

PDV Interferometer with frequency-and time-division multiplexing.

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The PDV [1] diagnostic systems are widely used in the leading laboratories of many countries to study fast processes of the high energy density physics. The RFNC-VNIITF Gas dynamics Department is no exception. Since these systems require the use of broadband digital technology, they are quite expensive [2]. One of the ways to reduce the unit cost of the registration channel is to make better use of the functional capabilities of the recorder, i.e. the digital oscilloscope. This is achieved by frequency-and time-division multiplexing of data signals. The paper describes the systems we have implemented using this method, as well as the results of its trial operation and possible areas for further improvement.

- [1] Strand O T, Goosman D R, Martinez C, Whitworth T L and Kuhlrow W W 2006 *Review of Scientific Instruments* **77** 083108
- [2] Ralnikov M, Kuchko D, Shirobokov A and Komarov R 2019 *Zababakhin Scientific Talks. Abstract* **01** 149