

PROSPECTIVE SPACE MISSIONS WITH L-BAND MICROWAVE RADIOMETRIC SYSTEMS

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ABSTRACT:

Prospective Russian space missions include aims directed in developing and enhancing Earth remote sensing techniques by means of microwave radiometry. New L-band (wavelength about 21 cm) microwave radiometric systems for space applications are constructed in the Special Design Bureau of the Institute of Radioengineering and Electronics RAS. Scientific programs of experiments with these instruments, which incorporate numerous proposals of Russian scientific institutions, are prepared in the Institute of Radioengineering and Electronics RAS. The main goals of these Scientific programs are: development of radio physical Earth remote sensing methods from space in L-band for investigation of physical events and processes in earth surface – atmosphere system; investigation of external factors (galaxy emission, ionosphere, etc.) impact into measured parameters of investigated objects; analysis of radio interference problems; development of new techniques of data processing for simultaneous measurements by using a set of instruments with diverse space resolution. Presentation reveals the detail description of L-band radiometric system designs and prospects of scientific program realization in near future Russian space projects.

TOPIC: Microwave remote sensing

ALTERNATIVE TOPIC: New earth observation satellites