomat had androgynous physical characteristics and natural abilities as a mimic and a spy. Starting in 1777, he lived as a woman, wearing female clothes; consequently, Caroline wrote “Mademoiselle d’Eon” in the *Visitors' Book*. Returning on 6 August 1792, “La Chevaliere d’Eon” was joined by a “Miss Danby”.

The High Sheriff of Leicestershire, Charles Grave Hudson, 1<sup>st</sup> Baronet, visited Slough on 1 November 1787. His colleagues from Yorkshire, Northumberland and London, John Ingilby (FRS), 1<sup>st</sup> Baronet, Davidson Richard Grieve and John William Anderson, 1<sup>st</sup> Baronet, came on 14 October 1788, 28 May 1789 and 1 October 1791, respectively. On the latter date, Anderson was joined by his wife Dorothy (d. 1817). On 29 March 1788, the poet Georgiana Dorothy Cavendish, Duchess of Devonshire, visited Slough; she was not related to Henry Cavendish (see Section 8).

The English diplomat Philip Stanhope, 5<sup>th</sup> Earl of Chesterfield, visited the Herschels on 10

and 11 May 1789. On the former date, he was joined by the politicians Edward Thurlow, 1<sup>st</sup> Baron Thurlow (1731–1806), and Granville Leveson-Gower, 1<sup>st</sup> Marquess of Stafford (1721–1803). On the 11<sup>th</sup>, Stanhope’s wife Anne and Lieutenant Thomas Grenville (1755–1846) are mentioned in the *Visitors' Book*. The Stanhopes returned on 17 July 1790 (a “Mr. Vright” was present) and 29 December 1791. The latter visit is only documented in Caroline’s *Observation Book*, where she noted:

I shewed Mr. and Mrs. Stanhope the comet. The evening is but indifferent, clouds and moonlight interface; so that it makes a faint appearance. ([C. Herschel, 1782–1824: 6](#)).

The object was Caroline’s 5<sup>th</sup> comet, found on 15 December in Lacerta, and now crossing Pegasus (the small sweeper was used). That same night William independently observed Saturn. Philip Stanhope’s final visit was on 4 October 1795 (without Anne), when Wedderburn, Aubert and Lee were also present.

In 1790, the *Visitors' Books* mention a “Duke of Orleans” on 17 February, 2 March and in June. This was Louis Philippe Joseph d’Orléans. On the first date, Henry Scott, 5<sup>th</sup> Duke of Queensberry, and the German diplomat Joachim Karl, Graf von Maltzahn, were also in Slough (later William and Caroline made sweep 933). On 2 March, the French nobleman was joined by George Spencer-Churchill, 5<sup>th</sup> Duke of Marlborough, and in June by Jane Cathcart, Duchess of Atholl (1754–1790); it was her second visit after 1787. In 1793, Louis Philippe Joseph d’Orléans became a victim of the French revolution—he was guillotined. On 13 August 1807, we read “Duke of Orleans & his brother” in the *Visitors' Books*. These were Louis Philippe d’Orléans (1773–1850) and Louis Charles d’Orléans, Comte de Beaujolais (1779–1808), both sons of Louis Philippe Joseph. They were joined by Prince Edward Augustus, a son of George III (see above). Louis Philippe d’Orléans returned on the 18<sup>th</sup>; in 1830, he became the last King of France (Louis Phillipe I). His younger brother died on 30 May 1808 in Malta of tuberculosis at the young age of 29.

On 21 January 1791, we see the Royal Navy officer Francis Reynolds-Moreton, 3<sup>rd</sup> Baron Ducie, and Sarah Jodrell (1741–1793), who became his second wife on 18 June (his first died in May 1789). However, the *Visitors' Books* already note “Lord and Lady Ducie Morton”. Unfortunately, Sarah Reynolds-Moreton died on 23 May 1793.

On 30 June 1795, the Herschels met Willem Batavus, Prince of Orange. Five visits would follow. He was Stadtholder of the Dutch Republic but went into exile to London that year. Batavus was joined by his wife Wilhelmina and the sons Wilhelm Friedrich and Wilhelm Georg Friedrich. The next visit was in July 1795 with Wilhelmina. Batavus came alone on 26 July 1796; also present were the Italian diplomat Francesco Sastres, the “Comte de Carinola” and “Countess Henry”. When the Prince returned on 8 August 1798, the Herschel family was on tour in south-west England. In the *Memoirs* we read:

The Prince of Orange has been at Slough to call at Mr. Herschel’s and to ask him, or if he was not at home to Miss Herschel, if it is true that Mr. Herschel has discovered a new star [Uranus], whose light was not as that of the common stars, but with swallow tails, as stars in embroidery. He has seen this reported in the newspapers, and wishes to know if there is any foundation to that report. ([Mrs. J. Herschel, 1876: 99](#)).

For Batavus’ last visit on 29 March 1799, we read: “The Prince of Orange stepped in to ask some questions about planets. Lord Kirkwall and a gentleman came to see the instruments.” (*ibid.*). The other guest was the Welsh politician John Hamilton FitzMaurice, Viscount Kirkwall (1778–1820).

On 22 May 1802, we see “Lord Stanhope”. However, this person is not identical to Phillip Stanhope, mentioned above. The visitor was the Royal Army officer Charles Stanhope (FRS), 3<sup>rd</sup> Earl of Stanhope, only mentioned in the *Temporary Index*: “Lord Stanhope & Mr. Varley saw some objects.” ([C. Herschel, 1780–1808: 59](#)). Probably, the 7-foot reflector was used. The other visitor was Cornelius Varley (1781–1873), an instrument-maker and water-colour painter; he invented the ‘graphic telescope’.<sup>31</sup>

On 26 April 1806, Heneage Finch (FRS), 4<sup>th</sup> Earl of Aylesford, visited Slough. Although his primary duty was as Lord Steward of the Household, he was also known as a landscape artist. Finch was joined by Alleyne Fitzherbert, 1<sup>st</sup> Baron St. Helens (1753–1839), the Prussian General Jacob de Budé and a “Rev. Mr. Miller”. The Scottish geologist James Hall of Dunglass (FRS), 4<sup>th</sup> Baronet, visited Slough on 20 April 1810. On 3 July 1814, the Crown Prince of Bavaria, Ludwig Carl August (1786–1868), visited the Herschels. In 1825, he became King Ludwig I of Bavaria.

On 14 April 1818, we see Arthur Wellesley,

2<sup>nd</sup> Duke of Wellington, Marquess of Douro, in Slough. He came with his younger brother Charles. Both were sons of Arthur Wellesley, 1<sup>st</sup> Duke of Wellington, victor of Waterloo in 1815 (who never visited the Herschels). The 10- and 9-year-old boys were accompanied by their tutor Henry Michell Wagner (1792–1870), Vicar of Brighton. On 14 May 1818, the trio returned with another family member, Henry Wellesley, 1<sup>st</sup> Baron Cowley (1773–1847), brother of the 1<sup>st</sup> Duke. The English physician, lexicographer and FRS Peter Mark Roget (1779–1869) was also present. The 2<sup>nd</sup> Duke came again on 7 September 1819, joined by his tutor and Jane Douglas Hervey-Bathurst (1787–1827). The following night, William made his very last observation: the target was the Great Comet of 1819 (i.e. C/1819 N1 Tralles).

On 16 July 1818, the Herschels could greet the Grand Duke of Russia, Michael Pavlovich Romanov. He was joined by 11 persons: the Russian Ambassador Paul von Nicolay (1777–1866); the Royal Army officer Sir William Congreve (FRS), 2<sup>nd</sup> Baronet (1772–1828), “General Pashewitch”, “General Alewdrenski”, “Baron Nicolay”, “Dr. Namel” and “C. Le Fort and five German Gentlemen”. According to the *Memoirs*, they “... came to see Jupiter.” ([Mrs. J. Herschel, 1876: 127](#)).

On 14 October 1818, we see Maximilian Joseph von Österreich-Este, Archduke of Austria, and eight other persons, among them the Austrian General Ignaz Franz Graf zu Hardegg (1772–1848) and the German Joseph Freiherr von Wöber (1782–1862). According to the *Memoirs*, his parents Ferdinand Karl von Österreich-Este (1754–1806) and Maria Beatrice (1750–1829) had already visited Slough in 1786 (they were the first guests from Austria).

On 18 June 1822, we see Prince Christian Frederick of Denmark, who became King Christian III in 1840. He was joined by his second wife, Caroline Amalie (1796–1881). Both nobles were William’s last guests—he was already 83 years old. The great German-born astronomer died two months later, on 25 August, and was buried in Upton.

## 11.2 Lord Byron

The visit of George Gordon Noel Byron, 6<sup>th</sup> Baron Byron, commonly known as Lord Byron, is differently described in the literature. The paper “A note on Lord Byron’s visit to William and Caroline Herschel” ([Effinger, 2020](#)) claims that he was in Slough on 24 September 1811. The author quotes Caroline’s *Visitors’ Book*: “Countess of Hartcourt with Mr. and Mrs. Gordon”; see also [Holmes \(2008\)](#). This is backed

by another author (Cunningham, 2017) who further writes that “after his visit”, the poet has written: “I viewed the moon and the stars through Herschel’s telescopes”; see also Rowan Robinson (2013). Not all of this information is correct.

First, the “Countess of Hartcourt” is Mary, the wife of William Harcourt, 3<sup>rd</sup> Earl Harcourt. But who are “Mr. and Mrs. Gordon”? The man could be George Gordon, but Lord Byron was not married at that time. In 1810 he had homosexual experiences in Greece and when he returned to England in July 1811 he was warned by friends to keep silent about this delicate matter. In October, Lord Byron learned of the untimely death of the choirboy John Edleston, his great love from his time at Trinity College. This came as a great shock to him, and he went through a prolonged period of mourning. In 1815, he spontaneously married Annabella Milbanke (1792–1860).<sup>32</sup> Thus, Caroline’s “Mr. Gordon” cannot be Lord Byron. There was no Slough visit in 1811.

However, there are two other “Gordons”, mentioned by Caroline in 1784 and 1786. On 14 March 1784, the “Duke of Gordon” was in Datchet. This was Alexander Gordon, 4<sup>th</sup> Duke of Gordon, Marquess of Huntly; he was joined by James Lind. On 5 June 1786 (Slough), we read about a visit by “Mr. Gordon (a natural son of the Duke of G)”. This was his son George Gordon, 5<sup>th</sup> Duke of Gordon, Marquess of Huntly (1770–1836). However, on 24 September 1811 we read “Mr. & Mrs. Gordon”. This cannot be Alexander Gordon and his wife Jane (1748–1812), who was depressed and ill because her husband now had a mistress, Jane Christie (they married in 1820). It also cannot be George Gordon, who only married Elizabeth Brodie (1794–1864) in 1813. Thus, we end up with an unknown couple, who made naked-eye observations of the Great Comet of 1811 while at Observatory House.

However, there was a visit by the real Lord Byron, which took place on 10 June 1813. We read in the *Visitors’ Book*: “June 10 in the evening. Lady Oxford with four daughters accompanied by Lord Byron”. The Lady was Jane Elizabeth Harley, Countess of Oxford, who was his mistress at that time. However, there are no documented observations made by Lord Byron (the last happened in 1818). The quoted words are probably more an expression of his imagination when seeing the large telescopes in the garden of Observatory House. Moreover, they were not written “after his visit”, but first appeared in his diary of 1821. Lord Byron died on 19 April 1824 in Messolongi, Greece.

## 11 IMPORTANT VISITORS

Table 18 gives a selection of other important visitors, mainly based on profession or position. Due to their many visits, Grenville Penn, Jean-Baptiste Komarzewski and James Watt are treated first.

### 11.1 Granville Penn

Penn visited the Herschels seven times. Born in London, he was a writer and scriptural geologist, believing that the Earth was formed in recent times based on a literal interpretation of the Bible. Of course, William’s view about the creation of the world was more scientific (Hoskin, 2014b). On his first visit, on 14 October 1788, Penn was joined by Colonel Robert Morse (1743–1818), a member of the Corps of Royal Engineers. On 27 April 1794, he came with his wife Isabella (1771–1847). There were five other guests, among them the Irish politician William O’Brien, 6<sup>th</sup> Earl of Inchiquin (1765–1846), his wife Elizabeth Rebecca (1775–1852) and the Spanish physician Antonio de Gimbernat (1734–1816). The next visit took place on 21 June 1799, together with the English printer and author John Nichols (1745–1826), Editor of the popular *Gentleman’s Magazine* for nearly 40 years. William might have been among its readers. Penn came again on 10 August 1801, when the Herschel family was on tour in Wales. He was joined by Caroline King, Countess of Kingston (1754–1823), the wife of Robert King, 2<sup>nd</sup> Earl of Kingston, who visited Slough on 18 November 1793. On 8 November 1809, Penn was again a guest in Slough. His last visits took place on 21 June 1816 and 17 December 1817. In 1816 visitors were “Count Berton, a Piedmontese Nobleman, introduced by Dr. Keate”; in 1817 we see Reinhold Diedrich von Nolcken, the son of Christopher Reinhold von Nolcken. Granville Penn died at Stoke Park, Buckinghamshire, on 28 September 1844 at the age of 83.

### 11.2 Jean-Baptiste Komarzewski

Lieutenant-General Komarzewski (FRS) was a good friend of the Herschels. He came from a noble Polish family and held the position of Head of the War Offices. He also was a mineralogist, becoming a Fellow of the Royal Society in 1792. Six visits in Slough are documented in the short period from 1789 to 1792. The first took place on 21 October 1789. Komarzewski was joined by the Bouverie family and James Williamson (see Section 8). On 1 October 1791 we see him with the Polish Ambassador Franciszek Bukaty, the Sheriff of London John William Anderson, 1<sup>st</sup> Baronet, and his wife Dorothy. The next visit was on 2 November 1791, together with “2

Table 18: Selected important persons (sorted by first visit); B = Bath, D = Datchet, C = Clay Hall, bold = observations, italics = William was absent.

Name	Born–Died	Nation	Remarks	N	Visits
Patrick Brydone	1736–1818	Scotland	Travel writer, FRS	1	<b>B1781</b>
John Roger Arnold	1769–1843	England	Watchmaker and inventor	3	<b>1782, 1786, 1801</b>
Edward Nairne	1726–1806	England	Optician and instrument-maker	1	<b>D1783</b>
Peter Dollond	1731–1820	England	Instrument-maker, John Dollond's son	2	D1783–1784, 1812
William Hamilton	1730–1803	England	Archaeologist, volcanologist, FRS	2	1786, 1791
James Watt	1736–1819	Scotland	Engineer, FRS	5	1786, 1793, 1796, 1807, 1818
John Bryant		England	Bath Philosophical Society	3	<b>1787, 1791(2)</b>
Grenville Penn	1761–1844	England	Writer	7	1788, 1794, 1799, 1801, 1809, 1816, 1817
Paolo Andreani	1763–1823	Italy	Balloon driver	2	1789, 1792
William Cruickshank	1740–1810	Scotland	Chemist, FRS	1	1789
James Edward Smith	1759–1828	England	Botanist, Linnean Society founder	1	1789
Jean-Baptiste Komarzewski	1744–1810	Poland	Mineralogist, Lieutenant-General, FRS	6	1789, 1791(2), 1792(3)
Chief Bowles	1765–1839	USA	Leader of the Chickamauga Cherokee	1	1791
Thomas Payne	1752–1831	England	Bookseller, publisher	1	1791
Johann Friedrich Blumenbach	1752–1840	Germany	Professor of Medicine in Göttingen	1	<b>1791</b>
Christian von Mechel	1737–1817	Switzerland	Engraver, publisher	2	1792, 1792
John Baddeley	1727–1804	England	Clockmaker, FRS	1	1793
Giovanni Battista Rodella	1749–1834	Italy	Telescope-maker	1	1794
Thomas Lawrence	1769–1830	England	President of the Royal Academy, FRS	1	1796
Joseph Planta	1744–1827	Switzerland	British Museum Librarian, FRS	3	1797, 1800, 1802
Thomas Charles Hope	1766–1844	Scotland	Prof. of Chemistry in Glasgow, FRS	1	1803
Ernst zu Münster	1766–1839	Germany	Statesman	3	<b>1807, 1807, 1807</b>
Joanna Baillie	1762–1851	Scotland	Poet, dramatist	1	<b>1807</b>
Frederick Paul Irby	1779–1844	England	Admiral	2	<b>1807, 1807</b>
Thomas Starling Norgate	1772–1859	England	Journalist	1	1812
William Edward Parry	1790–1855	England	Arctic explorer, FRS	1	1814
Isabella Mattocks	1746–1826	England	Actress, Covent Garden Theatre	2	1815, 1816
John Quincy Adams	1767–1848	USA	6 <sup>th</sup> President of the United States	1	1816
Sigismund Rentzsch	1775–1843	Germany	Watchmaker to the King	1	1816
Charles Manners–Sutton	1755–1828	England	Archbishop of Canterbury	2	1817, 1818
George Naylor	1764–1831	England	Painter, FRS	1	1818

Gentlemen from Poland". Komarzewski and the Spanish Ambassador to Poland, Pedro Normande y Mericán, were in Slough on 2 April 1792.

From 29 May to 9 August 1792, he travelled with William through Wales, Scotland and south-west England. They visited James Watt at his Birmingham factory. Just two month later Komarzewski was again in Slough, and on 4 October he was joined by Pedro Normande y Mericán, Henry Phipps, 1<sup>st</sup> Earl of Mulgrave, and Joseph Priestley. His last visit was on 26 September 1792. The English publisher Joseph Johnson and the "Venetian Ambassador and 7

Gentlemen" were present. The Ambassador could be Gasparo Soderini, although his duty ended 1787, but there was no successor. Jean-Baptiste Komarzewski later moved to Paris, where he died on 1 February 1810 at the age of 66.

### 11.3 James Watt

In 1786, the eminent Scottish engineer James Watt (FRS) visited Slough. He owned a factory in Birmingham, which was later visited by Herschel on his tours in 1792 and 1793. Watt returned on 15 September 1793; with 32 visitors this was one of the most crowded days at

Observatory House. He was joined by his wife Ann (1783–1832), his business partner and FRS Matthew Boulton (1728–1809) and the Maskelyne family. It also was a meeting of Ambassadors: Bernardo del Campo of Spain; Christian Detlev von Reventlow of Denmark, joined by his wife Sophie Frederikke Louise Charlotte (1747–1822) and daughter Sophie Charlotte (1779–1846); Sigismund Ehrenreich Johann von Redern of Prussia and his wife Henriette (1739–1827); and João de Almeida de Melo e Castro, 5<sup>th</sup> Conde das Galveias (1756–1814), of Portugal.

Watt's next visits took place in May 1796 and on 18 June 1807, again with his wife Ann. On the latter date, we read in the *Memoirs*: "Spent the day at Slough, Mr. and Mrs. Watt being there on a visit, and a large party to dinner." (*Mrs. J. Herschel, 1876: 113*). We see the engineer one last time in Slough on 22 September 1818, although 82 years old (see [Table 5](#)); a "Mr. Jones from Birmingham" joined him. James Watt died on 25 August 1819 in Heathfield, Staffordshire.

#### 11.4 Others

Watt's partner Matthew Boulton came to Slough in May 1796. Moreover, the third *Visitors' Book* mentions "Mr. & Mrs. Boulton" on 8 August 1810. This cannot be Matthew, who died a year earlier, but he had a son, Matthew Robinson Boulton (1770–1842), who took over his father's business in 1800 at the Birmingham factory together with James Watt Jr. (1769–1848). Had Matthew Robinson and his wife visited Slough? This is impossible, because the marriage to his wife Mary Ann (1795–1829) only occurred in 1817 (so in 1810 she would have been just 15 years old). Thus, "Mr. & Mrs. Boulton" remain unidentified. Interestingly, there is a hint of an undocumented visit by a Matthew Boulton before 1793. On 30 June 1787, he wrote a letter to his son, though with some errors:

When your Sister & I returned from London we called upon Mr. Hershall the Astronomer near Windsor & saw his great Telescopes. He hath discovered lately 2 Burning mountains or Vulcanos in the Moon & when the largest Telescope is quite compleat he expects to make many other important discoveries & extend our ideas of the immensity of the Creation. (*Daly, 2018*).

The writer and traveller Patrick Brydone (FRS) met the Herschels on 20 July 1781 in Bath. This first Scottish visitor published several travelogues in the *Philosophical Transactions*. According to the *Fixt Stars*, there was an observation of the double star  $\alpha$  Herculis with

the 7-foot reflector:

I shewed this star to Mr. Brydone, who immediately observed that one of them was red the other greenish. However, it appeared to me what I have called a faint bluish tint. (*C. Herschel, 1775–1784: 111*).

John Roger Arnold was a well-known London watchmaker. He continued the work of his father, John Arnold (1736–1799), who coined the term 'chronometer'. His first visit to Bath on 15 June 1782, when he observed with Maskelyne, Shepherd and Playfair, is mentioned in Section 7. Arnold visited the Herschels two more times in Slough, on 3 June 1786 and 4 August 1801. There was an observation on the former date:

Lord Effingham, another gentleman & Mr. Arnold saw the 5<sup>th</sup> nebuleuse of the Connoissance des temps [M 5 in Serpens], in the 7 feet reflector, and afterwards in the 20 feet. (*C. Herschel, 1783–1802*).

On the latter date, William, Mary and John were travelling in Wales.

Edward Nairne, the London optician and instrument-maker, visited Datchet on 29 November 1783. Herschel's micrometers were mainly constructed by him, as was a refractor of 18 inches focal length (called the 'achromatic'). He was joined by a "Mr. Collins", and both observed with the 7-foot telescope:

Near 2 degrees north following  $\eta$  Cygni. I shewed this star to Mr. Nairne & he pointed out the situation of the double as my measures give it. Mr. Collins saw the same, [power] 278, 460. The position is north preceding. I shewed Mr. Nairne & Collins Mr. Pigots Comet. (*W. Herschel, 1774–1799: 26*).

The object, found by Edward Pigott on the 19<sup>th</sup>, was seen in Aries at magnitude 7.2. That night Caroline independently observed with her small sweeper.

Peter Dollond, another well-known London instrument-maker, visited the Herschels at Datchet in 1783–1784. He was the son of John Dollond, famous for the invention of the achromat, and excellent telescopes. A second visit took place on 27 September 1812 in Slough. Dollond was joined by a "Mrs. Kelly" (see Section 7). Unfortunately, William was on his annual tour with Mary and John, in Devon.

In 1786, the English archaeologist and vulcanologist William Douglas Hamilton (FRS) visited Slough. He also served as the British Am-

bassador to the Kingdom of Naples. Another visit is dated 27 August 1791 (William and Caroline made sweep 1019 that night). On 19 March 1787, we see the English engineer John Bryant, a member of the Bath Philosophical Society, in Slough. William wrote in the *Journal* (interrupting sweep 719): “Mr. Bryant saw the two satellites [of Uranus] with 480 with a lower power he could only see the 1<sup>st</sup>.” (C. Herschel, 1783–1802). The 20-foot front-view telescope was used. Bryant returned on 17 January 1791. “Mr. & Mrs. Williams” and a “Gentleman” were present (only mentioned in the second *Visitors’ Book*).

On 7 January 1789 the *Visitors’ Books* mention a “Count Adriani”. This was the Italian Paolo Andreani, famous for his balloon flights (he was not a Count, but his father who died in 1772 was). He was again in Slough on 28 August 1792; Count Brühl, the Royal Navy officer John Colville, 9<sup>th</sup> Lord Colville of Culross, and a “Mr. Dawson from Bath” were also present. Andreani was a friend of Barthélemy Faujas de Saint-Font and had visited Datchet on 15 August 1784. On his journey through England, the prominent explorer also met James Watt and Joseph Priestley.

William Cruickshank (FRS) visited the Herschels on 26 September 1789. He was Professor of Chemistry at the Royal Military Academy, London. The Scot is known for the identification of carbon monoxide. The next day, the English botanist James Edward Smith came to Slough. Together with his colleague Joseph Banks, he had founded the Linnean Society of London in 1788 and was its first President.

On 19 March 1791, a “Gen. Bowles, Cherokee Chief” is mentioned in Caroline’s *Visitors’ Book*. However, on the 21<sup>st</sup>, the second *Visitors’ Book* gives “One of the Charokeechiefs”. This is Chief Bowles (also known as ‘The Bowl’), one of the leaders of the Chickamauga Cherokee. He fought against the American cavalry in the Indian Wars. The ‘Cherokee Nation’ was established in 1794 in Oklahoma. If the date in the second *Visitors’ Book* is correct, then Chief Bowles was joined by “Dr. Foster” and “Mr. Tone” (otherwise he was alone).

On 7 October 1791, the London bookseller and publisher Thomas Payne visited the Herschels. He came with his wife and two daughters; one of them, Sarah (1759–1832), married James Burney (1750–1821), brother of the novelist Fanny Burney. Payne had published part of her literary work. The Slough visit is only mentioned in the second *Visitors’ Book*, also listing “Capt. & Miss Sayer” for that date. William observed on the following night. On 26

December, we see the German Johann Friedrich Blumenbach in Slough. He was Professor of Medicine at Göttingen University and a well-known race theorist. William showed him some objects through the 7-foot reflector.

The Swiss engraver and publisher Christian von Mechel visited Slough on 15 July 1792, while William was on tour in Scotland. Mechel returned on 10 August to finally meet him. Also present were Samuel MacKnight (1757–1807), Writer to the Signet in Scotland, and the French dancer Charlotte de Cheminot (1740–1825); a “Dutch Nobleman” and “Mrs. Johnson” are also mentioned.

On 18 November 1793, the celebrated Albrighton-based clockmaker John Baddeley (FRS) visited the Herschels. There were 14 other people who came to Observatory House that day, among them the Anglo-Irish peer Robert King, 2<sup>nd</sup> Earl of Kingston (1754–1799), Joseph Louis Bernard de Cléron d’Haussonville (1737–1806), Victurnien Bonaventure de Rochechouart-Mortemart (1753–1823), his wife Marie Céleste Adélaïde de Nagu (1764–1853) and daughter Catherine de Rochechouart (1776–1809). Giovanni Battista Rodella, another instrument-maker, appeared in 1794, probably during the summer (he wrote a report about the visit; see Table 11). He was responsible for the mechanical work at Padua Observatory. On his tour through England, he also met Jesse Ramsden, James Watt and Matthew Boulton.

In May 1796, the prominent London painter Thomas Lawrence (FRS) visited Slough. In 1792 he had been appointed by George III as ‘painter-in-ordinary to his majesty’. In 1820 he became President of the Royal Academy. Lawrence portrayed many important persons, including the King and Queen, the Duke of Wellington and Pope Pius VII. He was a colleague of William Beechey, who was 16 years older. Both had been knighted by the King for their important work.

Joseph Planta (FRS), Principal Librarian at the British Museum, visited the Herschels on 3 May 1797. He returned in June 1800, joined by his wife Elizabeth; her biographical data agree with those of Alexander Herschel. Bertie and Ann Greatheed were also present. A last visit by Planta is documented in 1802 (but no date is given).

On 1 August 1803, the Scottish scientist and Professor of Chemistry at Glasgow University, Thomas Charles Hope (FRS), visited Slough, joined by “a Gentleman, a friend of Dr. Hope’s”. It was Professor Hope who proved the existence of the element strontium.

Ernst Friedrich Herbert zu Münster visited

the Herschels three times. The German statesman, known as Count Münster, was in the service of the House of Hanover. He had studied at Göttingen University, together with the three youngest sons of George III. His first visit was on 31 March 1807. He was joined by William Abdy, 7<sup>th</sup> Baronet (1779–1868), and his wife Anne (1788–1875). On 4 October, we read in the *Temporary Index*: “Count Münster, General Cartwright, Mrs. Beckedorff & Miss Beckedorff saw the comet”. (C. Herschel, 1780–1808: 59). The object was the Great Comet of 1807. The identity of the General is unknown. The two German women were Charlotte Amalie Beckedorff (1756–1843), Keeper of the Robes to Queen Charlotte, and her daughter Sophia. They were close friends of Caroline.<sup>33</sup> Count Münster returned to Slough on 14 August 1811, but unfortunately William, Mary and John were on their annual summer journey, travelling through northern England and Scotland.

The well-known Scottish poet Joanna Baillie visited the Herschels on 5 and 6 April 1807, joined by her elder sister Agnes. William wrote in the *Review* for the 5<sup>th</sup>: “I saw Jupiter and shewed it to Miss Baillie and her sister Joanna, the author of several volumes of dramatic pieces.” (C. Herschel, 1779–1819: 34). On the 6<sup>th</sup> we read: “Miss Baillies saw the Sun and in the evening the Georgian planet, Saturn etc.” (*ibid.*). Probably the 7-foot telescope was used. The sisters were friends of Lord Byron and Fanny Burney. Both lived to old age: Joanna died at 90 and Agnes reached 100. On 28 September 1812, Sophia Baillie and Elizabeth Margaret Baillie visited Slough; they were Joanna’s sister-in-law and niece, respectively. Unfortunately, William, Mary and John were on their annual summer tour, in Devon.

On 8 October 1807, the Rear Admiral Frederick Paul Irby visited Slough. The *Visitors’ Book* notes “Admiral & Mrs. Boston”, but here we have a problem. Irby’s first wife Emilie (1784–1806) had died on 7 August at the birth of their son. He married again in 1816, thus “Mrs. Boston” cannot be his second wife Frances (1796–1852). The only possibility is his mother Christiane Irby, Baroness Boston (1750–1832). She had already been in Slough on 5 October 1787, joined by her husband Frederick Irby, 2<sup>nd</sup> Baron Boston (1749–1825). Frederick Paul’s father came a second time (alone) on 16 January 1788. The Admiral also paid another visit, only six days after the first, on 14 October 1807. He was one of the 58 persons, who watched the Great Comet of that year, and was among the few to observe it with the 7-foot telescope.

On 8 September 1812, Caroline wrote in her *Observation Book*: “Mr. Ruffo and Mr. Norgate were in the garden with me and prevented my observation it more attentively.” (C. Herschel, 1782–1824: 108). The Herschel family was on tour in Devon and Caroline ‘held the fort’ at Observatory House. The uninvited guests were the English journalist and newspaper editor Thomas Starling Norgate and the Italian nobleman Paolo Ruffo, 3<sup>rd</sup> Prince of Castelcicala, 2<sup>nd</sup> Duke of Calvello (1791–1865). He was the son of Fabrizio Ruffo, 2<sup>nd</sup> Prince of Castelcicala, 1<sup>st</sup> Duke of Calvello (1763–1832), who had already visited Slough on 14 September 1791.

The American John Quincy Adams visited Slough on 14 July 1816. He would become the 6<sup>th</sup> President of the United States in 1825. The *Visitors’ Book* notes: “Mr. Joy with sons of Mr. Adams Minister of the United States”. The “Minister” is John Quincy Adams’ father, John Adams (1735–1836), who was the 2<sup>nd</sup> President of the United States, from 1797 to 1801. The other son was Thomas Boylston Adams (1772–1832). Finally, “Mr. Joy” is John Jay (1745–1829), the Governor of New York. His wife Sarah (1756–1802) had already visited Slough on 26 April 1797 (“Mrs. Jay from America with a party”). A month later, on 23 May, the *Visitors’ Book* mentions a “Mr Adams with a party”. This cannot be the second President, who had just assumed office. However, there must have been an earlier, undocumented visit by John Adams. In the literature about his diary we learn that Adams “... was captivated by Herschel’s discoveries and counted his visit to Herschel and his telescopes among his best experiences in England.” (Daly, 2018: 9)

The German Sigismund Rentzsch visited Slough on 1 December 1816. He was the watchmaker to George III. Early in his career, he had patented a strange ‘hydrostatical/pneumatical chronometer’. During the period 1811–1849, Rentzsch ran a workshop at St James’s Square in London. At the meeting with Herschel, he was joined by the German architect Georg Ludwig Friedrich Laves (1788–1864), who worked in Hanover.

On 12 November 1817, the Archbishop of Canterbury, Charles Manners-Sutton, visited the Herschels. He was the uncle of John Henry Manners, 5<sup>th</sup> Duke of Rutland, who had been in Slough on 11 and 13 August 1794. The Archbishop had succeeded John Moore in this important position. At Slough, Manner-Sutton was joined by General de Budé (see Table 5) and “General Cartwright”. On his second visit, on 8 August 1818, we also see the niece of George III, Princess Sophia Matilda of Gloucester, Mary

Somerset, the mother of Sophia Paulett and second wife of Lord Charles Henry Somerset (1767–1831), and Edward Disbrowe, Vice-Chamberlain to Queen Charlotte, with his daughter Charlotte Albinia. Caroline wrote in her *Memoirs*:

I spent the afternoon with my brother, who found himself very unwell, but with the assistance of my nephew [26-year-old John], he had the pleasure of showing the Princess Sophia of Gloucester (who came in the evening accompanied by the Archbishop of Canterbury and several lords and ladies) many objects in the ten-foot telescope. ([Mrs. J. Herschel, 1876: 128](#)).

On 24 March 1818, George Naylor (FRS) visited Slough. He originally was a miniature painter. In 1816 he had been appointed King of Arms of the newly created orders of the Royal Guelphic Order. Two years later, William Herschel received the honour of a Knight of the Royal Hanoverian Guelphic Order ([Hoskin, 2013](#)).

## 12 CONCLUDING REMARKS

This paper represents the first systematic study of the people who visited William and Caroline Herschel, and later William's wife Mary. They came to their various homes at Bath, Datchet, Clay Hall and Slough. The basis of the study is the evaluation of three *Visitors' Books*, created by Caroline and other unknown writers. Further information comes from handwritten documents made by the Herschels and stored in various archives. The period from 1777 to William's death in August 1822 is treated. More than 2,500 visits were recorded during this period.

The information presented here is mostly new, although some aspects were already published in the author's comprehensive book about William Herschel's observations ([Steinicke, 2021](#)). However, only a selection of visitors is discussed in this paper, on the basis of their profession, position or general importance. The data were assembled in a large database, which can be consulted upon request.

In addition to 'normal' visitors, there were also a considerable number of nobles: they account for 18% of all visits. After Herschel settled near Windsor Castle in 1782, he was an attractive target for this class of people. Due to William's diverse interests, musicians, astronomers and other scientists were frequent guests (they account for 12% of all visits). However, many noble people were also interested in science and were Fellows of the Royal Society.

The proximity to Windsor Castle and the

financial support received from George III—who was very interested in astronomy—certainly meant that Herschel was obliged to host noble guests. Of course he did not run regular 'observing nights' like a public observatory, so it was only very special guests, mainly scientific colleagues, who were able to carry out observations with one of William's telescopes. Some, including Sir Joseph Banks, President of the Royal Society, were even allowed to carry out a sweep with the large 20-foot reflector. Occasionally, distinguished guests were able to stay overnight at Observatory House.

Although he never ran 'public nights', on special occasions, such as when the Great Comets of 1807 and 1811 were on display, Herschel arranged star parties in the garden, for up to 50 invited guests. On these occasions the impressive 40-foot reflector also was on display. Largely funded by King George III, this telescope was completed in 1787 and was a landmark that could be seen from afar. It was intended to impress George III, as was Herschel's naming of his newly-discovered planet 'Georgium Sidus' (now known as Uranus).

However, there is no evidence in the archived documents that the King expected William to provide special care for nobles in exchange for his Royal patronage. But perhaps some nobles were encouraged by various members of the Royal Family to visit the famous 'court astronomer' (even if this was not Herschel's official title).

After nobles, another large group of visitors to Observatory House were members of the military or the church. Their reasons for wishing to meet the famous German-born astronomer were not always apparent, but due to his discovery of a new planet, Herschel became a very popular person and word of his hospitality and knowledge quickly spread.

Herschel not only tried to entertain visitors to Observatory House (nothing is known about the costs involved), but he also had a certain educational zeal. According to published reports from various visitors, including Faujas and Magellan, he patiently and conscientiously described his telescopes and outlined observing methods and results. Because of his early cosmopolitan education in Hanover and the freedom of research that he later enjoyed after his musical ventures in England, William Herschel was a pleasant, communicative person with knowledge that went far beyond astronomy.

The question arises as to whether William Herschel's research activities were limited by the large numbers of visitors, especially during

the period 1783–1802. This was the most intensive observing phase, when almost the entire sky was systematically searched for nebulae and star clusters. Virtually every clear night was used by William for sweeps, with support from his sister.

During the day, Caroline documented and evaluated the observational data of the previous night, while William was busy building telescopes, expanding observational methods with sophisticated new devices, thinking about ‘the construction of the sky’, or working on papers for publication in the *Transactions of the Royal Society of London*.

So when was there time for visitors? In fact, the circumstances are less dramatic than one might think. Of the approximately 3,200 dates when observations were made (mainly at night, but sometimes also during the daytime, studying the Sun), guests were present on only around 190 days. In addition, there were 650 days with visitors, when no observations took place, mainly because of bad weather or William’s absence. Thus, there was no real conflict between observational and social duties. There were only a few cases where William Herschel had to interrupt an observation due to the appearance of guests, and these related to very important people, such as professional astronomers or high-ranking nobles.

Most people visited during the day, and often they had announced their arrival prior to their visit, either by letter or through other guests. Of course, some people came spontaneously. Herschel’s Observatory House in Slough was conveniently located on the main route between London and Bath, and his telescopes were conspicuous features of the landscape. However, there is no hint in any of the Herschel records that these unexpected guests were a problem.

When the weather was really bad and no preparation was necessary for a nightly observation, the Herschels were able to look after their guests with greater leisure. Otherwise the visits probably were rather short, especially during the first years of the sky survey. After William’s marriage in 1788 and Caroline’s subsequent departure from Observatory House, visitors generally were cared for by his wife, Mary. Yet the siblings managed to keep the astronomical work going, which always had the highest priority. Both William and Caroline could hardly have gotten much sleep in the first few years of the sky survey.

From 1802 onwards William found more time for visitors, having completed his intensive observational campaign. However, he was now

absent more often, as shown by his regular summer journeys with Mary and John, occasionally joined by friends. Caroline then took care of guests, but some people missed William and returned later, when he was present.

Of course, Caroline’s own observing sessions also were occasionally limited by visitors. Usually, she allowed guests to look through one of the small Newtonian reflectors that had been built for her by William.

Caroline also received financial support from the King and certainly felt obliged to properly look after nobles when they visited. Caroline became famous for her cometary discoveries, and it is apparent that she and William collectively were responsible for attracting the large numbers of visitors to Observatory House.

This is reflected in the high proportion of women and young ladies, who accounted for about 25% of all visitors. In Herschel’s time, interest in astronomy and science in general was a particularly male domain, and female astronomers were a rare breed, in England and worldwide. While only a few women visited the Herschels before 1786, the number rose sharply afterwards. The reason was obvious: Caroline’s discovery of her first comet on 1 August—and more in the following years. Later, Mary Somerville rose to prominence (e.g. see [Neeley, 2001](#)) and she visited Slough in 1812.

Women visitors often were accompanied by male partners, and even entire families made pilgrimages to Slough. William’s wife Mary, on the other hand, had little scientific knowledge and was therefore less interesting for visitors. But she was still popular and had a good reputation as a hostess. Through their many visits, Mary and Caroline were practiced in polite conversation with prominent guests, including nobles. William could always rely on both of them.

There is certainly still a lot to discover in the Herschel archival records at the Royal Society and the Royal Astronomical Society (and now digitally available). Perhaps more than the three *Visitors’ Books* will appear, although no previously unknown visits or guests are to be expected. The available data still offer room for interesting analyses about social connections, scientific issues or historical events. It would also be worthwhile to examine the different interests of the various guests, by consulting non-astronomical sources.

Finally, there are still about 900 unidentified visitors, although some information about these people is known. If more relationships can be found, there will be an opportunity for further

identifications and to update information on specific individuals. Handwritten entries in the *Visitors' Books* also should be checked, although some of the writing is barely legible.

### 13 NOTES

1. Although the book *The History of Slough* by [Fraser \(1973\)](#) contains a chapter “Notable residents and visitors”, it mentions only 11 persons in the period treated here.
2. See also the chapters on the Herschels in [Steinicke \(2010\)](#).
3. The years of birth and death are only given at the first appearance of a person. Exceptions are in the tables.
4. His father, William Watson Sr. (1715–1787), was an eminent botanist and naturalist. This Fellow of the Royal Society (FRS) supported Herschel to publish in the *Philosophical Transactions of the Royal Society of London*. Later the Herschel family frequently went to stay with him at his home in Dawlish.
5. For Herschel’s music, see [Proust and Orchard \(2020\)](#).
6. The owner of Caroline’s *Visitors’ Book* is an American member of the Antique Telescope Society.
7. In October 1797, Caroline abruptly left the cottage and found lodgings at Herschel’s work-man, Sprat, in Slough. She never again lived with her brother and his family at Observatory House.
8. This is Friedrich Wilhelm von Hessen-Philippsthal (1786–1834), who visited Slough on 23 May 1819. He was joined by his brother Ernst von Hessen-Philippsthal (1789–1850).
9. In German: Ernst August Karl Johann Leopold Alexander Eduard, Herzog von Sachsen-Coburg und Gotha, and Karl II., Herzog zu Mecklenburg-Strelitz. Which version of a name is used depends on the context.
10. The RAS designation refers to the Herschel Archive of the Royal Astronomical Society, London. It contains a large number of original documents by William (W) and Caroline (C) which have been digitized and are available on DVD.
11. The database is a large Excel file, which cannot be presented here. Please contact the author for any questions.
12. Between 1783 and 1802 William and Caroline systematically observed the sky with the standard telescope, the 20-foot, to find new nebulae and star clusters. In a sweep the telescope was oriented on the meridian and the tube moved up and down ([Steinicke, 2021: Chapter 2](#)).
13. A typical year was 1805, with 37 observations of deep-sky and Solar System objects. From 15 to 27 August, William, Mary and John travelled to Portsmouth, Chichester, Brighton and London. On 8 and 9 December, William observed Comet Biela. The family might have been happy to have no visitors.
14. Edward John Spencer, 8<sup>th</sup> Earl Spencer, was the father of Lady Diana Spencer. John Spencer-Churchill, 7<sup>th</sup> Duke of Marlborough, was the grandfather of Winston Churchill.
15. Of course, Banks did not consider proposing her as a Fellow. The first female FRS was only elected in 1945.
16. John Herschel’s later home, Collingwood, was nearby.
17. An exception might have been French guests, who were not familiar with English. William could read, write and speak French very well. The first visitor from France was Barthélemy Faujas de Saint-Font on 15 August 1784 (see [Table 11](#)). However, all letters to German colleagues, such as the Berlin astronomer Johann Elert Bode (1747–1826), were written in English, but often they answered in German.
18. Faujas met Herschel after he had finished sweep 250 ([Steinicke, 2021: Chapter 2.2.5](#)).
19. John Michell (1724–1793) influenced Herschel with his cosmic theories, which were far ahead of their time (among other things, he dealt with the possibility of black holes). William visited him on 13 June 1792 at his home in Thornhill. Michell also built telescopes, including a compact 10-foot, 29.7-inch aperture reflector that Herschel acquired after Michell’s death.
20. The English astronomer Nathaniel Pigott (1725–1804) was the father of Edward Pigott, known for the discovery and observation of variable stars (see Section 7).
21. We see only two other visitors on a 1<sup>st</sup> of January. In 1795, the American merchant Nathan Bond (1754–1816) came together with a “Mr. Frey from America”. What about Christmas Eve and New Year’s Eve? On 24 December 1809, Francis Lee (1766–1826), Chaplain to the Prince of Wales, visited Slough. Maybe he said a Christmas prayer. However, evidence that Herschel ever attended church is hard to find; see [Hoskin \(2014b\)](#). On 31 December 1800, the King was the only guest. New Year’s Eve of 1783 was a bad day for Caroline. She was injured, when working at the tele-

- scope; see below.
22. Caroline made an independent observation with her small refractor.
  23. In 1650, the Polish astronomer Johannes Hevelius (1611–1687) noted the appearance of a ‘Mons Porphyrites’ in the crater Aristarchus. Herschel might have known about this observation.
  24. He discovered the solar phenomenon, now called the ‘Wilson Effect’. Herschel knew about it but did not mention it in his paper about the Sun. Patrick Wilson was not amused about this and wrote a letter to Herschel, who replied and apologized for his fault (see [Lubbock \(1933\)](#)). There are two more Wilsons in the *Visitors’ Books* (both of them unidentified): a “Mr. Wilson, recorder of Windsor” on 7 September 1812 and “Mr. Wilson, Glasgow” on 7 July 1815, accompanied by his wife and his daughter Helene.
  25. By the way, this self-educated astronomer should not be confused with Christian Mayer (1719–1783) from Mannheim Observatory, famous for his observations of double stars. Herschel’s work on ‘star reviews’ was significantly influenced by him ([Steinicke, 2021: Chapter 1.2–1.4](#)).
  26. He is, of course, not the same Airy family footman William Sayers, who committed a robbery at Greenwich in 1868. The identity of “Mr. West” is unknown.
  27. First licensed in 1394, The Salters’ Company has its origins in the salt trade of medieval London. Until today it is one of the Livery Companies of the City of London. It is directed by masters and wardens.
  28. He died at the young age of 34 and was the son of Prince August Ferdinand von Preussen (1730–1813).
  29. The baptised name of the German-born composer was Georg Friedrich Händel.
  30. In 1830, Prince William Henry became King William IV. The Herschels were never visited by the King’s first son George, Prince of Wales (1762–1830), who became King George IV in 1820, or the 5<sup>th</sup> son, Ernest Augustus, Duke of Cumberland (1771–1851).
  31. The graphic telescope was an optical aid for artists. It was patented in 1811, and is a device that enables artists to view magnified images and trace them onto paper.
  32. Their daughter was the eminent mathematician Augusta Ada King, Countess of Lovelace (1815–1852); for Lord Byron, see [Ellis \(2023\)](#).
  33. When the Queen died in 1818, the Beckedorffs moved to Hanover. Caroline followed them four years later. Sophia later got her small sweeper.

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