Use of Infrared Synchrotron Radiation for Compression Investigation of Ring-Shaped Electron and Electron-Ion Bunches

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The description of multichannel system for investigating dynamics of the electron ring compression over synchrotron radiation is given [1]. The system consists of optical channel, infrared radiation detector, amplifiers unit, electronics of monitoring and coupling with computer. The optical channel is transparent for radiation 0.2 – 40 mkm. The infrared one-coordinate detector consists of 12 photo-resistances. The information arrives from the detector over a cable coupling line to 256-channel charge-sensitive converters, then it is read out into buffer memory and is transformed into the computer. The program of the information reading out operates in the real time environment. The program possibilities allow to build up correlation dependences between different variables.

References

[1] Maltsev A.A., Maltsev M.A. – Technical Phys. **Vol. 42** No 4. (1997) P.378