The digital filter to suppress the influence of the vibration frequency stand in the output of the laser gyro

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The paper describes investigations of a possibility to increase the accuracy of laser ring gyro (RLG) by removing noise introduced by the mechanical dither system in the RLG output signal with the composite digital filter. Composite digital filter consisting of several barrier (notch) digital filters with optimal barrier frequency was modeled. The experimental results show that a composite digital filter including three-section notch digital filter can effectively remove the dither signal.

Keywords: *laser gyroscope, digital signal processing, digital filters, vibration frequency stand, dithering, dithering removing, barrier (notch) digital filter.*

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