

ABSTRACT

The function of TELKOM-1 satellite is as a communication repeater which is orbited on the equator line with height about 36,000 KMs and operated on position of 108° Longitude East. It receives the frequency of 6,000 MHz and transmits it of 4,000 MHz to the earth station. As the satellite lies far from the earth and it's difficult to reach therefore to maintain it (especially at battery), the operator must send some commands from the Master Control Station on earth.

Satellite battery represents one of important components at satellite system which needs the special attention. Eventhough the satellite has been completed solar array which supplies the power to all subsystem. However when there is eclipse, the battery will supply the power as the satellite doesn't get sunshine. Damage or failure at satellite subsystem can cause satellite cannot function normally.

At this Final Assignment, the writer evaluated the battery condition of TELKOM-1 satellite after the March eclipse in 2005, also the writer analysis the quality of the battery whether it's still possible to be used in the March 2006 eclipse (Vernal Equinox 2006). From there, the writer got the maximum DOD value of the battery of the longest eclipse without NSSK (North-South Station Keeping) maneuver about 57.8947 percent, meanwhile the maximum DOD value of the battery of the longest eclipse with NSSK maneuver about 58.9 percent, where the both values are still in a normal limit and less than 72.9 percent (the reference maximum DOD), so that these both batteries are still able to support eclipse and NSSK maneuver during the Vernal Equinox 2006 season. It was known that the second battery had a better performance than the first one because second battery had lower pressure.