Hardware solutions to improve control system quality of radio telescope RT-7.5

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The article presents main technical solutions aimed at improving the functionality and accuracy of the telescope guidance, replacing obsolete control systems. It is suggested to use single-engine drives on the basis of three-phase asynchronous motors with single-stage reduction gear instead of twin-engine electric drives of azimuth and elevation axes with DC motors and multi-stage reduction gears. All the elements of new drives have a backlash-free connection. We offer to install the digital absolute encoder for providing feedback, and vector frequency inverters for electric motors controlling. Tests of the advanced radio telescope confirmed the correctness of the technical solutions taken.

Keywords: *radio telescope, control system, guidance drive.*

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