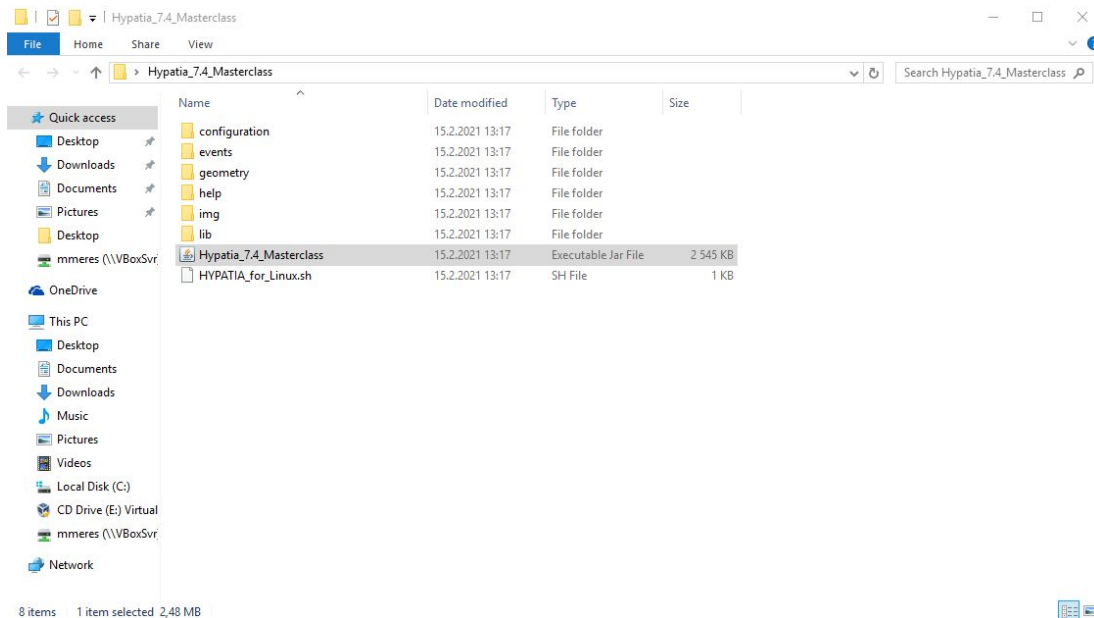


Úvod od HYPATHIE

Príprava

- Nainštalovať Javu 8 - <https://www.java.com/en/download/>
- Stiahnuť HYPATIA 7.4 - http://hypatia.phys.uoa.gr/Downloads/HYPATIA/Hypatia_7.4_Masterclass.zip
- rozbalit' a spustiť súbor Hypatia_7.4_Masterclass.jar

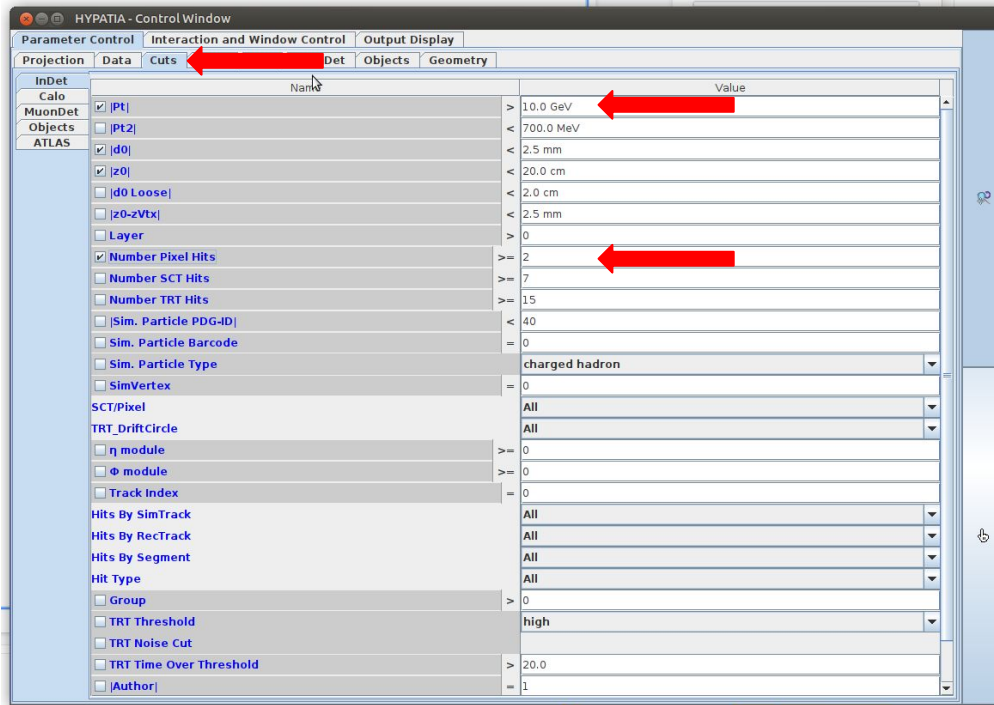


Okná HYPATHle


- Invariant Mass Window
- Control Window
- Track Momenta Window
- Canvas Window

Nastavenie cutov

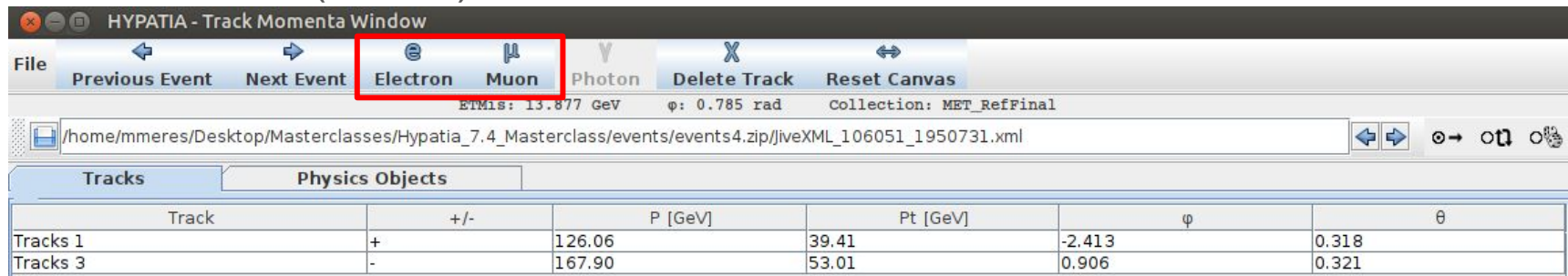
- V okne Control Window → zvoliť záložku Cuts
- Nastaviť $P_t > 10 \text{ GeV}$
- Zaškrtnúť a nastaviť “Number Pixel Hits” ≥ 2



Identifikovanie dráh

- Prepínanie medzi eventami: ←, →
- **Zvolenie dráhy:** Control Window → Interaction and Window Control → 

Nabité častice (Tracks)



HYPATIA - Track Momenta Window

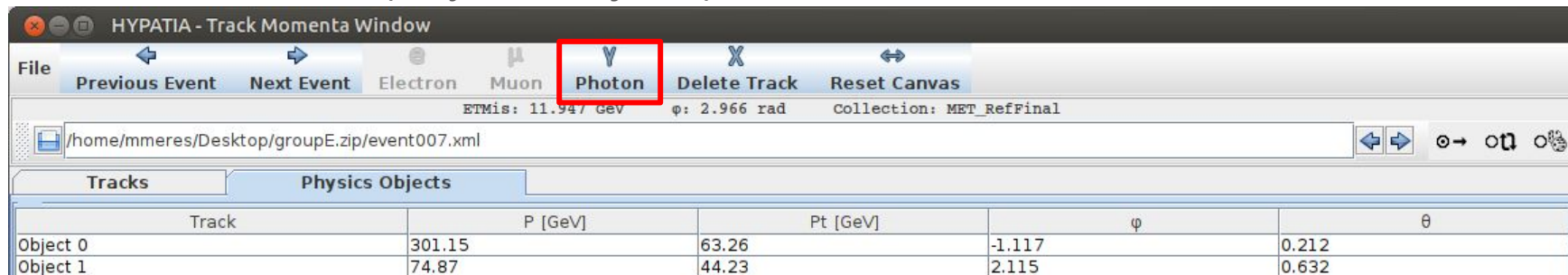
File Previous Event Next Event **Electron Muon** Photon Delete Track Reset Canvas

ETMis: 13.877 GeV ϕ : 0.785 rad Collection: MET_RefFinal

/home/mmeres/Desktop/Masterclasses/Hypatia_7.4_Masterclass/events/events4.zip/jiveXML_106051_1950731.xml

Track	+/-	P [GeV]	Pt [GeV]	ϕ	θ
Tracks 1	+	126.06	39.41	-2.413	0.318
Tracks 3	-	167.90	53.01	0.906	0.321

Neutrálne častice (Physics Objects)



HYPATIA - Track Momenta Window

File Previous Event Next Event **Photon** Delete Track Reset Canvas

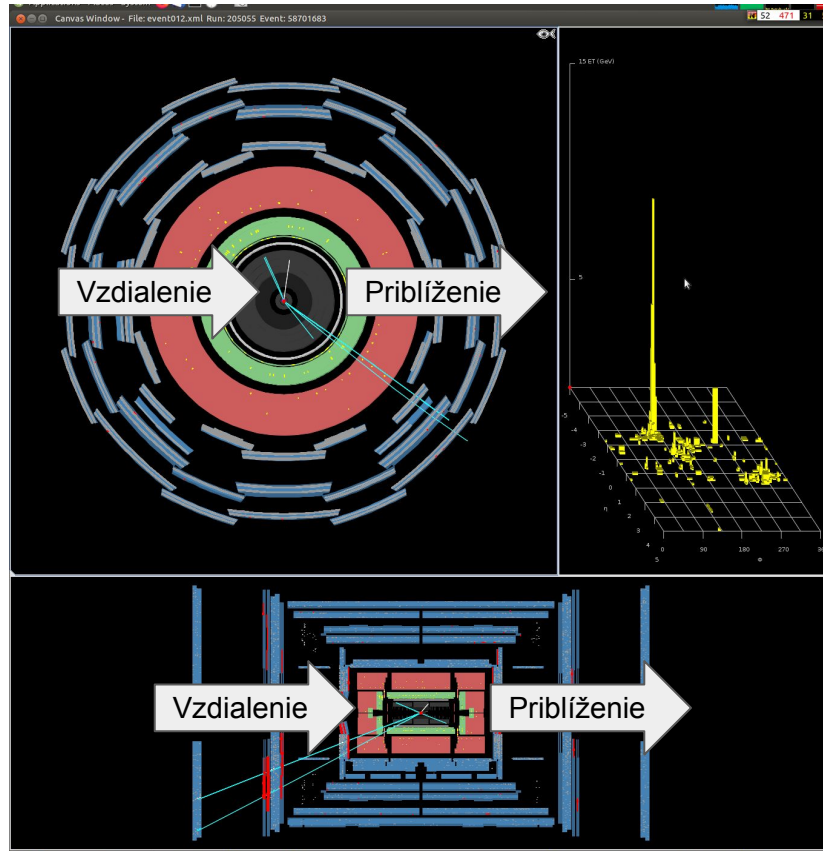
ETMis: 11.947 GeV ϕ : 2.966 rad Collection: MET_RefFinal

/home/mmeres/Desktop/groupE.zip/event007.xml

Track	P [GeV]	Pt [GeV]	ϕ	θ
Object 0	301.15	63.26	-1.117	0.212
Object 1	74.87	44.23	2.115	0.632

Priblíženie/Vzdialenie detektora

- Control Window → Interaction and Window Control →



Odstránenie dráhy

Hybrid Pupils' Analysis Tool for Interactions in ATLAS - version 7.4 - Invariant Mass Window

File View Histograms Preferences Help

File Name	ETMis [GeV]	Track	P [GeV]	+/-	PT [GeV]	ϕ	η	M(2) [GeV]	M(eeee) [GeV]	M(eemm) [GeV]	M(mmmm) [GeV]	e/m/g
event012.xml	14.324	Tracks 138	117.1	+	45.5	2.022	-1.599	NotCompatible	NotCompatible	NotCompatible	NotCompatible	e
		Tracks 3	150.1	+	54.0	-0.611	-1.682					e
		Tracks 4	39.8	+	14.8	-0.887	1.645	NotCompatible				e
		Tracks 118	14.4	+	10.8	1.451	0.796					e

etmis: 14.324 GeV ϕ : 0.523 rad Collection: Mbr RefPinal

HYPATIA - Track Momenta Window

File Previous Event Next Event Electron Muon Photon **Delete Track** Reset Canvas