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### Title

An x-ray streak camera with high spatio-temporal resolution

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# **An x-ray streak camera with high spatio-temporal resolution**

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**An x-ray streak camera with high resolutions in temporal and spatial dimensions has been developed. A temporal resolution of 400 fs and a spatial resolution of 25  $\mu\text{m}$  have been achieved for 25  $\mu\text{m}$  gold (Au) photocathode. The high temporal resolutions in temporal and spatial dimensions can be retained in a wide 53.36 ps time range. A temporal resolution of 233 fs and a spatial resolution of 11  $\mu\text{m}$  have been demonstrated for 10  $\mu\text{m}$  Au photocathode.**

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