## 56th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4) Scientific and Technical Histories (2)

Author: Mr. Frank H. Winter National Air and Space Museum, United States, fhwinter@gmail.com

Mr. Jean-Jacques Serra AAAF, France, JJ.Serra@wanadoo.fr

"THE FIRST 'SPACE AGE,' CA. 1850-1915—A RE-EXAMINATION OF THE EARLIEST KNOWN APPEARANCES OF SPACEFLIGHT IN POPULAR CULTURE AND SCIENCE, PART I: THE ROLE OF SCIENCE FICTION

## Abstract

Michael J. Neufeld in his 2011 IAC history paper, "The Three Heroes of Spaceflight: The Rise of the Tsiolkovskii-Goddard-Oberth Interpretation and its Current Validity" noted: "The single most enduring interpretation in space history credits three thinkers with independently proving the scientific and technology feasibility of spaceflight in the late 19th and early 20th centuries: Konstanin Tsiolkovskii in Russia and the USSR, Hermann Oberth in the German-speaking world, and Robert H. Goddard in the United States."

Other historians say the "rocket fad" of the 1920s-30s, which included the founding of "rocket societies," laid the foundations of "modern rocketry" and led to the opening of the true "Space Age" started in 1957 by the orbiting of the first Sputnik by the USSR.

Yet, our three-part paper will show that, based on upon a closer examination of previously overlooked historical materials including digitized early newspapers and articles, that from roughly the mid-1800s to the pre-World War I period—which, for convenience sake, we date to ca. 1850-1915—there was a noticeably far more significant rise in both public and scientific interest in the topic of the possibilities of "interplanetary flight" than has previously realized. This interest was manifested internationally in diverse ways, especially in popular culture. We have also discovered many "precursors" to Tsiolkovskii, Goddard, and Oberth than previously known. We thus conclude that there was a previously unknown "first space age"—when mankind became more fully conscious of the basic idea of the possibilities of spaceflight.

Since our material is so extensive and rich in detail, this will be a three-part paper as follows: Part I covers the first ideas of spaceflight as found in science fiction literature. Part II will cover the idea of spaceflight in the other arts of this period, such as in plays and operas, pictorial art, poetry, and films, besides the earliest known simulations of "Trip to the Moon" (and Mars) shows for mass audiences. Finally, Part III will cover newly found "precursors" to Tsiolkovskii, Goddard, and Oberth and will also feature accounts of illustrated scientific (astronomical) "Trip to the Moon" lectures during that early period that used uniquely designed image projectors.