25th IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM (A5)
Space Transportation Solutions for Deep Space Missions (4-D2.8)

Author: Mr. Abhishek singh
National Space Society (USA) -Mumbai chapter, India, abhiseka808@gmail.com

Mr. Prathmesh Barapatre
National Space Society (USA) -Mumbai chapter, India, prathameshbarapatre5@gmail.com

VASMIR ENGINE MODULE FOR INTERPLANETARY MISSIONS.

Abstract

In recent years of development we have seen that different agencies are trying to explore space and thus we have that the need for powerful rocket engine is necessity for making such missions possible and also very cost effective. We currently have the chemical rockets being used and thus we have the following are providing higher thrust but the specific impulse of such engines are least and time taken is in months for reaching. So to make man an interplanetary species we need a powerful engines which can not only lessen time to reach our destination but also make it cost effective. So we have VASMIR engines used for such purpose but these engines cannot be used for liftoff because of low thrust and thus we have proposed an idea of using attachable and detachable engine modules that will be in LEO(lower earth orbit) of earth where can attach such engine modulus so we can have benefit in two ways one we can have chemical rockets being used for liftoff from surface level with higher payload and then we can use a VASMIR engine module which can be attached or detached from the module. Thus is this way we can reduce the fuel mass to be carried by rockets and also overcome the fact of over carrying chemical fuels for interstellar space. Now we have change the design for thermal radiators and power supply system.