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## SINGLE-CHANNEL HIGH-PRECISION LASER RANGEFINDER

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Abstract: The article deals with the construction of a single-channel light rangefinder. At the same time, one of the main difficulties is the presence of depolarization of light, which forms residual light at the output of the analyzer, which greatly affects the measurement accuracy. It is shown that in order to exclude residual light by compensating for depolarization, a KDP crystal plate with the possibility of rotation in a plane parallel to the optical axis is installed at the input of the demodulator.

The possibility of using an optical delay line on a single mirror with the possibility of moving along the axis of the radiation source is also considered. The normal to the mirror surface and the optical axes of the KDP crystals are located to the axis of the light source at an angle of  $0.7-0.9^{\circ}$ .

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