

# Petros Stavroulakis

# Data analysis in Experimental High Energy Physics

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## **PHASE 1** Expertise and methods

Being aware of the recent findings and results of the Belle II experiment is something every member of the collaboration is encouraged to do and so, I learned to always try my best to be in tune with the current state of the experiment I am working on.

- Masters the basic knowledge and key concepts of his field and knows their history and their significance.
- Is familiar with recent progress in his field.
- Can view his research activities within an international context.
- Is familiar with the investigative methods and techniques of his field (including mathematics and statistics) and can explain why they are appropriate for a given purpose.
- Is able to consider alternative methods and techniques.
- Is able to formulate problems and hypotheses according to needs.
- Defends his research findings in a constructive manner; provides evidence to support his ideas and proposals.
- Organizes his presentations in a clear, informative and concise manner.



Personal and relational qualities

#### **PHASE 1** Communication

Through regular presentations to the entire Belle II collaboration, as well as to other groups, a sense for communicating the various aspects of my research naturally arose.

- Knows how to put together a persuasive presentation and communicate about his project or his activity.
- Understands, interprets and communicates appropriately in a register suited to his aims and his audience.
- Masters a range of communication tools.
- Masters his online identity.
- Contributes to the dissemination of knowledge within the company, and demonstrates effective teaching skills.
- Is proficient in at least English and one other world language.

#### **PHASE 1** Analysis, synthesis and critical thinking

I developed this skill via working on analysing data from the Belle II experiment, in order to look for physics effects beyond the Standard Model. The completion of such an analysis is dependent on the rigorous review by various members of the international collaboration.

- Analyzes his own findings and those of his peers.
- Is able to synthesize; expresses key ideas clearly.
- Can sort and rank information according to the goal.
- Pursues his reasoning and hypotheses free of dogmatism or ideological bias.
- Has the objectivity to consider various schools of thought; is able to modify his point of view.

Demonstrates intellectual rigor.

### PHASE 1 Integrity

- Respects the standards and practices of his entity.
- Demonstrates integrity in the processing and dissemination of data.
- Demonstrates integrity with respect to his partners' or competitors' contributions in accordance with intellectual property rules.
- Upholds the confidentiality and anonymity of subjects taking part in studies and research.
- Honors his commitments and ensures the congruence between actions and words.
- Declares any conflict of interest.

