

MONTPELLIER: 3 CENTURIES OF ASTRONOMY, 56 INSTRUMENTS IN THE NATIONAL CULTURAL HERITAGE AND A UNIVERSITY CONTEXT

H. Reboul¹

Abstract. The astronomy heritage in Montpellier (France) expressed itself in an observatory and its instruments in the 18th century. During the 19th and 20th centuries the science gradually moved in the local science university. Even when outdated, these instruments were still cared for by the astronomy academics who were responsible or very involved for their preservation until 10 years ago. At the beginning of the 21st century, a team of volunteer academics assembled in the Science university of Montpellier 2, then under the guidance of a curator (conservateur d'État). During the next ten years, very significant progress were made: the astronomy collection was included in the national heritage inventory, it was stored in the official collections department store rooms, and 56 of these items were classified as national French heritage (Monument Historique) ; the 18th and 19th century instruments also benefited from restoration works. These instruments were regularly shown in exhibitions. But the astronomy collection was then significantly impacted by major budget cuts led by different administrative changes. In 2015, the merging of two of the three Montpellier universities amplified its isolation within a very large quantity of life science collections.

Keywords: Astronomical instruments, collections, university, cultural objectives, administration

1 Introduction

Astronomy in Montpellier has a long history of teaching, research and conversation among the general public; since the 17th century this continuity has been a dominant factor in the conservation of an instrumental ensemble remarkable for both its variety and its integrity. At the beginning of the 21st century, a few academic volunteers from different fields (including astronomy) have started to work on the preservation of these heritages.

2 Origins of Montpellier's astronomical heritage collection

In 1705 the King Lewis XIV issued a royal decree creating the “Société Royale des Sciences de Montpellier” (SRSM), which gave its unique status as “extension and part” of the Royal Academy of Sciences in Paris. The first official astronomy observatory was built on top of the Babote tower (Fig. 1a) between 1742 and 1745 (Faidit (1986), see also Faidit (1993)); the building itself was classified as national heritage monument in 1927. The 1770 Gregorian telescope (Fig. 1.b), ‘7 inches and 8 lines’ (208 mm) (Faidit (1986)) was set up there in 1784. The legal status of the SRSM led to its disappearance during the French revolution in 1793, but when a “Science Faculty” was created in 1809, astronomy was one of its original seven chairs (Dulieu (1981)), and after 1812 the former instruments of the SRSM were made available to the Science Faculty (except two large quarter-circles of 3 feet rad. that are missing compared to the inventory of 1793).

This astronomy collection was augmented throughout the 19th century despite the missed opportunity of the great observatory that Urbain Le Verrier initially wanted to build in Montpellier (Faidit (2001)). The dome of the local botanic gardens (Fig. 3.a) was opened in 1879, together with the Foucault telescope built by Eichens (Fig.2.c) but was faced by a long-lasting protest from the local botanists (Fig. 3.b) and astronomers

¹ LUPM, Laboratoire Univers et Particules de Montpellier (UMR 5299), Université de Montpellier - Campus Triolet, Place Eugène Bataillon - CC 72 - 34095 Montpellier Cedex 05 FRANCE

often used other sites of observation until the building of the present campus in 1963 : it has its own observatory with two domes that currently house ten active telescopes, some dating as far back as 1873 (Fig. 2.d, e, f, h).

With the development of large “mission” observatories in the 20th century, the Montpellier Astronomy Laboratory acquired instruments for the reduction of silver recordings (images and spectra) : Askania (Fig. 2.g), Challenge, Joyce, Hilger and Watts (digitized version), ... The ground based observation equipment for the 1966 and 1969 space “experiments” (by four members of the Montpellier laboratory) of “artificial comets” generated by rockets sent at 220 km alt. is also part of this collection.

3 Preservation of this heritage collection and its present perspective

In 1998 a new dynamic began to take shape within the Science University of Montpellier 2 (UM2). A large exhibition “Trésors de Science” was held in the city center, later reinstalled at the Agropolis Museum : it showcased a selection of the various heritage collections of the Science University and gave the opportunity to draw out the new astronomy collection’ inventory despite their geographic dispersion in different buildings or store rooms within (or even far outside) the university campus.

In 2000 the collection was studied by the National inventory of the “Groupe du patrimoine astronomique” (Françoise Le Guet and Anthony Turner). In 2003 a secured store room was set up by volunteer academics at the Botany Institute (owned by the university UM2) in the city centre. In 2003 a University Collections Department (Service des Collections) was created at the UM2, with a curator at its head. In 2004, a photographic campaign of the astronomy instruments was carried out by the DRAC (Direction Régionale des Affaires Culturelles). In 2005 an association of volunteer academics was created under the aegis of the 1901 law, to enable them to work (even when retired) in the collection store rooms complying with the current regulations.

In 2005 the application for the classification of 56 astronomy items as national heritage collections was defended and granted at CSMH (“Commission Supérieure des Monuments Historiques”) in Paris. In 2007, as part of the 12th International Congress on the Enlightenment (Montpellier), in partnership with the science university library and with the county’s archives, an exhibition showed books and instruments within the same showcase: they were thus exhibited as they were used during the 18th century at the observatory, which was then a very rare occurrence. In 2008, the collections were described in an online database on the UM2’s website (now <https://collections.umontpellier.fr/collections/astronomie>). From 2007 to 2010, all the 18th and 19th classified astronomy instruments were restored in Paris by a specialized conservation studio (they were granted the “Museum of France” award).

In 2010 the University Collections Team (“Service des Collections”) became the Center for the Heritage Collections (“Pôle Patrimoine Scientifique”). Between 2012 and 2013 their budget was reduced by two thirds : for the astronomy collections, it then became inexistant. The access to the store room got more restricted and it then became very difficult to do useful work on these collections. In 2015 the merging of two universities (UM2: Sciences and Arts university, and UM1 : Medicine, Pharmacy and Law) led to that of the Center for the Heritage Collections (“Service du Patrimoine Historique”) within the Heritage Collections Department of the university of Montpellier. In this particular framework, the astronomy collection with its distinctive features is lost within the very large series of life sciences specimens and more specifically the prestigious medical and anatomy collections of the Medical Faculty. Almost no information about the astronomy collection’s loans for exhibitions nor about their transfers to other institutions leak through to the astronomy academics; unfortunately they have no opportunity to discuss these questions with the curators.

4 Conclusions

At the beginning of the 21st century the academics’ incentive led to a significant progress on the university heritage collections ; it was a means of fulfilling the university usual missions which are to promote research, to teach, and to disseminate scientific culture. After ten very positive years (conservation, protection, restoration, heritage development) the astronomy collection of Montpellier finds itself excluded from the original target of this heritage strategy.

For astronomy collections the logistics of an observatory are essentially different to those of a university. The former strategy that was supported during the 1990ies both by the Culture, and the Higher Education Ministries seems to be a pertinent solution to our current problems. Because of the very small number of astronomy academics, the local scale alone is probably not the most pertinent to ensure this particular heritage's preservation: each site of conservation holds instruments that can be unique. A national (or higher?) supervision level seems to be the most relevant to ensure the future preservation of this astronomy collection, whose long history has to be told jointly by astrophysicists and curators. What remains to be found is a workable *modus vivendi* between them for the benefit of the astronomy collection of Montpellier.

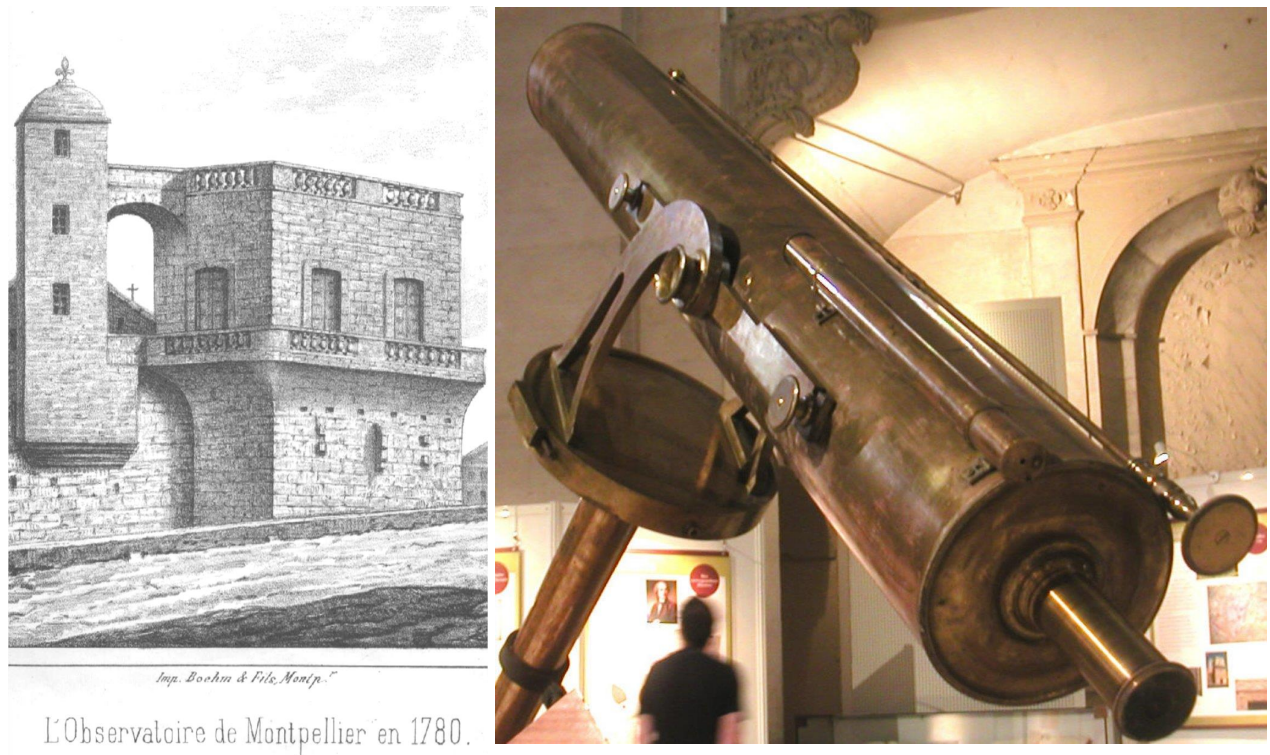


Fig. 1. a: Babote Observatory in 1780 (from Roche (1881)). **b:** Gregorian Nairne telescope, 1770 (here in 2007, before restoration, during the exhibition for the XIIth International Enlightenment Congress in Montpellier)

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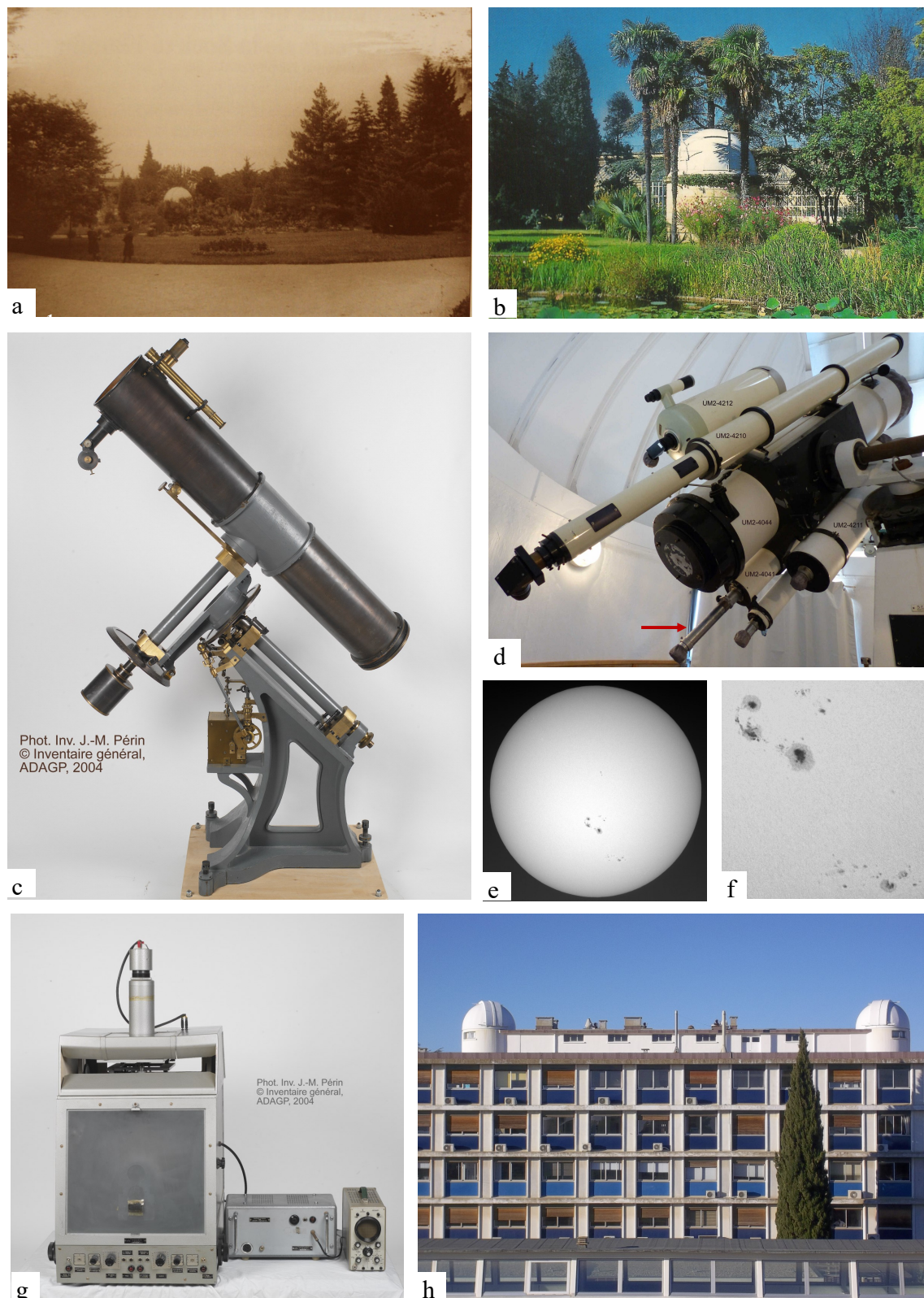


Fig. 2. **a:** dome of the “jardin des plantes”, late XIXth century (in (Faidit 2001), p. 29). **b:** late XXth century : photo from the cover of Faidit (2001). **c:** 1877 Foucault’s telescope (20 cm instead of the envisaged 80 cm in Faidit (2001)) before restoration, MH. **d:** East dome content of the present observatory: the red arrow indicates the Secrétan–Eichens refractor of 1873 (national commission of the Venus transit of 1874); its MH classification is in progress, its equatorial mount has been preserved but its original Eichens clock mechanism with Foucault regulator probably ‘is in Toulouse since the eclipse of Elche’ (Anonymous (1883)) within the framework of the joint expedition of the FdS of Montpellier and Toulouse to Sfax and Elche for the eclipse of the sun of 28 May 1900). **e:** image of the sun obtained in 2012 with above Secrétan–Eichens refractor, then 139 years old (and a 2010 SBIG 11000M camera). **f:** detail of 5. **g:** Askania 1965 iris photometer. MH. **h:** Today FdS observatory (built in 1963).