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## Parametric X-ray radiation from relativistic electrons interacting with a textured polycrystals

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The characteristics of Parametric X-ray radiation (PXR) from crystalline and polycrystalline targets (in the last case also called polarization bremsstrahlung (PB)) are well studied. An important task to be performed in this field is the measurement of the radiation spectral-angular characteristics from textured polycrystalline targets because such interaction represents the transition between crystalline and polycrystalline targets.

This work is devoted to PXR generated during the interaction of a 7 MeV electron beam with a textured tungsten polycrystalline foil. The spectra and orientation dependences of PXR for the (200) plane were measured for the following observation angles: 90°, 120°, 150° and 180° relative to the direction of the emitting electrons propagation. New results of PXR peculiarities at spectral and orientation distributions were observed: the PXR peak position changing when the orientation angle between the electron beam and the target surface changes; the shift of PXR spectral peak to an anomalous diffraction region (PXR was observed at an energy smaller than the lowest possible energy obtainable for free X-rays diffraction); the observation of a broadening of the PXR orientation dependence when the observation angle approaches to 180°.

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