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THE EARLY HISTORY OF CANADIAN PLANETARY EXPLORATION

Abstract

While much of the history of the Canadian space program has been well-documented in numerous places, most of the written history has to do with activities carried out in Earth orbit — various Earth satellites, Canadarms, the astronaut program, etc. Here I report on Canadian activities beyond Earth orbit, which is to say, planetary exploration, with a particular focus on early activities.

It is well-known that Canada was an early participant in space activities, starting with the launch of Alouette 1 in 1962, only 5 years into the Space Age. However, for many decades the Canadian government's space program focused entirely on missions in Earth orbit; Canada was very much a late-comer to the field of deep-space missions. Prior to the late-1990s, the Canadian Space Agency's budget did not include an explicit planetary exploration program component, which resulted in very little support for deep-space exploration proposals; I only know of two deep-space projects that the Canadian government participated in prior to that, Ulysses and Nozomi.

Despite this, numerous individual Canadians were involved in planetary exploration projects prior to that — projects carried out by other countries' space agencies, with Canadians participating directly, with no Canadian government involvement. In one case, the Apollo program, the involvement of many Canadians in various roles in the Apollo Spacecraft Program has been described in several publications. The participation of Canadians in other planetary projects, including Viking, Ulysses, Magellan, Galileo, Cassini and Juno, is less well-known. Through the course of my own career, I have had the good fortune to know several of these Canadian planetary exploration participants, and to hear their stories first-hand. In this talk I will list some of those pioneers, and discuss the projects in which they participated.

In Canada, early interest in planetary exploration was centered in non-government space advocacy organizations, particularly the Canadian Space Society, of which I am a founder and past-President. I will describe how the CSS played an important role in the Long Term Space Plan III process in 1997/98, leading to the Canadian Space Agency's adoption of planetary exploration as one of its core activities.