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Specola 2000: A Project for the Preservation of the Historical Archives of the Twelve Italian Astronomical Observatories

Agnese Mandrino

INAF – Brera Astronomical Observatory, Via Brera 28, 20121 Milano, Italy

Donatella Randazzo

INAF – Palermo Astronomical Observatory "G.S. Vaiana", Piazza del Parlamento 1, 90134 Palermo, Italy

Luisa Schiavone

INAF – Turin Astronomical Observatory, Via Osservatorio 20, 10025 Pino Torinese (TO), Italy

Abstract. The historical archives of the Italian Astronomical Observatories contain valuable information on their institutional and scientific life. Due to the lack of proper inventories, however, the wealth of historical data contained in the archives has not always been used to its full extent. A joint effort started in 1999 by the former Ufficio Centrale Beni Archivistici (now Direzione Generale per gli Archivi) of the Italian Ministero per i Beni e le Attività Culturali, Società Astronomica Italiana and the former Consorzio Nazionale per l'Astronomia e l'Astrofisica, aimed at the inventorying and preservation of the archives. Seven years after its start, the project has reached the second of four planned phases.

1. The Italian Astronomical Observatories and Their Heritage

The astronomical observatories in Italy are among the oldest institutions devoted to scientific research. In Milan, for example, the University was founded in the first half of the 20th century, but the Brera Observatory dates back to 1764 and is thus the oldest research body in town. See Table 1 for the years of foundation of the twelve Italian astronomical observatories.

Such a striking difference in the age of the institutions results from the fact that, prior to 1861, Italy was not a single nation, its territory being divided into about ten separate and independent states, each having its own government and administration in charge of scientific and cultural matters.

Some of the institutions are, and have always been since their foundation, housed in historical buildings: the Royal Palace in Palermo, the Brera Palace in Milan, the Pozzi Palace in Bologna, the Torlonga Tower in Padua. The Capodimonte Observatory in Naples represents the first purpose-built edifice to house an astronomical observatory (see Figures 1–3).

The observatories contain treasures, such as archives, libraries and scientific instruments, whose historical and scientific value is huge. This heritage mirrors the activities carried out by the institutions, which extended from the field of

Figure 1. The Royal Palace in Palermo, (photo by Giuseppe Vitale, INAF – Osservatorio astronomico di Palermo) and The Torlonga Tower in Padua. (Photo by Enrico Giro, INAF – Osservatorio astronomico di Padova)

science into civil life: an example is given by the meridian lines installed in the Bologna, Milan and Palermo Cathedrals, for the purpose of marking noon.

But the astronomers' work until the end of the 19th century also had some impact on civil society, with the compilation of ephemerides for navigation, col-

Table 1. Years of foundation of the Italian astronomical observatories

Observatory	Year
Bologna	1711
Torino	1759
Brera (Milano)	1764
Padova	1767
Palermo	1790
Roma	18th century, 2nd half
Napoli	1819
Arcetri	1872
Catania	1880
Collurania (Teramo)	1882
Trieste	1898
Cagliari	1899

Figure 2. Left: the Brera Palace in Milan. (Photo by Cristina Bernasconi, INAF – Osservatorio astronomico di Brera) Right: the Poggi Palace in Bologna. (From Enrica Baiada, *Il Museo della Specola e l'astronomia a Bologna, in Storia Illustrata di Bologna*, vol. 7, Bologna, AIEP, 1988)

Figure 3. The Capodimonte Observatory in Naples. (Photo by INAF – Osservatorio astronomico di Capodimonte)

laboration with engineers to draw geographical maps, correction of mechanical clocks, preparation of calendars, and supply of data as supporting evidence to judicial authorities.

The series of meteorological observations kept in the historical archives provides an invaluable contribution to the field of climatology: an Italian project launched by the Consiglio Nazionale delle Ricerche (CNR) is based on the anal-

ysis of the series produced by the astronomical observatories, which acted as the first meteorological network in Italy.

The archives also contain photographic material, such as plates and prints. It is worth mentioning the collections held at the Catania and Torino observatories which include the plates of the *Carte du Ciel* project, and also the fonds[1] in the Trieste, Bologna and Brera observatories.

2. The Importance of Archival Material as the Foundation of the Specola 2000 Project

The need for an adequate conservation program, arrangement and inventory of observatory archives has been brought to the fore, in Italy and elsewhere, since the early 1980s by the growing attention being paid to the subject of history of science. The value of the archival material held in all astronomical observatories has been officially recognized by the International Astronomical Union.

In 1991 at the General Assembly in Buenos Aires, IAU Commission 41 for the History of Astronomy, while forming an Archives Working Group,[2] adopted a resolution supporting the following initiatives (see North 1991):

- To establish a register of the whereabouts of extant astronomical archives of historical interest;
- To impress on observatories and other institutions their responsibility for the preservation, conservation, and where possible, cataloguing of such archives;
- To search for an institution that will allocate space and funds for maintaining such a register and publishing it.

The interest in historical archives on the part of the astronomical community led to the organization of a special session (see Stephenson & Orchiston 2003, p. 445) on "Inventory and preservation of astronomical archives, records and artifacts" at the 2000 IAU General Assembly in Manchester, UK.

In the same year, Prof. Giorgia Foderà Serio and Agnese Mandrino launched Specola 2000 (see Foderà Serio & Mandrino 2000), which for the newly formed Istituto Nazionale di Astrofisica (INAF) represented one of the first national projects involving all the Italian astronomical observatories.[3] Up until that time, the difficulties due to logistics and shortage of staff had impaired any intervention on the archives. The first Italian observatory to enact a program of protection and evaluation of its archives has been Brera, where the documents

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[1] *Fond* is an archival term, explained in the glossary of terms published in ISAD(G) [General International Standard Archival Description, 2nd ed.], page 10 as "The whole of the records, regardless of form or medium, organically created and/or accumulated and used by a particular person, family, or corporate body in the course of that creator's activities and functions." See: `http://www.ica.org/biblio.php?pdocid=1`

[2] The Archives Working Group website is `http://www.le.ac.uk/has/c41/wgarc.html`

[3] The full text of the project is available online, in Italian, at: `http://www.archivi.beniculturali.it/servizioIII/progetti/specola/progspecola.html`

have been arranged up to 1917. The interest aroused by this work has produced an increased awareness of the importance of the historical archives as a major resource for the study of the history of astronomy. Following the Brera example and also thanks to the local efforts made by the librarians, the archives at Torino, Naples, Bologna, Palermo, Catania and Rome, have been partially or almost totally arranged, though not in the organic and coordinated manner typical of projects on a national scale.

3. The Concept of Archives

By archives we mean an organic whole of documents which provides the record of the history of the institution to which they belong. Archives are not a collection of documents put together in an artificial, *a posteriori* manner; on the contrary they originate from the natural organization of the documents produced by or sent to an institution (the observatories in our case) throughout its history.

Italian historical archives hold documents older than forty years. According to Italian legislation, the collections must be arranged and held indefinitely. Inactive records less than forty years old and no longer used in current practice, are held in a temporary repository (*deposito* in Italian) until the forty years expire and they can be transferred to the historical archives. If the records are still in use, they are considered "current archives".

The only arranging method which is widely accepted and recognized is based on "historical" criteria, i.e. archives which through time have lost their order for any reason should be brought back to the organization they had when they first originated. Their original form in fact enables us to understand how a given institution worked and thus to reconstruct its history.

Archives can "expand". In some cases the original collections have grown through donations; for instance the historical archives at the Bologna Observatory have very recently been given the private collections belonging to its former Director Guido Horn D'Arturo (1879–1967), by his heirs.

In other cases, observatory archives can contain the papers relating to scientific associations, such as in the case of the archives of the Società Urania held in the Torino Observatory, or part of the archives of the Società Astronomica Italiana in Brera, or the archives of the Copernican and Astronomical Museum in the Rome Observatory.

4. Overview of the Project

4.1. Aims

The Specola 2000 project, named after the year of its start, aims to:

- arrange and produce an inventory of the historical archives of the twelve Italian astronomical observatories
- create appropriate searching tools (inventories, indexes, subject catalogues) and make them accessible via the internet
- open the arranged archives to the public

- encourage the utilization of the historical documents held in the archives, thus increasing their value

4.2. The Institutions Behind the Project

- *The twelve Italian astronomical observatories*, promoters of the project coordinated by Giorgia Foderà Serio, professor of History of Astronomy at the University of Palermo (after her retirement in 2003, Fabrizio Bonoli, professor of Astronomy at the University of Bologna) and Agnese Mandrino, archivist and librarian at the Brera Observatory. With the creation in 2002 of the National Institute for Astrophysics (INAF) the project is carried out within the Libraries and Historical Archives Working Group.

- *The Ministero per i Beni e le Attività Culturali, Direzione Generale per gli Archivi*, the Italian institution in charge of archive preservation and legislation, is financing almost the entire project. The people taking care of Specola 2000 are Maria Grazia Pastura, director, and Micaela Procaccia.[4]

- *The Società Astronomica Italiana*, supporter of the project (with the coordination of Salvatore Serio, professor of Astronomy at the University of Palermo).

4.3. Hands-on Work

Now a few words on how the project actually works. In each Observatory there is a figure, often the librarian, in charge of the Specola 2000 project. This person is not supposed to arrange the archives (this task requires a great deal of technical knowledge and a lot of additional time) but to act as a supervisor.

The arrangement and inventory production work is carried out by an experienced archivist, selected and paid by the Ministero per i Beni e le Attività Culturali. The project has not indicated a preferred software to utilize during the arrangement of the single archives. In the end, the format of the various inventories will be "standardized" and fed into SESAMO, an archives-specialized software.

4.4. Phases of the Project

Specola 2000 is being carried out in 4 phases:

- *Phase 1: Census of the archival materials held in each observatory.*
  Through this initial operation the extent of the documents kept throughout the centuries has been verified. The information recorded for each observatory has included the history of the institution, a summary of the archives contents and their conservation status.

- *Phase 2: Archive arrangement and production of an inventory including all records up to 1960.*
  This applies to those archives for which an inventory had never been made

[4]The website of the Direzione Generale per gli Archivi, Servizio III is `http://www.archivi.beniculturali.it/servizioIII/`.

(Rome, Padua, Cagliari, Teramo and Trieste) and to those for which a partial one already existed (Bologna, Catania, Palermo, Brera, Arcetri, Torino and Naples).

- *Phase 3: Realization of a catalogue of the correspondence items.*
  It is not yet known if this phase will take place in all the observatories (owing to lack of funds) but in some places such as Arcetri, where the Giorgio Abetti correspondence represents the majority of the documents, this work is at a very advanced stage.

- *Phase 4: "Virtual" recovery of documents produced by the Italian Observatories and held by other institutions.*
  For this last phase to be started, it is mandatory that the three previous ones have been carried out in their entirety, enabling us to gain a more complete picture of the history of each institution and the extent of the archives.

5. Results

So far, thanks to global or partial funding, the following archives have been arranged: Arcetri, Brera, Catania, Padova, Palermo, Roma, Bologna. The archives of the Torino and Naples Observatories had already been arranged before the start of the Specola 2000 project.

The arranging and cataloguing of the documents has enabled us to identify some common (though different in structure) archival series, which can be regarded as the skeleton of the observatory archives. When we consider them, we notice that these series reflect the scientific work carried out in this type of scientific institution:

Meteorological observations
Astronomical observations
Clock observations
Magnetic observations
Topographic observations
Protocol registers
Administrative records
Accounting records
Scientific correspondence
Astronomers fonds
Iconographic fonds

The archives of each observatory have been arranged respecting their original structure. The information about the institutions where the archives originated, and the body where the same are held, will be fed into the SIUSA portal.[5] Realized by the Ministero per i Beni e le Attività culturali, this portal

[5]Complete and detailed information on the SIUSA project is available online at the following address: `http://www.archivi.beniculturali.it/servizioIII/progetti/siusa.html`. The SIUSA portal is online at `http://siusa.signum.sns.it`.

gives information on lots of different types of Italian archives (public, private, ecclesiastic, school, borough councils, firms).

To end with, we would like to point out that as a result of the Specola 2000 project, and also thanks to the work done previously, the inventories of five Observatory archives are entirely or partially searchable via the web:

- Torino:
  `http://www.oato.inaf.it/archivio`
- Arcetri:
  `http://www.arcetri.astro.it/BIBLIO/storico`
- Brera:
  `http://www.merate.mi.astro.it/docM/OAB/Biblio/biblio_e.html`
- Napoli:
  `http://vivara.na.astro.it:8081/tomcat/biblio/ida.html`
- Bologna:
  `http://www.bo.astro.it/~biblio/Archives/copertina.html`

References

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