# **Data Challenge Results**

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LABORATÓRIO DE INSTRUMENTAÇÃO E FÍSICA EXPERIMENTAL DE PARTÍCULAS DATA IN (ASTRO)PARTICLE PHYSICS and COSMOLOGY the BRIDGE to INDUSTRY SCIENCE

## The challenge

A set of synthetic waveforms was generated having two S2-like pulses. For each timeline, the **start** time of the first pulse, **distance** (d) between the two pulses, relative **height** and **widths** were varied randomly within realistic values.

Train a CNN to learn/estimate the distance between the two pulses.





B.S. González et al., EPJC, 2021

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### CNN structure - Keras, Python 3, Adam Optimizer



Entire set



#### Training set



#### Validation set



Test



# Thanks for your attention!



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