

# WPCF 2023 - XVI Workshop on Particle Correlations and Femtoscopy & IV Resonance Workshop 2023



Contribution ID: 57

Type: **Contributed**

## A Pixellation method for the FARCOS array

Friday, 10 November 2023 15:50 (15 minutes)

A Pixellation method for the FARCOS array

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A new pixellation method for the Double Sided Silicon Strip Detectors (DSSSD) of the FARCOS [1,2] array has been developed and tested with data collected at INFN-LNS laboratory with an alpha particle beam impinging on a  $^{12}\text{C}$  target. We concentrated on the reconstruction of two and three alpha particles coincidence events. Respect to other recent works [3,4] we underline the need to use the arrival time of each signal to clean the events from noise and spurious coincidences. The method is able also to clean coincidence data of two neighbouring strips from interstrip events. This allows to reconstruct the kinematical coincidence path of two alpha particles also for neighbouring strips. The method used is also able to clean from the noise generated by events interacting with the detector near the guard ring. This noise affects mostly the data collected in the more external strips of the detector. The analysis performed allows us to evaluate also the efficiency in the reconstruction of interstrip events as a function of the ionization power of detected particles. The energy resolution of well reconstructed interstrip events was evaluated by looking at two alpha particles coincidences. No difference was observed respect to the good energy resolution measured for single pixel events.

[1] E De Filippo et al *epj* in preparation

[2] E.V. Pagano, et al., *EPJ Web Conf.* 117 (2016) 10008

[3] S.Kundu et al *NIMA* 943(2019)162411.

[4] F.Guan et al *NIMA* 1029(2022)166461.

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**Session Classification:** Day 5 - Afternoon