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# Comparison of BBA methods for commissioning of fourth generation light sources

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Beam based alignment (BBA) plays an important role in the commissioning of the fourth generation light source but it takes a lot of time with several hundreds of BPMs. To speed up BBA, a method using AC excitation, called fast BBA, has been proposed and is tested in several 3rd generation light sources. We have recently also proposed and tested a new BBA based on the neural network machine learning. In this paper, we will compare these new BBAs with conventional BBA in term of error, speed and some other aspects such as the betatron coupling.

#### Footnotes

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