

# Joint International Workshop on Hadron Structure and Spectroscopy (IWHSS 2025) and the QCD Structure of the Nucleon (QCD-N'25)



Contribution ID: 7

Type: **not specified**

## News and perspectives from BES-III experiment

*Monday 1 September 2025 12:35 (20 minutes)*

Since 2009, the BESIII experiment has been collecting  $e^+e^-$  physics data in the energy range between 2.0 up to 4.9 GeV. This allowed the BESIII Collaboration to collect the largest datasets of charmonium  $J/\psi$ ,  $\psi(2S)$  and  $\psi(3770)$ . In particular, the radiative decay of the  $J/\psi$  provide a promising hunting ground for glueballs, of which the  $X(2370)$  represents a promising candidate. Moreover, the studies of hadron production have led to the observation of SU(3)-flavor breaking effects and rare decay modes of  $\psi(3770)$  and  $\psi(4160)$  resonances.

Looking at the future, the inner drift chamber has been replaced by a three-layer cylindrical GEM inner tracker (CGEM-IT), achieving  $\approx 200 \mu\text{m}$  spatial resolution and  $\geq 95\%$  layer efficiency, to secure high-precision tracking. Moreover, BESIII will triple its current luminosity and in 2028 the beam energy will rise up to 5.6 GeV in order to explore the direct production of charmed baryons.

**Author:** ROSINI, Francesco

**Presenter:** ROSINI, Francesco

**Session Classification:** Monday