

Progress of Space Terahertz Technology in China*

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Terahertz science and technology attract more and more attentions of scientists and techniques in the recent years. The space terahertz technology is becoming into a hot spot in the field of the space research and the space application. We present the progress of space terahertz technology in china in this paper. Except for the exploring the application of terahertz technology on the space positioning, the remote sensing, and the monitoring of cosmic rays, and so on, we are focusing on the application of the new technologies of terahertz imaging on the space technology. Instead of the point-by-point scanning of terahertz imaging, we have developed the two-demission quasi-real time of terahertz imaging technology. The infrared CCD with the operating wavelength of around 800 nm is used for the imaging of terahertz field by the electro-optic sampling. The scope of imaging depends on the size of the electro-optic crystal. The corresponding software is explored based on the LabVIEW programming. The stand-off terahertz imaging by the CCD detection is going on the development based on the cooperation between the Institute of Space Technology of China and the key lab of Terahertz Optoelectronics of Education Committee in the Capital Normal University. We also present the future trend of space technology of china including the terahertz imaging technology. Finally the cooperation between China and Europe is suggested with concerning on the basis of technology cooperation of other field. It is helpful for all us to exchange the idea on the application of terahertz technology on the space research.

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