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CRYOGENIC TRANSFER MODULE: ISRAELI GTO UPPER STAGE PROJECT FROM THE LATE
1980'S

Abstract

During the late 1980's and early 1990's, when Israel's indigenous launch capability was in its early stages, the Israel Aircraft Industries (IAI) via MLM plant, suggested a cryogenic upper stage as an export product.

MLM was (and still is) the prime contractor and integrator of Israeli satellite launch vehicles (The "Shavit") and is one of the most potent aerospace and missile provider in Israel to this day.

The paper will describe the technical aspects of the upper stage that was intended to carry a large and massive communications satellites through a transfer orbit, to the designated slot in the geostationary orbit.

This project was financed by IAI RD funds, without support of Israel Space Agency and without a direct request of Israel's Ministry of Defense. This is the main reason why the full development was to be relied on foreign customers. With lack of buyers, the project was terminated before a single, fully developed transfer vehicle was built (and launched). Nevertheless, it is a demonstration of IAI/MLM ambitious approach towards space, and the work completed was an opportunity for the engineers to explore new domain in space technology.

During the research for the paper the author interviewed some of the people from MLM that were part of the development phase. All in all, the paper will shed light on (yet another) less known Israeli space project.