LUNAR – I rover

DESIGN AND JUSTIFICATION

LUNAR – I rover will be designed as a lighter and one mission-rover. The whole design concept of the rover will be based on its purpose. The purpose is to explore the PSR in moon’s south pole and collect sample of moon water/ice.

Rover will be designed as a lighter rover than any other rover built previously as it has only one main purpose compared to other rovers. Reduced mass will have a positive effect in many areas. It will help to save fuel for lift-off and relaunch. It will also help to move rover easily on the surface of the moon.

Robotic arm will be designed to check/study the selected spots closely and collect samples. It will have a small drilling device, camera/s, lights, scanner for closeup studies as well as sample collecting unit.

Rover will include with advanced computing system for calculating, navigation, moving, moving the robotic arm, and communicating purposes.

Rover will have a deep lights system covering many angles as it will conduct the mission mostly in Permanent shadowed regions.

LUNAR – I rover is using direct communication with ground control as distance between moon and earth is relatively small. It will have a high-gain microwave antenna system to send and receive data.

Rover will also be included with an advanced camera system to cover the 360-angle of the point of view from rover.