



O2 Analysis Tutorial v.5

Introduction to PWGUD session

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IFJ PAN Kraków
13.11.2025

O2 Tutorial plan

O2 Analysis Tutorial: 10-14 November 2025

PWGUD session: 13 November 2025, Thursday, 14:00 – 17:25

O2 Analysis Tutorial 5.0

from Monday 10 November 2025 (09:00) to Friday 14 November 2025 (21:00)
CERN

: Sessions / : Talks : Breaks

	10 Nov 2025	11 Nov 2025	12 Nov 2025	13 Nov 2025	14 Nov 2025
AM	09:00 Lectures - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) (until 13:10) (132-005) 09:00 Introduction to O2/O2Physics analysis - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) 10:15 Analysis with Hyperloop - Nicolas Poffey (CERN) 11:30 DPG: A brief introduction to O2 reconstruction - Ruben Shahoyan (CERN) 12:10 DPG: Event and track selection recommendations - Igor Abtzybeev (Technische Universität München (DE))	09:00 Lectures - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) (until 12:45) (222R-003) 09:00 PID: Electrons, Hadrons, and Light Nuclei - Mr Hirak Kumar Koley (Jadavpur University (IN)) 09:30 PID: Weak Decays and Secondary Vertices - Romain Schotter (Austrian Academy of Sciences (AT)) 10:00 Using derived data in O2/O2Physics - Victor Gonzalez (Wayne State University (US)) 10:30 Run 2 analysis using O2/O2Physics - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) 11:30 Machine learning in O2/O2Physics - Francesco Mazzocchi (CERN) 12:00 Software triggers in ALICE - Roman Lietava (University of Birmingham (GB)) Maximiliano Puccio (CERN) Fabrizio Grossi (CERN)	09:00 PWG-HF - Luigi Della Stitta (CERN) Grazia Luparello (INFN Trieste (IT)) Fabrizio Grossi (CERN) Matia Faggin (CERN) Vi Kucera (Inha University (KR)) Xinye Peng (CUG & INFN Padua) (until 12:30) (132-005) 09:00 Introduction to the HF O2 framework and general information - Matia Faggin (CERN) 09:30 Production and usage of derived data in HF - Fabrizio Grossi (CERN) 09:45 Simplified workflow for D-meson reconstruction: description and guided execution - Luigi Della Stitta (CERN) Vi Kucera (Inha University (KR)) 10:30 Hands-on session: exercises on the simplified HF task - Matia Faggin (CERN) Marcello Di Costanzo (Politecnico di Torino (IT)) Stefano Pullano (CERN) Luigi Della Stitta (CERN) Vi Kucera (Inha University (KR)) Samuele Catarucci (Università e INFN Trieste (IT)) Luca Aglietta (Università e INFN Torino (IT)) Fabrizio Chinì (Università e INFN Torino (IT)) Antonio Palasciano (Politecnico & INFN, Bari (IT)) 12:15 Additional time for Q&A	09:00 PWG-CF Tutorial - Anton Albin Riedel (Technische Universität München (DE)) Qiyi Shou (Fudan University (CN)) Oton Vazquez Dose (INFN e Laboratori Nazionali di Frascati (IT)) (until 12:30) 09:00 PWG-CF Tutorial - Oton Vazquez Dose (INFN e Laboratori Nazionali di Frascati (IT)) Qiyi Shou (Fudan University (CN)) Near Koster (Nikhef National Institute for subatomic physics (NL)) Maxim Vira (University of Jyväskylä) Junseok Kim (CERN) (until 12:30) 09:00 PWG-EM - Ivan Vorobyev (CERN) Joshua Leon Korig (Goethe University Frankfurt (DE)) Delia Delibata (University of Tsukuba (JP)) (until 12:30) (413-004 - TH Discussion Room) 09:00 Photon tutorial - Stefania Mrazinski Stefania Mrazinski (Goethe University Frankfurt (DE)) 10:00 --- Coffee break --- 10:30 Dilepton tutorial - Raghavella Balasubrah (Goethe University Frankfurt (DE))	09:00 Machine Learning - Chiara De Martin (Università e INFN Trieste (IT)) Francesco Mazzocchi (CERN) Luca Aglietta (Università e INFN Torino (IT)) Lee Benby (University of Derby (GB)) (until 12:30) (132-005) ML_inference_hands_on_1.pdf ML_instructions mode_learn.onnx
PM	14:00 General hands-on - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) (until 17:55) (222R-003) 14:00 Getting started with O2/O2Physics development - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) 14:45 Analysis of Monte Carlo data - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) 15:30 --- Coffee break --- 16:00 Creating a data model and saving to derived ACQD - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT))	14:00 General hands-on - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) (until 17:55) (222R-003) 14:00 Template functions and compile time directives - David Dobrigkeit Chinellato (Austrian Academy of Sciences (AT)) 15:30 --- Coffee break --- 16:00 Simulations in O2/O2Physics - Sandro Christian Wenzel (CERN) Marco Giacalone (CERN)	14:00 PWG-DQ - Luca Micheletti (CERN) Cristiane Jelkovic Fiorini Da Silva (University of Campinas UNICAMP (BR)) Xiaochi Bai (University of Science and Technology of China (USTC)) Xiaochi Bai (University of Illinois at Chicago) (until 17:55) (530R-044) 14:00 General introduction - Ionut Cristian Arsene (University of Oslo (NO)) Ionut Arsene Arsene (University of Oslo) 14:30 Event filtering and skimming - Victor Jose Gaston Feuillard (Università e INFN, Cagliari (IT)) 15:00 Hyperloop: from introduction to testing - Luca Micheletti (CERN) 15:20 --- Coffee break --- 15:50 Hands-on: using muon data (muon + global muons) - Maurice Coquet (CERN) 16:35 Hands-on: using barrel data - Pengshong Lu (University of Science and Technology of China (CN)) 17:20 Machine Learning in DQ - Jinjiao Seo (Heidelberg University (DE)) 14:00 PWG-LFMM - Suchanta Tripathy (Lund University (SE)) Francesca Ercolassi (Università e INFN, Bologna (IT)) Romain Schotter (Austrian Academy of Sciences (AT)) Souren Kouda (CERN) Dakhshayen Malik (Università e INFN, Cagliari (IT)) Adrian Ferryon Nassipour (Sejong University (KR)) Veronika Barbovova (Pavol Jozef Safarik University (SK)) Maximiliano Puccio (CERN) (until 17:30) (132-005) 14:00 Strangeness Hands-On: cascade analysis in OO using derived tables - Romain Schotter (Austrian Academy of Sciences (AT)) 15:30 --- Coffee break --- 16:00 Resonance Hands-On: Phi Analysis - Adrian Ferryon Nassipour (Sejong University (KR)) Dakhshayen Malik (Università e INFN, Cagliari (IT)) Veronika Barbovova (Pavol Jozef Safarik University (SK))	14:00 PWG-JE - Raymond Ehlers (University of California Berkeley (US)) Nima Zardoshti (CERN) (until 17:30) 14:00 PWG-UD - Roman Levicki (Czech Technical University in Prague (CZ)) Adam Matyjka (Polish Academy of Sciences (PL)) (until 17:30) (413-004 - TH Discussion Room) 14:00 Introduction - Adam Matyjka (Polish Academy of Sciences (PL)) 14:05 Event selection for UPC - Sigurd Niese (University of Oslo (NO)) 14:45 --- Coffee break --- 14:55 Data analysis with UD tables - Anissa Khatum (Università degli studi di Foggia (IT)) 15:15 --- Coffee break --- 15:25 MC data - Michal Broz (Czech Technical University in Prague (CZ))	

PWGUD session plan

- 14:00 – 14:05 Introduction (Adam Matyja)
- 14:05 – 14:45 **Event selection for UPC** (Sigurd Nese)
 - Single gap producer
 - Event selection
 - Exclusive / inclusive
 - Skimming / derived data
 - Practical exercise
- 14:55 – 16:15 **Data analysis with UD tables** (Anisa Khatun)
 - Central Barrel analysis
 - Muon Arm analysis
 - Practical exercise
- 16:25 – 17:25 **MC data** (Michal Broz)
 - MC Generators in analysis
 - How to request MC production
 - Regular and embedded MC