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Astronomical collections in Observatories: promoting preventive conservation

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Abstract. The practice of preventive conservation of cultural heritage consists of “all measures and actions aimed at avoiding and minimizing future deterioration or loss” of it (ICOM-CC, 2008). Unlike conservation treatments, preventive conservation deals with entire collections and their surrounding environment. It is known that exposing historical objects to the environment has a significant impact on their degradation process. Studying and managing risk factors is an indispensable practice within the management policies of any cultural institution. The National Institute for Astrophysics (INAF) holds some valuable historical collections, heritage derived from the Italian contribution to astronomy over the centuries. The management and protection of these collections faces many challenges. A preventive conservation plan, aimed at assessing and managing risks that threaten the collections, may offer many long-term benefits, allowing us to use available resources in the best possible way. In the past few years INAF-Astronomical Observatory “G.S.Vaiana” of Palermo has been working on the development of preventive conservation projects for its archival, bibliographic and scientific heritage. The present contribution reports on these ongoing experiences and intends to stimulate a discussion within the scientific community in order to individuate the problems we are called to respond to in Astronomical Observatories.

Keywords. Preventive conservation, museum, archive, scientific instruments, astronomical observatory, historical library

1. What does “preventive conservation” mean?

At the 15th Triennial Conference held in New Delhi in 2008, ICOM-CC adopted a resolution on a terminology for conservation to facilitate communication among the international communities. The following terms have been adopted: “preventive conservation”, “remedial conservation”, and “restoration” which together constitute “conservation” of the tangible cultural heritage. These terms are distinguished according to the aims of the measures and actions they encompass. Specifically, preventive conservation was defined as “all measures and actions aimed at avoiding and minimizing future deterioration or loss. They are carried out within the context or on the surroundings of an item, but more often a group of items, whatever their age and condition. These measures and actions are indirect – they do not interfere with the materials and structures of the items”.

2. The scientific heritage held by INAF

The National Institute for Astrophysics holds remarkable historical collections, preserved in the Italian Observatories. The collections include instruments, books, and

historical archives, mostly still *in situ*. The management and protection of these collections face many challenges, including limited resources, presence of heterogeneous materials (with different conservation requirements), location inside historical buildings, lack of room for appropriate storage of the collections, use of historical showcases. A preventive conservation plan, aimed at assessing and managing risks that threaten the collections, would help in establishing priorities of intervention and adopting timely and sustainable strategies. It may offer many long-term benefits, allowing available resources to be used in the best possible way. Many Observatories throughout the world face the same problems. We would like to share our experiences.

2.1. *A case study: preventive conservation project for the collections of Palermo Observatory, Museo della Specola*

The project starts in 2018 with the aim of identifying and managing the “risks” to which objects are exposed in the museum in order to establish intervention priorities and identify where improvements can be made. The “risk” is defined as ‘the chance of something happening that will have a negative impact on our objectives’. The impact of risks is expressed as the expected loss of value to the heritage asset. It does not involve just any type of material damage to the heritage asset, but rather the loss of information about it, or the inability to access heritage items.

At the moment, we are working on: 1) identifying the relevant aspects of the context in which the collections are situated; 2) identifying the risks that threaten our collection, building and site, through: a) elaboration and compilation of condition reports of some selected objects on display; b) thermo-hygrometric monitoring of the museum rooms; c) sampling campaign to test air quality in the museum and inside the showcases.

2.2. *Preventive conservation interventions in the historical library and archives of Palermo Observatory*

Since 2016, in collaboration with Palermo University, preventive conservation interventions were made on the historical archives papers, on a small collections of 19th-century portrait photographs and on many books of the antique collections (printed before 1830). A preliminary survey was made to establish general conditions and evaluate the risks for the collections through use. A conservation assessment allowed us to ascertain the absence of environmental factors that could adversely affect collections. No complex care strategies were involved. The storage folders were replaced with boxes or folders made from acid-free buffered board. Many damaged books, that could not undergo restoration due to lack of funds, have been provided with appropriate boxes to prevent further deterioration. Whenever possible, safe storage of photographs or documents is guaranteed by appropriate enclosures.

3. Why promote preventive conservation?

Preventive conservation is the most efficient form of conservation as it allows you to: focus on the entire collection of a museum; reduce, over time, the need to act directly on assets with costly and invasive interventions, acting on the causes of degradation processes and not on the effects; guarantee a suitable conservation environment for objects that have already undergone restoration treatments in the past. The resulting measures are not always expensive or particularly complex to implement. On the contrary, knowing the real needs of the museum and collections and having established the risks and priorities,

targeted strategies can be planned guaranteeing a more efficient management of the available resources.

References

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