

Documents Related to Astronomy in German Archives

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ABSTRACT

A short account of holdings of documents related to astronomy in German archives is given. Several online and printed inventories are indicated. The appendix contains a list of selected collections.

1. Overview of Holdings

Astronomical documents can be found in a very large number of German archives. Large collections are e.g. that of the Berlin Academy of Sciences (holding papers from the Berlin and Potsdam observatories, papers of Auwers, Bessel, Bode, Encke and others, as well as papers concerning astronomy at the Berlin Academy), of the Göttingen University Library (keeping papers from the Göttingen Observatory as well as papers of Gauß, Schwarzschild and others), and of the Deutsches Museum at Munich (owning papers of the Munich instrument makers Fraunhofer, Reichenbach, Steinheil and Utzschneider, as well as of some astronomers).

Many observatories keep their files in their libraries or at other places (e.g. Bonn, Hamburg and Munich; also the European Southern Observatory at its headquarter in Garching near Munich – see Blaauw 1992), but the access is mostly difficult. It is not easy to convince institutions to give their papers to professional archives. In the case of Leipzig the files are in the University Library because the observatory does not longer exist.

Papers of astronomers are kept in many different archives and libraries, e.g. that of Max Wolf are stored in the Heidelberg University Library, that of H.C. Schumacher – the founder of *Astronomische Nachrichten* – in the State Library at Berlin. Letters written by

astronomers can also be found among the papers of mathematicians, physicists and scholars from other fields, as well as in autograph collections. One of the largest autograph collection of the world was that of Ludwig Darmstädter kept at Berlin State Library; unfortunately, many items were lost during World War II. Of some importance for biographical information are also the archives of political parties and organization, e.g. the NSDAP files in the *Bundesarchiv* (Federal Archives) at Berlin (taken over from the former Berlin Document Center maintained by the USA at Berlin). For examples of the different fate of papers of German astronomers and on their preservation see Dick (1998).

There are also numerous administrative papers related to astronomy in state archives. The largest collection is kept at the *Geheimes Staatsarchiv Preußischer Kulturbesitz* at Berlin (files from Prussian ministries concerning observatories of Berlin, Kiel, Königsberg, Strassburg and other places).

Medieval manuscripts (Latin and Arab, many non-European) can be found in large and well-known archives as well as in monasteries and other institutions (e.g. at Gotha, see Schwarz et al. 1998). These will not be considered here.

Some years ago the *Astronomische Gesellschaft* (AG), a professional astronomical society founded in 1863, decided to establish its own archives with the help of the Archives of the Berlin Academy of Sciences. These archives will contain the papers of the *Astronomische Gesellschaft* of the latest decades. Older papers may be found mainly at three places: (1) Leipzig University Archive (from the first decades of the AG, see Münzel 1993), (2) Bonn University Observatory (mainly from the time of Eduard Schönfeld as secretary, ca. 1875–1891), and (3) Archives of the Berlin/Brandenburg Academy of Sciences at Berlin, among the papers of Babelsberg Observatory (especially from the time of Paul Guthnick as secretary, ca. 1924–1933).

Papers related to the IAU can also be found in some archives, e.g. in the Berlin-Brandenburg Academy Archives (among papers of Babelsberg observatory) and in the *Bundesarchiv* at Berlin (files of German ministries from the Third Reich).

2. Inventories

Unfortunately, the situation with (central) registers of astronomical papers in Germany is rather bad. The book by Ernst Zinner (1925) is, so far, the only general inventory of astronomical papers in Germany.

It covers only the period before 1850, is not complete and is outdated due to World War II losses and other circumstances. An inventory by Diedrich Wattenberg (1974) covers only East Germany and lists only letters. It is incomplete and contains some errors, but is nevertheless very useful.

Astronomers' papers may also be found among inventories of general interest. Personal papers by astronomers in former West Germany may be found with the help of the general inventories by Denecke & Brandis (1981 – holdings of libraries) and by Mommsen (1984 – holdings of archives). For the former East Germany there is only an inventory of holdings in libraries (Anonymous 1959–1971). The State Library at Berlin maintains a Central Register of Autographs (mainly letters), which is helpful also for history of astronomy studies. However, it covers only selected archives in West Germany. Recently this central register started to publish its index files in electronic form (project *Kalliope* – Verbundinformationssystem Nachlässe und Autographen). The State Library coordinates also the project *MALVINE* (Manuscripts and letters via Integrated Networks in Europe, see Fig. 1). The Central Register replies to written requests and may also be used personally on appointment. The Bundesarchiv maintains a database of personal papers (*Zentrale Datenbank Nachlässe*). Holdings of German archives related to astronomy may also be found in the *International Catalog of Sources for History of Physics and Allied Sciences*.

A growing amount of information is available through the World Wide Web, not only via the central databases mentioned above, but also from individual archives. For an (incomplete) list of links to the central inventories and to individual archives in Germany (and in the world), we refer to the History of Astronomy Archives website¹. However, in comparison with American archives the information available from German archives through the Internet is rather sparse. I do not know of any complete inventory available electronically from a German archive (at least not for any holdings related to astronomy).

Professional archives keep card files and inventories of their holdings, some of which are rather detailed; these are available for visitors, but excerpts are also sent by letter on request.

Some special inventories have been published, e.g. recently a register of astronomical papers in the Gotha Research Library (Schwarz et al. 1998) and a preliminary list of Gottfried Kirch's papers (Herbst

¹http://www.astrohist.org/hist_astr/ha_arch.html

715	Argaslam	Bedeutung der Zeichen	l. Van 3124, 209'-211'	XV.
716	F.W. Argelander	Sternkunde	d. Zier Stern	1830 ±
717	"	Über veränderliche Sterne	Ber Stern	1850 1850
718	"	8 Briefe	Ber Barn J. 1850	1837/72 1837/72
719	"	6 Briefe	Heid Stern	1839/45 1839/45
720	"	27 an Encke	Koo Stern	XIX
721	"	3 an Gauss	Göte. Gauss 95	1846/53 1846/53
722	"	14 an A. v. Humboldt	Ber Stern	1850 1850
723	"	an J. J. v. Littrow	Bern S. N. G.	XIX
724	"	9 an Noll	Heid Stern	1852/54 1852/54
725	"	1 an Thing Friedr. Will. v. Preußen	Ber Amt.	1835 1835
726	"	an R. Prepsold	Hann Str. A. IX. 2-1	1830 1830
727	"	44 an H. C. Schumacher	Ber S. Schu	

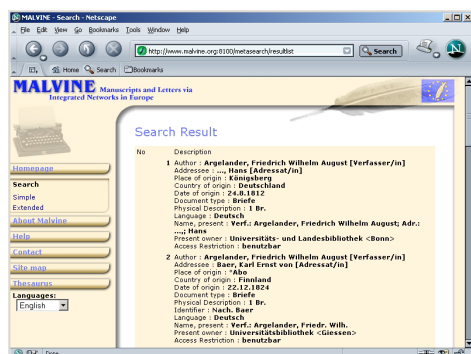


Figure 1. Entries for F.W.A. Argelander. *Top*: in Zinner (1925). Note that Zinner's book was printed directly from the manuscript written by his wife. *Left*: in the Kalliope database from a search through MALVINE.

1999). A nearly complete inventory of letters written by Gauss was compiled by Merzbach (1974). Letters to and from Wilhelm Olbers as well as Franz Xaver von Zach were listed in books by Wattenberg (1994) and by Wattenberg & Brosche (1993). Inventories of Johann Heinrich Lambert's and Michael Maestlin's papers and letters were compiled by Steck (1970, 1977) and Betsch (2002). For short accounts of personal papers of other astronomers see Dick (1993 – Friedrich Wilhelm Argelander), Dick (1995 – Wilhelm Foerster), Dick (2000 – Karl Friedrich Zöllner), Folkerts (1993 – Johannes Praetorius), Klauss (1986 – Friedrich Wilhelm Bessel), List (1961 – Johannes Kepler and Tycho Brahe), Schalldach (1994 – Ernst Zinner), Strumpf and Schwarz (1996 – Peter Andreas Hansen), and Zenkert (1975 – Bruno H. Bürgel). An inventory of the correspondence of Paul Guthnick with Soviet astronomers was published by Dick (1987). Complete inventories of the papers of Johannes Kepler (in the framework of the edition of his complete works, see Kothmann 1996), Gottfried Kirch, Heinrich Christian Schumacher and Wilhelm Foerster are in preparation. Useful hints to archives may also be found in the appendices to research papers and books; a good

example is the book by Litten (1992) on astronomy in Bavaria who used and listed a large number of archival holdings on the subject.

3. Access to Archives

The access to German archives is relatively easy. The visitor has to fill out a short application form and will usually get immediate access to the holdings. However, it is recommended to write to the archives in advance, especially in the case of state archives. The space in the reading rooms of the state archives is limited, and sometimes the files have to be prepared in advance. In some cases one has to wait three or more weeks to get a working place in the reading room. In manuscript reading rooms of university libraries or in smaller archives there is usually enough space for visitors, and the files may be retrieved very quickly. It is also possible to receive copies on written request. However, a personal visit usually yields more complete information.

APPENDIX: SELECTED COLLECTIONS

Berlin: Archiv der Berlin-Brandenburgischen Akademie der Wissenschaften

Auwers, Arthur (1838–1915)
Bessel, Friedrich Wilhelm (1784–1846)
Bode, Johann Elert (1747–1826)
Bottlinger, Kurt Felix (1888–1934)
Encke, Johann Franz (1791–1865)
Foerster, Wilhelm (1832–1921)
Grotrian, Walter (1890–1954)
Guthnick, Paul (1879–1947)
Kienle, Hans (1895–1975)
Ideler, Christian Ludwig (1766–1846)
Kirch, Gottfried (1639–1710)
Kirch, Maria Margaretha (1670–1720)
Kirch, Christfried (1694–1740)
Knorre, Viktor (1840–1919)
Lambert, Johann Heinrich (1728–1777)
Miethe, Adolf (1862–1927)
Schmidt, J.F. Julius (1825–1884)
Berlin/Babelsberg Observatory
Astrophysikalisches Observatorium Potsdam

Venusdurchgänge 1874/1882

Geschichte des Fixsternhimmels

Berlin Academy of Sciences (including astronomy)

Reference: Battré & Herrmann (1970); Baumgart (1977); Klauss (1986) [for Bessel]; Steck (1970, 1977) [for Lambert]; Wattenberg (1974)

Berlin: Staatsbibliothek zu Berlin, Handschriftenabteilung

Schumacher, Heinrich Christian (1780–1850)

Autographensammlung (collection of autographs) Darmstädter

Many single autographs

Berlin: Staatsbibliothek zu Berlin, Handschriftenabteilung, Zentralkartei der Autographen (Central register of autographs)

Projects: Kalliope (Verbundinformationssystem Nachlässe und Autographen); MALVINE (Manuscripts and letters via Integrated Networks in Europe)

Düsseldorf: Landes- und Stadtbibliothek

Benzenberg, Johann Friedrich (1777–1846)

Gotha: Forschungsbibliothek

Papers related to the Gotha observatories and astronomers von Zach, F.X., Ernst II., von Lindenau, B.A., Encke, J.F., Hansen, P.A., Gusev, M.M., Becker, E., Harzer, P., Anding, E.

Reference: Schwarz et al. (1998)

Göttingen: Staats- und Universitätsbibliothek Göttingen, Abteilung Handschriften und seltene Drucke

Finlay-Freundlich, Erwin (1885–1964)

Gauß, Karl Friedrich (1777–1855)

Hartmann, Johannes (1865–1936)

Hirsch, Friedrich (1890–1964)

Klinkerfues, Wilhelm (1827–1884)

Lichtenberg, Georg Christoph (1742–1799)

Mädler, Johann Heinrich (1794–1874)

Mayer, Johann Tobias (1752–1830)

Mayer, Tobias (1723–1762)

Olbers, Heinrich Wilhelm Matthias (1758–1840)

Schur, Wilhelm (1846–1901)

Schwarzschild, Karl (1873–1916)

Struve, Friedrich Georg Wilhelm von (1793–1864)
Wolfers, Jakob Philipp (1803–1878)
Göttingen Observatory
Reference: Merzbach (1984) [for Gauß]

Hamburg: Staatsarchiv
Hansen, Peter Andreas (1795–1874)
Schumacher, Heinrich Christian (1780–1850)
Repsold family
Reference: Strumpf & Schwarz (1996) [for Hansen]

Heidelberg: Universitätsarchiv
Wolf, Max (1863–1932)

Leipzig: Universitätsarchiv
Bruns, Heinrich (1848–1919)
Astronomische Gesellschaft
Leipzig Observatory
Reference: Münzel (1993)

München (Munich): Deutsches Museum, Archiv
Boda, Karl (1889–1942)
Drobisch, Moritz Wilhelm (1802–1896)
Fauth, Philipp (1867–1941)
Fraunhofer, Joseph von (1787–1826)
Hartner, Willy (1905–1981)
Hartwig, Ernst (1851–1923)
Kienle, Hans (1895–1975)
Reichenbach, Georg von (1771–1826)
Schwerd, Friedrich (1792–1871)
Seidel, Ludwig Philipp von (1821–1896)
Steinheil, Carl August (1801–1870)
Utzschneider, Joseph von (1763–1840)
Wilkens, Alexander (1881–1968)
Many autographs
Reference: Füßl & Mayring (1994)

Münster: Universitätsarchiv
Hellerich, Johannes (1888–1963)

Potsdam: URANIA-Planetarium mit Bürgel-Gedenkstätte

Bürgel, Bruno H. (1875–1948)

Reference: Zenkert (1975)

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