

# Computer vision application for real-time beam tracking in pinhole image systems at Alba

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During the last year we have installed and commissioned a second x-ray pinhole at ALBA for redundant and alternative beam size measurements. Here we report the issues we encountered and compare the ultimate PSF of both pinholes at ALBA. We also report on the first steps of a computer vision and machine learning application for pinhole beam diagnostics.

We have trained an artificial neural network to simultaneously detect, track and measure one or more beam images coming from the pinhole camera feed.

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**Track Classification:** Photon beam diagnostic