

HADES Policy for Analysis Approvals and Publications

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I. PHYSICS ANALYSIS PROCEDURES

Physics results presented in HADES talks/posters, conference proceedings, and publications must be based on analysis carried out within an HADES Physics Working Groups (PWG). The analysis procedures and details of the evaluation of statistical and systematic uncertainties must be documented in an Analysis Note (AN).

Transitional Arrangement for approvals in Progress: for approvals that are already in progress at the time this document comes into effect, a transitional arrangement is implemented. Throughout this transition phase, the provisions defined herein serve as guiding principles and are to be applied pragmatically, not in a strictly literal or rigid manner.

II. HADES OFFICIAL FIGURES

All figures related to detector performance or physics results must be approved as official HADES figures, following the procedures specified in this section, before they can be shown outside the Collaboration.

A. Figure Categories

- **HADES Simulation Figures** contain results of simulations of physics events and/or detector response, for example to illustrate expected detector performance, detector corrections, or reference distributions from event generators.

Simulation figures must be accompanied by all information required to reproduce the figure, including software version numbers, generator settings, and a precise description of how the quantities shown were calculated. This information is stored together with the figure in the Repository. Each HADES Simulation figure has a unique identification number.

Simulation figures are discussed in the relevant PWGs and approved by the PWG convener(s) or Project Leader(s).

- **HADES Preliminary Figures**

- **Physics Preliminary Figures** present results of physics analyses and must include estimates of most relevant statistical and systematic uncertainties for the interpretation of the measurement. Only one version of each Physics Preliminary result exists. Numerical values may be provided to non-members of the HADES Collaboration upon request; such requests are handled by Physics Coordination. Physics Preliminary results are superseded by published results.

- **Performance Preliminary Figures** provide supporting information about analyses, such as intermediate steps or comparisons of different analysis methods. These figures may include results not corrected for detector effects or results without systematic uncertainties. Numerical values of Performance Preliminary figures are not available outside the Collaboration.

- **Derived Preliminary Figures** present results derived from Physics or Performance Preliminary figures, for example alternative graphical representations or comparisons to model predictions, other HADES measurements, or results from other experiments.

- Each HADES Preliminary figure must be clearly labelled “HADES Preliminary” and has a unique identification number.

- **HADES Published Figures** contain final results appearing in publications or Public Notes. Each Published figure has a unique identification number and is stored in the Repository with a reference to the corresponding publication or Public Note. Upon publication, the corresponding Preliminary figure(s) are removed from the Repository or marked as obsolete.

- **Physics Analysis Procedures**

- **HADES official figures**

- HADES Simulation Figures

- HADES Preliminary Figures

- Physics Preliminary

- Performance Preliminary

- Derived Preliminary

- Published Figures

- Work In progress Figures

- **Figure approval Steps**

- **Bookkeeping of Figures**

- **Steps for Physics Publications**

Approved by Physics Board

Papers with the Publication Board

	Title	PC	IRC	Status
1	Formation and lifetime measurements of light hypernuclei in Ag+Ag collisions at 2.55 GeV	Manuel (chair), Christoph, Joachim, Simon, Tetyana	Pavel, Romain	Submitted to PLB: 26.01.26 Report obtained: 08.05.26 Resubmission deadline: 07.07.26 Ready for resubmission Urgent: ORCID numbers
2	Measurement of Differential Cross-Sections and Integrated Luminosity using Proton-Proton Elastic Scattering with ...	J. Riegler (chair), K. Schonning, G. Perez	J. Messchendorf, J. Pietraszko, P. Salabura	Collaboration-wide review: finished Cross-Checks Between Different DST Productions: ongoing
3	Study of two-photon femtosopic correlations in Ag+Ag collisions at $\sqrt{s_{NN}} = 2.55$ GeV with HADES	Mateusz (Chair) , Hanna, Christoph, Pavel, Claudia, Krzysztof, Jędrzej, Narendra, Diana	Romain, Herbert	Internal review: finished
4	pi-QCD	M. Lorenz, J. Messchendorf, I. Ciepál	V. Metag, K-H. Kampert	Internal review: partially finished