ABSTRACT

The transition from traditional satellite communication system to HTS era has brought about a significant increase in system capacity. Compared with previous generations of satellites, the fundamental improvement of HTS architecture is used of a spot beam antenna system, which can provide a wider range of satellite communications coverage for all service areas covered. The single-beam system has a maximum beam coverage of 1,000 kilometers and that can focus on the target area. Using different bandwidth allocations can make spot beams more efficient when transmitting data. The information bit rate used on HTS is as high as 225 Mbps, compared to 36 Mbps for traditional satellites. The capacity obtained using each data bit can reach 276286647.2 bps/Hz. According to the parameters used, APSTAR 5C satellite has a good performance category.
Key word : High throughput satellite, spot beams, Ku-band