

SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 3 (2C)

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THE PROPOSAL FOR THE CONCEPT OF EARTH-MOON LAGRANGE POINT TRANSFER
VEHICLE (EMLTV)**Abstract**

As one application of HTV(H-II Transfer Vehicle) technology, the Earth-Moon Lagrange point (EML point) Transfer Vehicle can be proposed, which will transfer some cargo to the EML station which is plan to build around EML1 or EML2. We have developed the system satisfying the human safety requirement through the HTV project for more than 10 years. The HTV system has been reviewed by lots of NASA's safety panel and recognized to be satisfied with the human safety requirement. So HTV can dock the pressurized module of the International Space Station (ISS) where some crew live. In the operation plan of EML station, the supply of some materials and cargo which are utilized to maintain the lives of the EML crew and activity of the station is very important. So as one option, the HTV could be modified into the Earth-Moon Lagrange point Transfer Vehicle (EMLTV), which will transfer some cargo from the earth to the EML station and , if necessary, return some materials to the ISS or to the earth with the reentry capsule. In the paper, we will describe how to modify HTV to the new transfer vehicle to EML point, from a systematic point of view , especially avionics technology.