Lunar Exploration in Japan
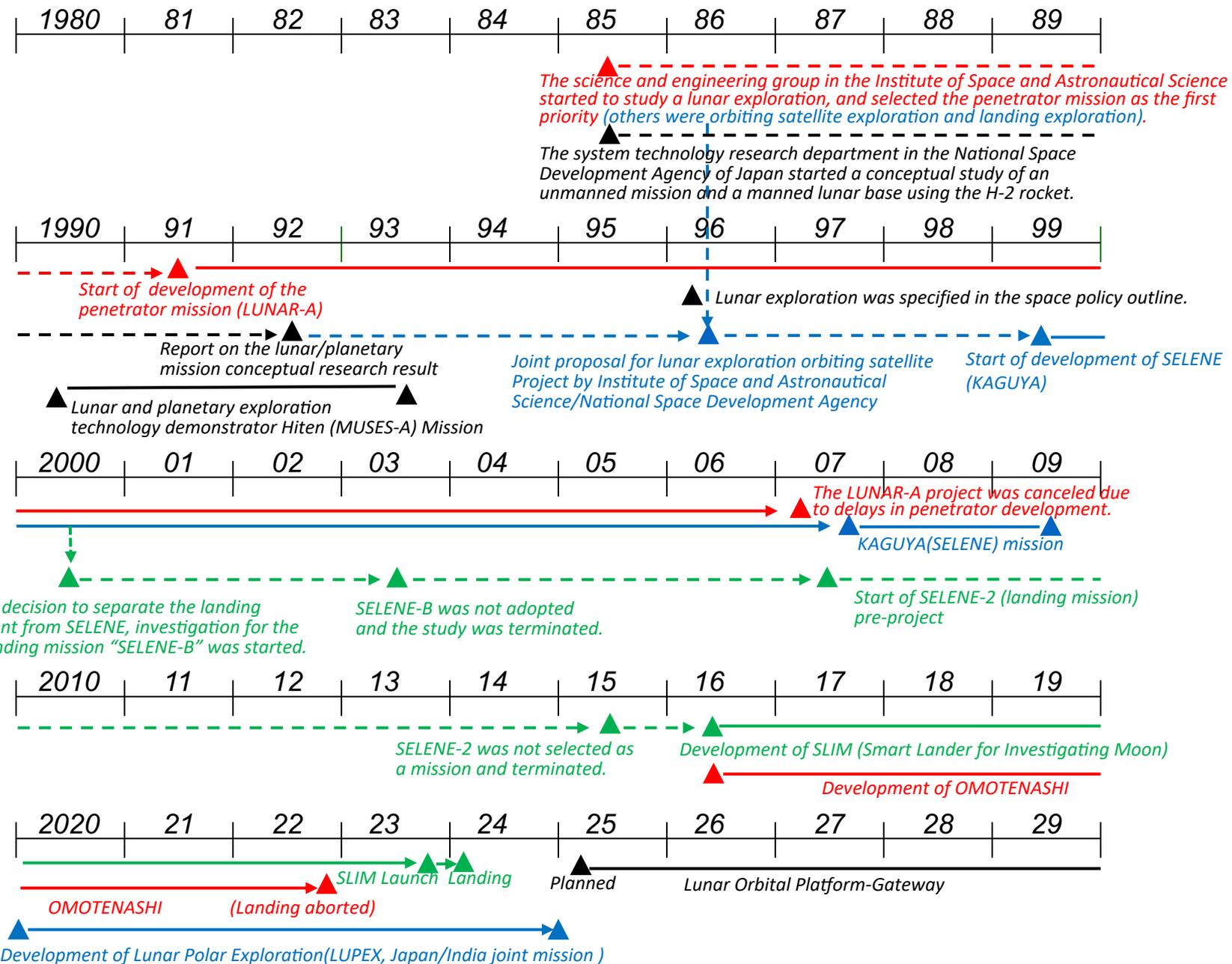
1. History of Japanese Lunar Exploration
   Projects by Government Agencies
   (from the Early Days to the Future)

2. Motivation and Main Players of Current Lunar
   Exploration and Development in Japan

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History of Japanese Lunar Exploration Projects by Government Agencies (from the Early Days to the Future)

1980 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89

The science and engineering group in the Institute of Space and Astronautical Science started to study a lunar exploration, and selected the penetrator mission as the first priority (others were orbiting satellite exploration and landing exploration).

The system technology research department in the National Space Development Agency of Japan started a conceptual study of an unmanned mission and a manned lunar base using the H-2 rocket.

1990 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99

Start of development of the penetrator mission (LUNAR-A)

Report on the lunar/planetary mission conceptual research result

Lunar exploration was specified in the space policy outline.

Joint proposal for lunar exploration orbiting satellite Project by Institute of Space and Astronautical Science/National Space Development Agency

Start of development of SELENE (KAGUYA)

Lunar and planetary exploration technology demonstrator Hiten (MUSES-A) Mission

2000 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09

The LUNAR-A project was canceled due to delays in penetrator development.

KAGUYA(SELENE) mission

After the decision to separate the landing experiment from SELENE, investigation for the other landing mission "SELENE-B" was started.

SELENE-B was not adopted and the study was terminated.

Start of SELENE-2 (landing mission) pre-project

2010 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

SELENE-2 was not selected as a mission and terminated.

Development of SLIM (Smart Lander for Investigating Moon)

Development of OMOTENASHI

2020 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29

SLIM Launch   Landing

OMOTENASHI   (Landing aborted)

Planned   Lunar Orbital Platform-Gateway

Development of Lunar Polar Exploration(LUPEX, Japan/India joint mission)

Motivation and Main Players of Current Lunar Exploration and Development in Japan

The Moon: Closest large celestial body to the earth (easier to access than other celestial bodies)

・*Utilization of the moon (commercial, political, and social use): The merits are unknown at this stage, but people interested in the practical use of the moon intend to explore the use value of the moon as a frontier without falling behind others (government and industry officials).*

JAXA Space Exploration Innovation Hub Center   JAXA International Space Exploration

Lunar Base(Shimizu Co.)   Concept of Moon City(OBAYASHI Co., in Japanese)

The PLanetary Society of Japan (in Japanese)   Moon Village Study Group(in Japanese)

・*Researcher's interests: Planetary scientists have insatiable interests to know more about the moon even though they have already learned a lot. Astronomers have expectations for new astronomical observations that will be possible only from the surface of the moon. Researchers in space exploration are fascinated by the moon as a forward base and training base for exploration of celestial bodies beyond the moon such as Mars*

Japanese Society for Planetary Sciences (Lunar and Planetary Exploration, in Japanese)

JAXA/ISAS Planetary Science Group   RISE Project(NAO Mizusawa)

・*Start-up target: Venture companies that have already taken action with business opportunities on the moon*

ispace   Japanese Lunar Rover "YAOKI"

・*Tourist target as a new land: People want to visit the moon, to see new landscapes, and to experience new environments.*

Club Tourism (Space Tours, in Japanese)