NuSec Annual Technical Workshop 2023





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Poisson-FOCuS on SIGMA data

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The Poisson Functional Online Cumulative Sum (Poisson-FOCuS) method is a method for solving the likelihood ratio test of $\operatorname{Poisson}(\lambda)$ null against $\operatorname{Poisson}(\mu\lambda)$ alternative where $\mu>1$, i.e. searching for an increase in count. This can be thought of as equivalent to testing all possible anomaly start points $\tau\leq T$ at each timestep T, giving a computationally efficient way to analyse count anomalies that occur over intervals of time. We run the Poisson-FOCuS method on SIGMA data, with an additional adjustment to remove anomaly tail traces, and report the results.

Primary author: WARD, Kes

Presenter: WARD, Kes

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