Movable launcher for H3 launch vehicle

Wataru Sarae \(^{(1)}\), Hiroyuki Ueda \(^{(1)}\), Akito Hattori \(^{(1)}\) and Hiroyuki Nagata \(^{(1)}\)

\(^{(1)}\) Japan Aerospace Exploration Agency (JAXA)
2-1-1 Sengen, Tsukuba, Ibaraki 305-8505, Japan
EMail: sarae.wataru@jaxa.jp

ABSTRACT

The next flagship launch system of Japan, the H3 launch vehicle is under development with the aim of making a debut test flight in 2020. The purposes of the H3 are to ensure Japan’s sustainable access to space and to be competitive in the satellite launch market.

The main requirements of the H-X are as follows:
- Launch capability: sufficient to support a wide variety of payloads ranging from Japanese national payloads to commercial ones,
- Launch price: a half of those of H-IIA/HIIB launch vehicles,
- Maintenance cost: a half of current expense,
- Minimum turnaround time: a half of current period.

To achieve these requirements, the ground segments of the launch system represent a key element and their operability and maintainability factors become important criteria.

This paper provides the operation outlook and the development plan of a new “Movable launcher” for the H3 launch vehicle, which is one of the most important subsystems in the ground segment for the H3. It will be used as a platform to stack, integrate and checkout vehicles in the Vehicle Assembly Building and then to move them to the Launch Pad.