REVIEWER´S ASSESSMENT OF FINAL WORK

I. IDENTIFICATION DATA

Title:	Electromagnetic processes at STAR experiment with regard of J/psi photoproduction
Author´s name:	Ondřej Staněk
Type of assignment:	Bachelor Project
Faculty:	Faculty of Nuclear Sciences and Physical Engineering (FNSPE)
Department:	Department of Physics (DP)
Reviewer:	Solangel Rojas Torres
Reviewer´s affiliation:	Czech Technical University in Prague

II. ASSESSMENT OF CRITERIA

Work assignment **average**

Assess how demanding the work topic is.

The thesis requires from the student study and learn introductory topics to the world of the high energy physics in general. For a B. Sc. work is perfectly razonable work, that is, study the context where ultra peripheral collisions are studied, the basic theoretical concepts, and the study and analysis of some data samples.

Fulfilling the assignment **fulfilled**

Consider whether the work submitted meets the assignment. If necessary, give your comments on items of the assignment not fully answered, or judge whether the scope of the assignment has been broadened. If student failed to fully treat the assignment, try to assess the importance, impact and/or the reasons for the failings.

The assignment was fulfilled according to the plan written in the thesis proposal. Nevertheless, I would expect more discussion regarding the results obtained for points 3 and 4 regarding the photo-production transferred momenta and cross-section. The plots were produced, but no interpretation or discussion was written. Also the comparizon with theoretical models is missing or is not crearly included in the thesis.

Chosen approach to solution **appropriate**

Assess whether student applied a correct approach or method of solution.

The method to approach the topic was correct, to review the context from the physics and experimental point of view, was assesed in a correct way

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Professional standard	**average**
Assess the professional standard of the work, application of course knowledge, references, and data from practice.	
For this level, I consider the standard is in the average level. Since some important points for a research work were missing to make it excelent, as the interpretation of the results, few editorial aspects, as citation style and few typos. Which for this level can happen, are not a tragedy, but could have been avoided	

Level of formality and of the language used	**average**
Assess the use of scientific formalism, the typography and language of the work.	
The level of formality along the text was very good, mainly in the bibliography revision sections (chapters 1 and 2). It would have been excelent if the citation numbering would have been in appearence numbering, there is a figure appearing but not cited in the text (figure 1.2) and a very few typos detected would not appear	

Choice of references, citation correctness	**excellent**
Assess student´s effort in finding and using study sources for completing their work. Give characteristics of the references chosen. Assess whether student made use of all the relevant sources. Verify whether all items used are properly distinguished from the results obtained by student and their deliberations, whether there are no violations of citation ethics, and whether the bibliography presented is complete and complies with the citation usage and standards.	
The bibliografy was correctly choosen. I covers all the topics in the required deept for this work.	

Further comments and assessment

Give your opinion on the quality of the main results obtained in the work, e.g. the theoretical results, or the applicability of the engineering or programming solutions obtained, publication outputs, experimental skills, and the like.

Some of my concert in the following comments can also be due to the fact that I missed some of the information written that I did not notice, so you may not take that seriously all the comments but just clarify for me to understand your work.It is missing some more information in Chapter 1.5 regarding the diffraction processes, so a bit more context and information about the plots are needed. My main concern regarding the thesis work is about the discussion of the results obtained from the analysis. First, I think that some introductions and explanations of momenta transfer t and rapidity y are not properly written, and that limits the explanation and interpretation that can be given later about the results obtained and shown in the plots from the runs 14 and 16. A clearer explanation of the setup and detector used in both runs of analysis would be great and can be solved during the presentation at the defense. For instance, brief explanation of the flags conditions used for run 14 would enrich the discussion and explanation of the results.The same set of plots is shown for run 16, but the purpose of doing another run is not clear to me. No discussion is written in the analysis chapter. I expected the student to elaborate on an explanation and interpretation of the plots with respect to the physics goals. And no clear comparison to the theoretical model is written.
I will assigne C-good grade to this thesis work

III. OVERALL ASSESSMENT, QUESTIONS TO BE ASKED DURING THE WORK DEFENCE, SUGGESTED GRADE

Summarize those aspects of the work that were significantly influential for your overall assessment. Suggest questions to be answered by student during the defence of the work before the examination board.

*** What is the connection between EPIC and the STAR experiment? How will UPC studies profit from this new project with respect to the current one?**
*** Which detectors from EPIC are expected to contribute to UPC studies?**
*** What is the reason for allowing 10 or less hits in the TPC?**
*** What is the reason to choose specifically runs 14 and 16? and not older or newer runs?**
*** What are the differences between the setups with and without TOF for the flagging? Please elaborate on the detectors used for the analysis and their purpose.**
*** How the results obtained are compared to a relevant theoretical model?**
*** What are the differences in the results from runs 14 and 16?**

Suggested grade: C - good.

Date: 19/08/2024

Signature: