

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Space Communications and Navigation Global Technical Session (8-GTS.3)

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RESEARCH ON NETWORK CODING OF SPACE LASER COMMUNICATION NETWORK

Abstract

The objective of this paper is to research using network coding for space laser communication network. Characteristic of laser communication network is given. The laser communication has been developed vastly by many countries for its advantage of wide band, capacity of resisting disturbance, anti-interception, good confidentiality, high speed etc. Laser communication terminal features small size, light weight and low power. Laser communication is becoming backbone of the air space ground of integrated information communication network. Application of network coding will improve system throughput. To compromise the merits of high speed laser communication modulation, network coding and channel coding will minimize overall power demand, improve transmission efficiency, reduce error probability, improve frequency efficiency and energy efficiency for laser communication network. In this article, a space laser communication network model is built and the use of physical layer network coding is discussed. The simulation result is given at last.