



Masaki Fujimoto
Deputy Director General
Institute of Space and Astronautical Science, JAXA

2 June, 2019

Dear Colleagues,

On behalf of Director General of ISAS/JAXA, it is my pleasure to let you know that ISAS has selected two mission candidates, LiteBIRD for a L-class slot and JASMINE for a M-class slot, respectively. ISAS is determined to proceed to budget request for these two missions to be launched in 2020s. The conclusion and the plan have been notified to a governmental committee that oversees the space science activity in Japan on May 21. The process will start soon and we will know the outcome for FY2020 around the end of the year.

ISAS space science program is mainly composed of three mission categories: L-class to be launched by H-IIA/III, M-class to be launched by Epsilon and the category for strategic participation to foreign-led missions. Among L-class missions launched in the past is Hayabusa2, now exploring its target asteroid Ryugu, with substantial support from NASA, DLR, CNES and ESA. An example for M-class is Hisaki for EUV-spectroscopic observations of solar system bodies, making good synergy with the NASA Juptier explorer JUNO.

LiteBIRD is a CMB observation mission to reveal the process that had led to the big bang. Its observation target is the polarimetry of B-mode signals. JASMINE is a NIR astrometry mission into the central part of our galaxy that will reveal the evolution history of our galaxy. Its capability is also suited for detecting exo-planets in habitable zones of low mass stars. All topics (CMB, astrometry and exo-planets) are new to ISAS, meaning that the decisions are to expand the horizon of Japanese space astrophysics.

These mission proposals had been recommended by our advisory committee as final candidates to be submitted to the final selection process. The final pre-selection phase (PrePhase-A1/2) continued for a few years, with significant support from ISAS. ISAS has confirmed that the science case and the technical maturity of two missions are good enough for ISAS to carry them on to the subsequent phases.

Once we have green with the budget, it is expected that the two missions will be subject to heavy front-loading process to deal with critical technology issues first, so that budget escalation will not happen in later phases. Since both assumes non-small contributions to be added by our international partners, while some discussion has been made during PrePhaseA2, international coordination efforts will be accelerated as well. In both aspects, ISAS is committed for promoting both missions.

ISAS has fabricated its small body exploration program by combining its multiple missions that share the same high-level story. This program-based approach is not only making the existing missions more attractive by indicating clearly where it stands in and how it contributes to the overall planetary science, but also enhancing the conversation for future possible collaboration in foreign-led small body missions. In astrophysics, now that we have multiple missions on and above the horizon (the two missions and XRISM), we believe program-based approach should also be pursued. Its benefit should be making our perspective clear when we will seek to participate in foreign-led large space telescope missions in the future.