

Acquisition Policy and Collection Development in Astronomical Libraries in Italy: Two Test Cases

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Abstract. We have analysed the acquisition policy of two Italian astronomical libraries, similar in typology, but geographically distant: the Arcetri Astrophysical Observatory Library, in Florence, and the Palermo Astronomical Observatory Library.

1. Introduction

It is very important to organise a correct management of acquisitions in a library and to determine the criteria on which the collection development should depend, especially in subjects like astronomy and astrophysics and related fields, in which there is a continuous updating. We have analysed the situation of two Italian astronomical libraries, similar in typology, but geographically distant: the first one is the library of the Arcetri Astrophysical Observatory, in Florence, and the second one is the library of the Palermo Astronomical Observatory. They are different in size, activity and history. We have focused our attention on the last twenty years, with special emphasis on the period from 1987 to 1997. This choice was due to a radical change in astronomy in the late seventies which therefore influenced astronomical publications. Moreover, the last twenty years have also represented an important phase in the life of the two Observatories, for different reasons. We summarise the characteristics and amount of collections of each of them and identify the specific profiles and needs of their parent institutions and their influence on the acquisition policy. We compare data about past and current trends in acquisition policy and collection increase from the late 1970's to the late 1980's, and since then up to the present time. In this comparison we take into account the amount of funds available and the role played by the librarian(s) and/or the astronomer(s) in charge.

2. The Arcetri Astrophysical Observatory and its library <http://www.arcetri.astro.it/BIBLIO/>

The activities of the Arcetri Astrophysical Observatory cover a large range of topics in modern astrophysics with special emphasis on observational and theoretical studies of the solar system, physics of stars and diffuse matter, external

galaxies and high energy astrophysics.

An intense effort is taking place on ground-based astronomical techniques in the framework of national or international programs such as the Large Binocular Telescope (LBT), the Galileo project, the Tirgo telescope, the Themis solar telescope, as well as in the on-going radioastronomical and adaptive optics programs. The Arcetri astronomers, in collaboration with the Department of Astronomy and Space Science of the University of Florence, also teach and are supervisors of “laurea” and PhD theses. The staff includes about 120 people, of which about 50 are astronomers. Moreover, educational activities for school pupils and the general public are regularly carried out. The large spectrum of activities going on at the Observatory is reflected in the library collection, that covers all fields of astronomy. The library collection includes: about 10,000 monographs; 206 serial titles (112 current); 630 titles of Publications/Newsletters of Astronomical Observatories and Institutions; 30 items and collections of CD-ROMs, including the Digitized Sky Survey; 15 links to on-line journals from the library Web page. The major subject areas represented in the library are the following: Astronomy and Astrophysics (3,900), Physics (1,300), Mathematics and Statistics (750), Computer Science (310), History of Science (especially history of astronomy) (700), Geophysics (260), Astronomical Instrumentation (300), Amateur/Popular/Educational Astronomy (300).

The library regularly receives preprints from about 75 Italian and international astronomical institutions.

The Arcetri historical collection was given in commodatum to the Library of the Institute and Museum of the History of Science of Florence.

3. The Palermo Astronomical Observatory and its library **<http://www.astropa.unipa.it/Library/index.html>**

Today, the Palermo Astronomical Observatory “G.S. Vaiana” is a highly specialised institute, whose main interest is X-ray astronomy, with emphasis on the study of the Sun and stars. Related interests include laboratory astrophysics for the testing and calibration of space-borne instrumentation as well as high resolution optical spectroscopy. Some activity is also going on in the history of astronomy, particularly the history of science in Southern Italy.

The Observatory staff works in close cooperation with researchers of the Department of Physics and Astronomy of the University of Palermo. The staff includes about 30 people, of which one third are astronomers.

Teaching activities are carried out in collaboration with the University of Palermo. An educational activity for school pupils and the general public is also done regularly.

The specialised profile of the institution has influenced, of course, the nature of the library. In fact, until a few years ago, the subjects more represented in the library were X-ray astronomy, the Sun and stars. This situation is now gradually changing to cover all fields of astronomy. The library collection includes about 8,000 monographs, of which about 4,000 are modern; 400 serial titles, including journals, newsletters and serial observatory publications, both modern and old (68 current journals); 37 links to on-line journals and newsletters from the library Web page.

The major subject areas represented in the library are the following (only modern books): Astronomy and Astrophysics (2,200), Physics (with special attention to Magnetohydrodynamics and Plasma Physics) (300), Mathematics and Statistics (300), Computer Science (170), History of Science (400), Amateur/Popular/Educational Astronomy (300).

The library regularly receives preprints from about 30 Italian and international astronomical institutions. The Palermo historical collection is still largely mixed with the modern one, with not well-defined boundaries.

4. Trends in acquisition policy at Arcetri

In 1978, when Franco Pacini became Director, the Arcetri Observatory was already a well-established institution, with an international reputation in the field of Solar Physics. The new Director gradually increased the fields of research at Arcetri, which now span from the solar system to extragalactic astronomy. Also the library had already an extensive collection of physics, mathematics and astronomy books, as well as subscriptions to the major scientific journals and a large collection of observatory serial publications.

With regard to selection criteria, the collaboration of the librarian with an astronomer in charge proved to be a good filter between the needs of the users and the organic development of the collections. This has been the standard policy at Arcetri in the past ten years. Over the past decade the growth of the library collection has developed steadily. The budget increase is mainly due to the rise of the subscription charges of the journals (unfavourable exchange, rise in prices, plus-charge for on-line versions). Apart from a peak in the years 1991-92 (which almost doubled the number of books purchased per year), there has been a significant decrease of the number of the acquired monographs in the last few years, while the number of journal subscriptions has remained substantially the same.

5. Trends in acquisition policy in Palermo

In 1976, when Giuseppe Vaiana became Director of the Observatory, the institution was in a marginal position in the scientific world, with very few research funds and only one aged astronomer. Vaiana gave a new impulse to the life of the institution and began the formation of a modern library.

Library expenses in the first decade since 1977 show a significant increase, especially after 1980. The collection increase of about 1,200 books from 1977 to 1987 is not negligible if one considers that every year about 200 astronomy books, relevant for professional researchers, are published. Also subscriptions to the most important astronomical journals became more regular.

Regarding the selection criteria, the acquisitions were determined by specific requests and needs of local researchers, and there was no scientist in charge or professional librarian to select information resources. Most of the purchased books were related to the subject areas of X-ray astronomy, the Sun and stars; radioastronomy, extragalactic astronomy and cosmology were scarcely covered in these years. Anyway, an effort was made by buying reference books in astronomy and physics.

In 1988, but in practice only in 1990, the Observatory ceased to be a branch of the Palermo University and became an autonomous research institute. This also implied the possibility of employing professional librarians and to have more funds for the library. With regard to the acquisitions, the trend was highly variable from 1991 to 1995, and since then it has become more regular, with a constant increase. The strong fluctuations in the Palermo trends before 1995 were at least partially due to the random nature of library fundings and to the lack of an established acquisition policy.

More than 2,400 books have been purchased in the last decade but it is to be noted that half of them has been acquired in the last three years. This is essentially because of the following factors:

- a) a substantial increase of the library budget
- b) a more rational organisation of acquisitions, with an astronomer in charge working in close cooperation with the librarian
- c) the policy of covering subject areas not necessarily of strict interest to local researchers.

6. Conclusions

The acquisition trends discussed above reflect the different characteristics and past histories of the two institutions. The regular trends of the Arcetri library are due to its long tradition and well-established nature. The balance between different science areas reflects the broad range of interests at the Observatory. On the contrary, the more erratic behaviour of the Palermo library reflects the past difficulties of the institution and the ongoing efforts to overcome them. The situation is now rapidly changing as shown by the steep increase in the acquisition trends in the last few years. This increase is mainly due to the purchase of astronomy books (mostly published since 1990) to fill gaps in the collection and broaden the subject areas covered. The next step will be to extend a similar policy to the fields of Physics and Mathematics, i.e., areas that are now less represented in the Palermo library. Similarly, an increase is expected in expenses for journal back issues, to complete the existing collections. Another issue that needs to be taken into account when comparing Arcetri and Palermo is the absence of a historical collection in the former library, while modern and old publications are still mixed in Palermo. A proper comparison will be possible only when the boundary between historical and modern collections in Palermo will be specified more clearly and/or when the Arcetri and Palermo collections will be compared also in terms of publication date.