

# Pandora AS Response Measurements

ARES Operations Meeting

Oliver Stein,  
Hamburg, 30 January 2023

# Measurements 11.01.2023 update

## Pandora AS (Schwarze Kanone) response measurements

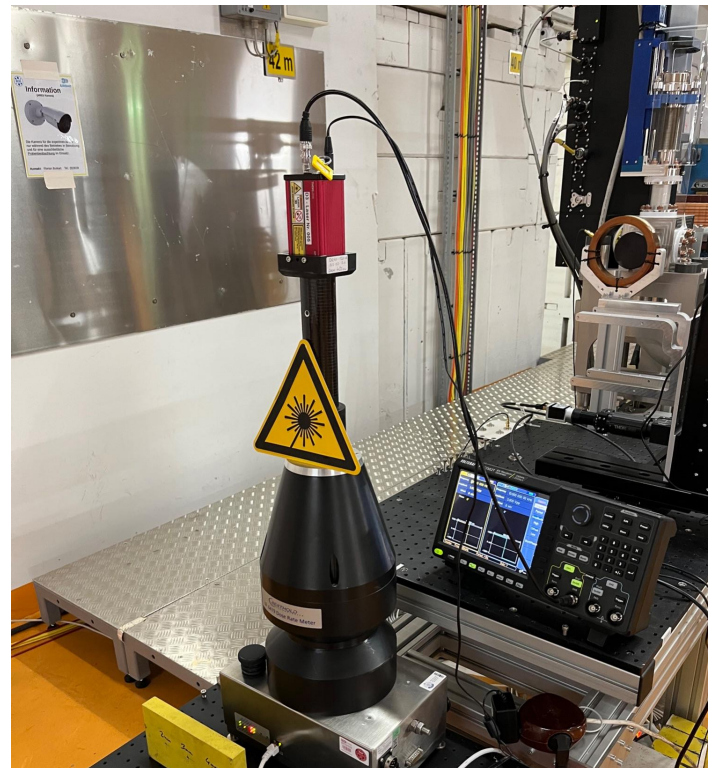
Goal: Measure the response of the Pandora AS (Air Scintillator)

Setup:

- Pandora AS installed downstream of ARES

Procedure:

- Scan horizontally in order to check alignment
- Measure the Pandora response for different beam intensities

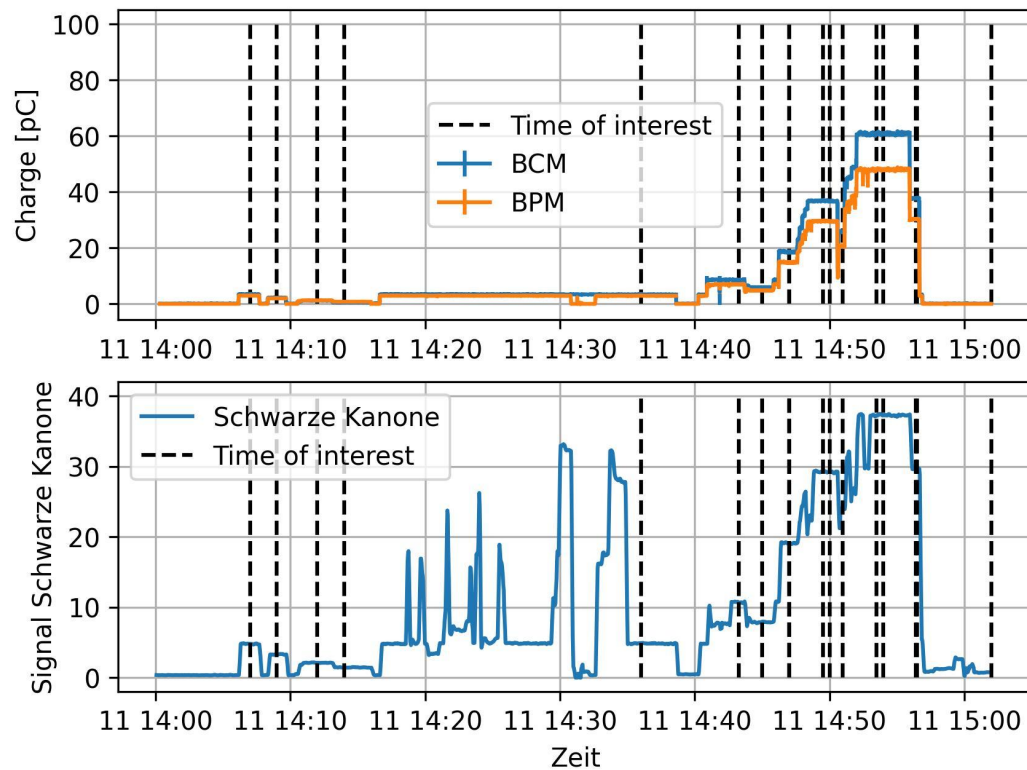


Response measurements with Laser, no beam

# Measurements 11.01.2023 update

## Pandora AS (Schwarze Kanone) response measurements

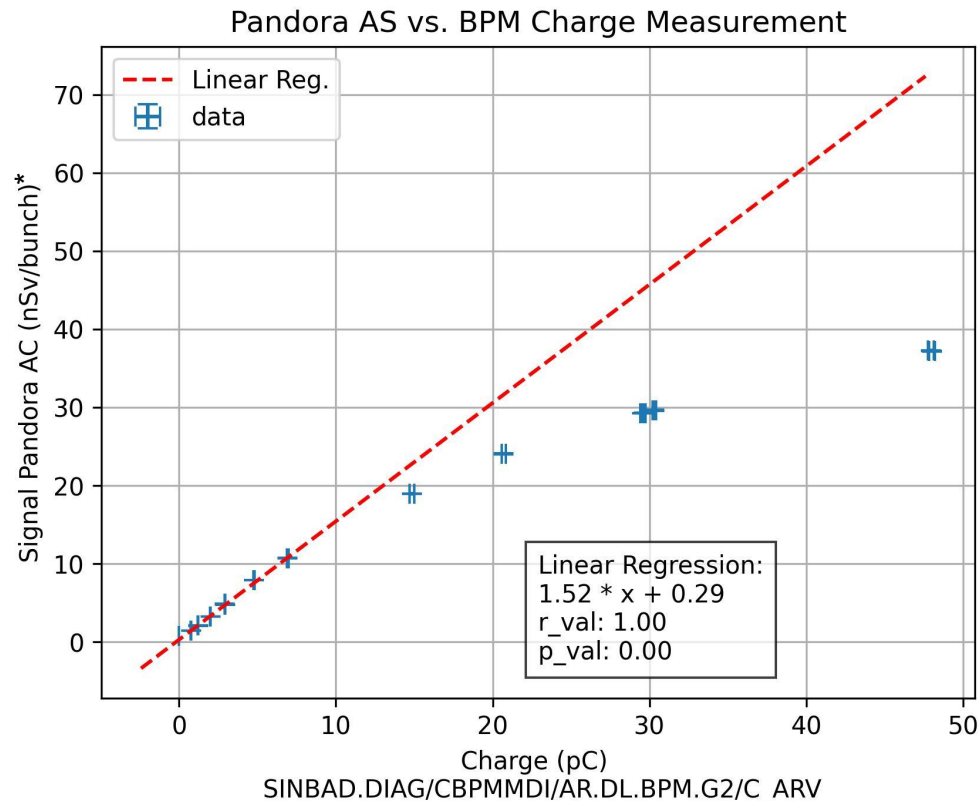
- Using times where the signals were constant
- Covering an intensity range 2 - 50 pC



# Measurements 11.01.2023 update

## Pandora AS (Schwarze Kanone) response measurements

- Linear between 0 and about 10? pC
- Further measurements required especially in the range of 10 - 20 pC
- Analysis ongoing



\*Pandora Signal (nSv/bunch) NOT calibrated

# Dosimetry downstream of ARES

## First version of TLD setup

Goal:

- Measure the response of the Pandora AS (Air Scintillator)
- Calibrated dose measurements

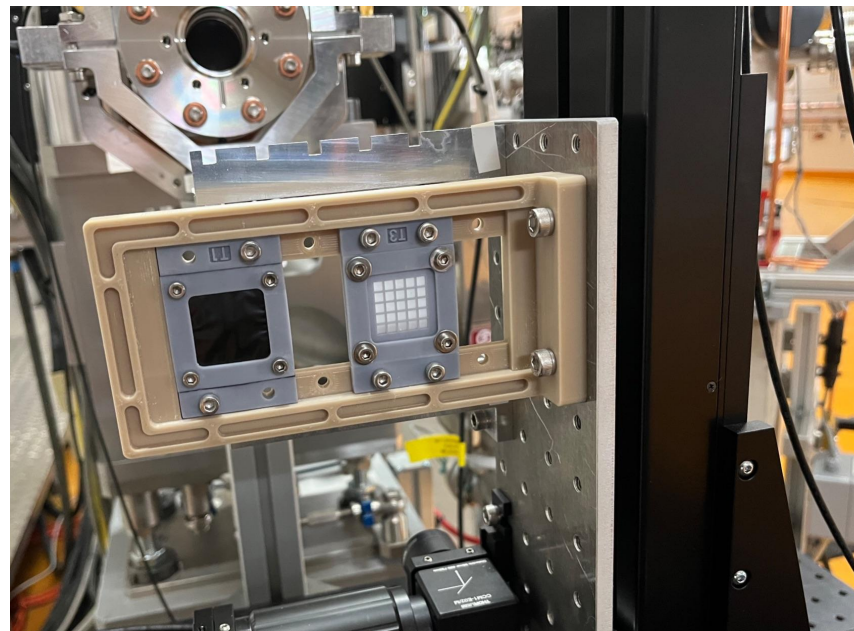
Printed a holder for TLD\* which can be installed on the linear stage. It can hold up to 25 TLDs (3x3 mm) in a 5 x 5 matrix.

TLDs will be covered with Kapton foil.

Plan:

- First fitting tests successful
- Filling the holder with TLDs
- **First test measurements on Wednesday?**  
(alignment, test irradiation)

\* Thermoluminescent Dosimeter



Test installation 30.01.2023

# Thank you!

## Contact

**DESY.** Deutsches  
Elektronen-Synchrotron

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