

# **RADARSAT**

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## **1. ABSTRACT**

RADARSAT Program had its beginnings in the early 1980s when Canada decided to pursue satellite based synthetic aperture radar (SAR) surveillance to meet its needs in resource mapping and environmental monitoring [1]. As such, Canada's first Earth Observation satellite, RADARSAT-1, was launched in 1995 and it is still operational today, well beyond its mission design life of five years. RADARSAT-1, carrying a C-band SAR payload operating at HH polarization and offering selectable imaging-mode capability, ushered in a new era in timely, day or night and all-weather observations of virtually any part of the Earth for a variety of applications. RADARSAT-1 mission thus has accomplished much, and with a client base in more than 60 countries, it continues to be of value to the global remote sensing user community.

Recognizing that an assured access to C-band SAR data was important to users, RADARSAT-2 was launched in 2008 with a mission design life of 7 years. RADARSAT-2 is owned and operated by a Canadian company, MDA, and it offers the data users several enhancements over RADARSAT-1, such as multi-polarization, better resolution, and a capacity to look right or left of the orbital track [2,3]. To further ensure continuity of C-band SAR data and meet its operational needs, Canada is already working on a RADARSAT constellation that will provide a more frequent coverage and a more rapid end-to-end response.

In this paper we provide an overview of the evolution of the RADARSAT program, summarize key accomplishments to date and highlight future plans.

## 2. REFERENCES

- [1] S. Parashar, Guest Editor, *Canadian Journal of Remote Sensing, Special Issue RADARSAT*, vol. 19, no. 4, 1993.
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- [3] S.K. Srivastava and P. Rolland, “Meeting Global Customer Needs of RADARSAT-2 Data”, presented at the 58th International Astronautical Congress, 24-28 September 2007, Hyderabad, India.