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Possible Japanese contributions to the Jupiter system exploration in 2020's

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In this talk, a summary of the Japanese EJSM WG efforts made in the FY2010 will be given. The first issue is the planning of JMO (Jupiter Magnetosphere Orbiter). JMO is assumed to fly together with EJSM spacecraft, namely, JEO (Jupiter Europa Orbiter, to be provided by NASA) and JGO (Jupiter Ganymede Orbiter, to be provided by ESA), and is planned to perform imaging of the space environment that the Galilean moons are embedded in and whose dynamic behavior the two EJSM spacecraft will observe. The study on the JMO orbit design have shown that the imaging from a vantage point at high-latitude is possible as we utilize the gravity assist from Calisto to raise the inclination of the orbit. Together with the fruitful discussion regarding what instrument suite should be onboard JMO, it shows the exciting aspect of the multi-spacecraft exploration of the Jupiter system. The second issue is on the Japanese participation in JEO and JGO. Several members of the WG have been invited to join various intsrument teams that will submit their proposals once the call is made. While competetive at the micro-scale, at the macro-level, the JMO WG will support every invited members so that substantial Japanese contributions at the instrument level to THE mission of the 2020's are secured.

Keywords: EJSM, Jupiter system, Europa, Ganymede, Plasma imaging, JMO