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# An effective use of calibration measurements for the CNAO pickup

*Thursday, 11 May 2023 16:30 (2 hours)*

The CNAO orbit measurement system consists of 20 electrostatic pickups. They are based on a nineties' design and reliably working from over fifteen years, despite a not very effective calibration system.
At beginning 2020, a new control software was installed, with two significant improvements: firstly, pickups signal is acquired continuously and beam orbit is saved every cycle; secondly, it allows to perform the calibration procedure very simply, from the pickup user's interface, in a fast and non-invasive way. These features gave us the instruments for a comparative study of position and calibration measurements, that brought about the definition of a quantity able to predict accurately position fake shifts caused by changes of eletronics transfer function. This allows to isolate the electronics contribution from the true beam shift, resulting in a more reliable orbit measurement system.
Calibration measurements have revealed some causes of electronics response variations, while others have to be understood yet. Anyway, a new monitoring plan has been started from a few months, to follow the trends closely, to better understand the causes and to promptly intervene with a software compensation, aiming to an increasingly reliable orbit measurement system.

## Funding Agency

## Footnotes

## I have read and accept the Privacy Policy Statement

Yes

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