

## **Seminarium Szkoły Doktorskiej NCBJ**

**Thursday, 24 October, 9:15  
room 207, Pasteura 7**

<https://www.gotomeet.me/NCBJmeetings/phd-seminar>  
<https://events.ncbj.gov.pl/event/382/>

**Speaker:**

**Monika Ghimiray (Szkoła Doktorska NCBJ)**

**Title:**

**Understanding the Vector Boson Scattering at the CMS experiment at CERN**

**Abstract:**

In this seminar, I will present a study of Vector Boson Scattering (VBS) processes at the Compact Muon Solenoid (CMS) experiment at CERN, with a specific focus on the scattering of same-sign  $W$  bosons. The final state under investigation involves two leptons, two neutrinos and two tagging jets. My analysis will explore key VBS processes, detailing the challenges posed by various backgrounds and the strategies employed to mitigate their contributions. In particular, I will highlight the impact of non-prompt leptons, which represent one of the most significant backgrounds, and explain how these are addressed in our study. Additionally, I will share insights from the data analysis, including results related to the interpretation within the framework of the Standard Model Effective Field Theory (SMEFT).