

On the use of Fiber Optic Sensors for structural and environmental monitoring of the Belle-II vertex detector

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The DEPFET vertex detector at Belle-II incorporates a structural (vibrations and displacement) and environmental (temperature and humidity) monitor based on Fiber Bragg Grating (FBG) optical sensors. The basic layout and principles of the monitoring system will be reviewed including results from the 2014 PXD-SVD combined testbeam and a detailed description of the FBG packaging, radiation hardness assessment and calibration procedures to make the FBG sensors a suitable technology for HEP applications.

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