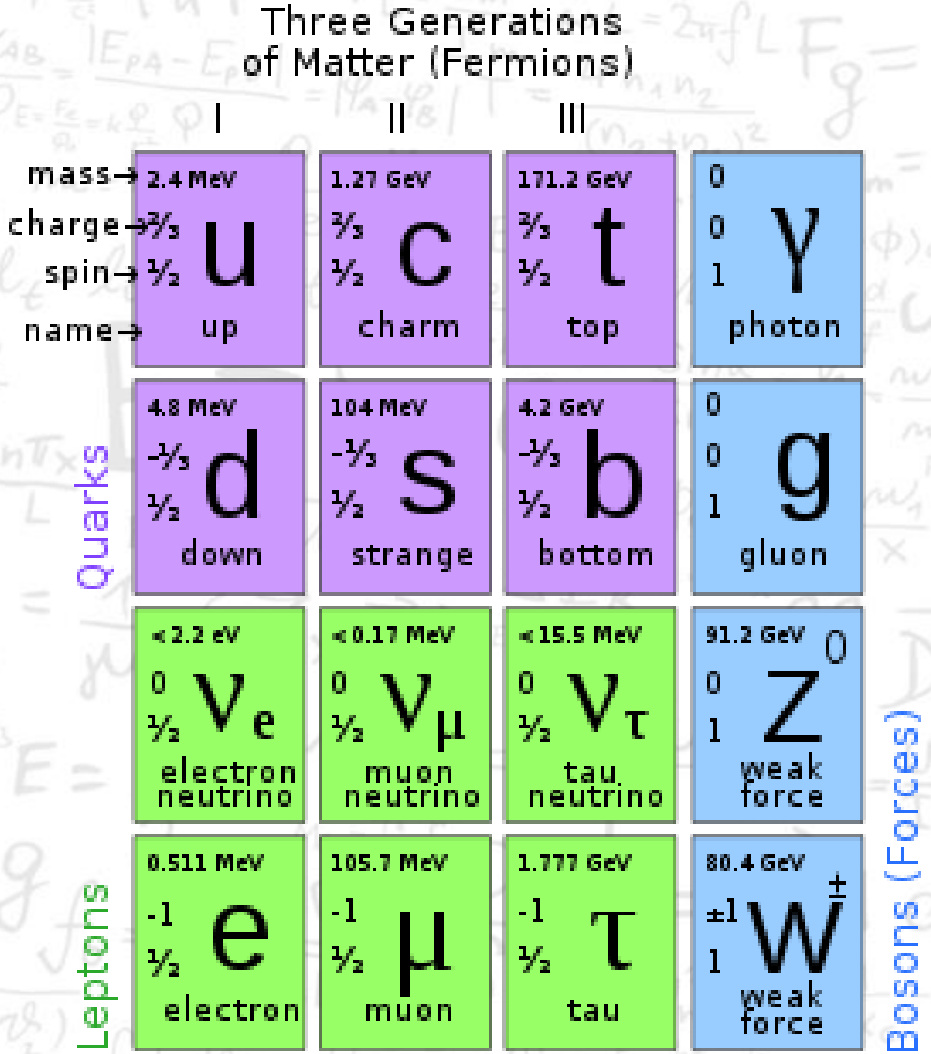
Hledání Higgsova bosonu na ATLAS

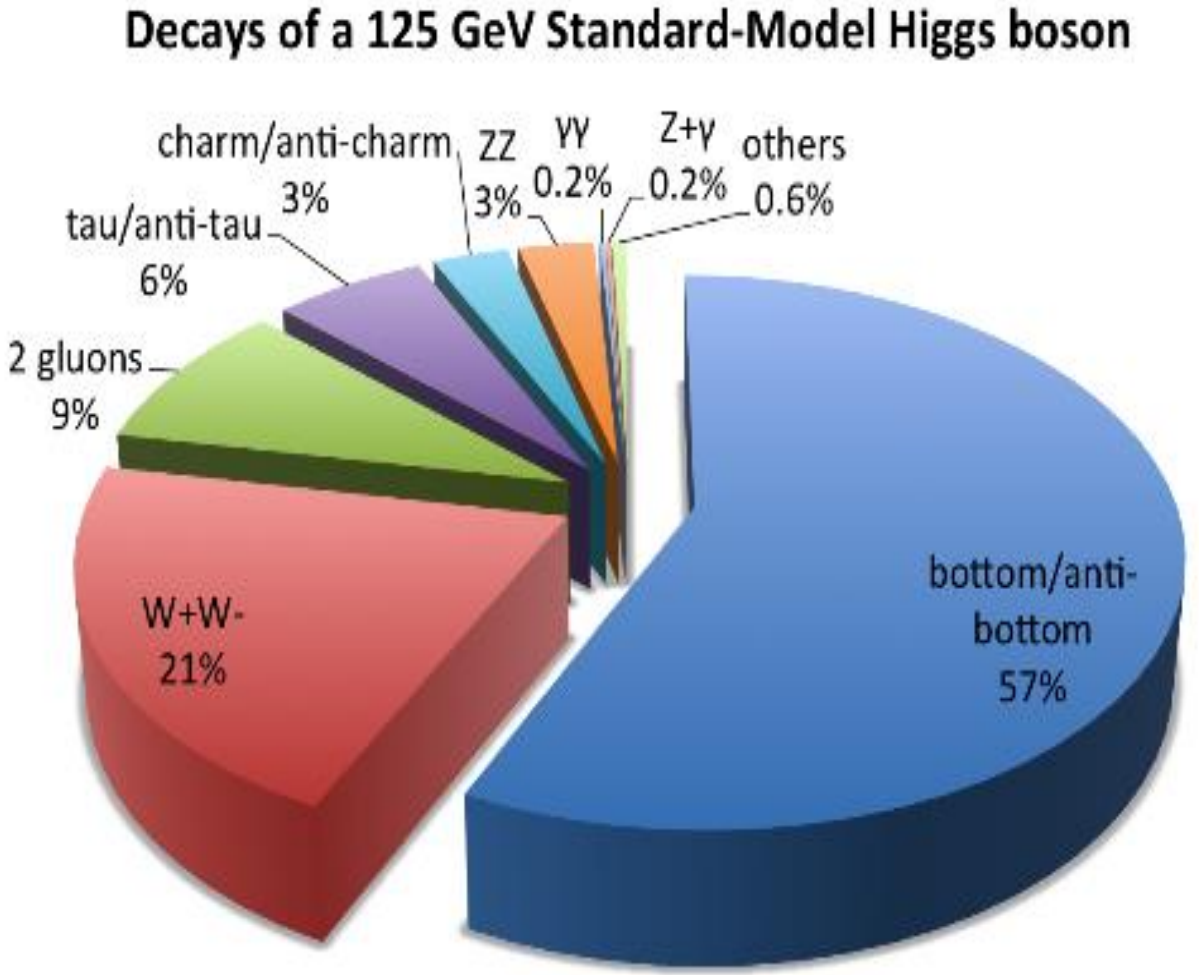
autoři: A. Krpenský
D. Ryšánek
J. Štorek

supervisor: J. Fodorová

Standardní model

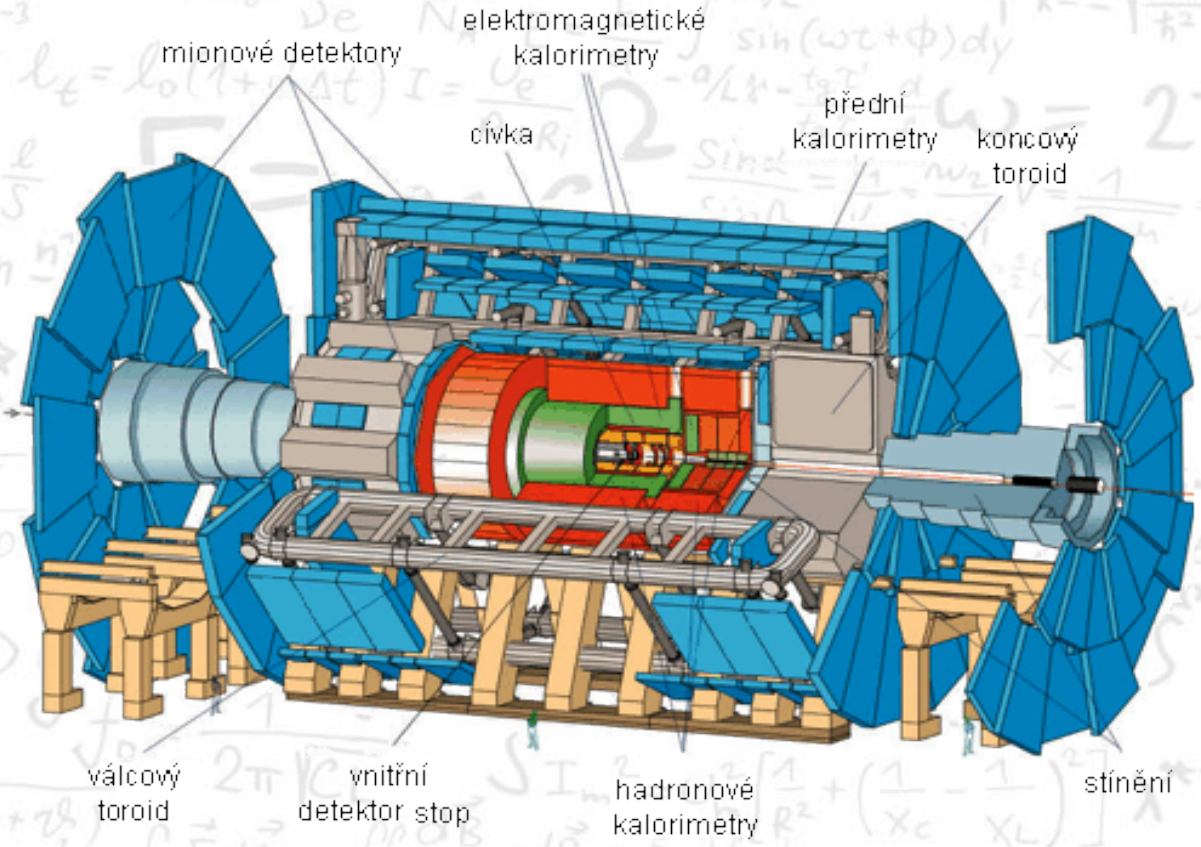


Rozpad Higgse



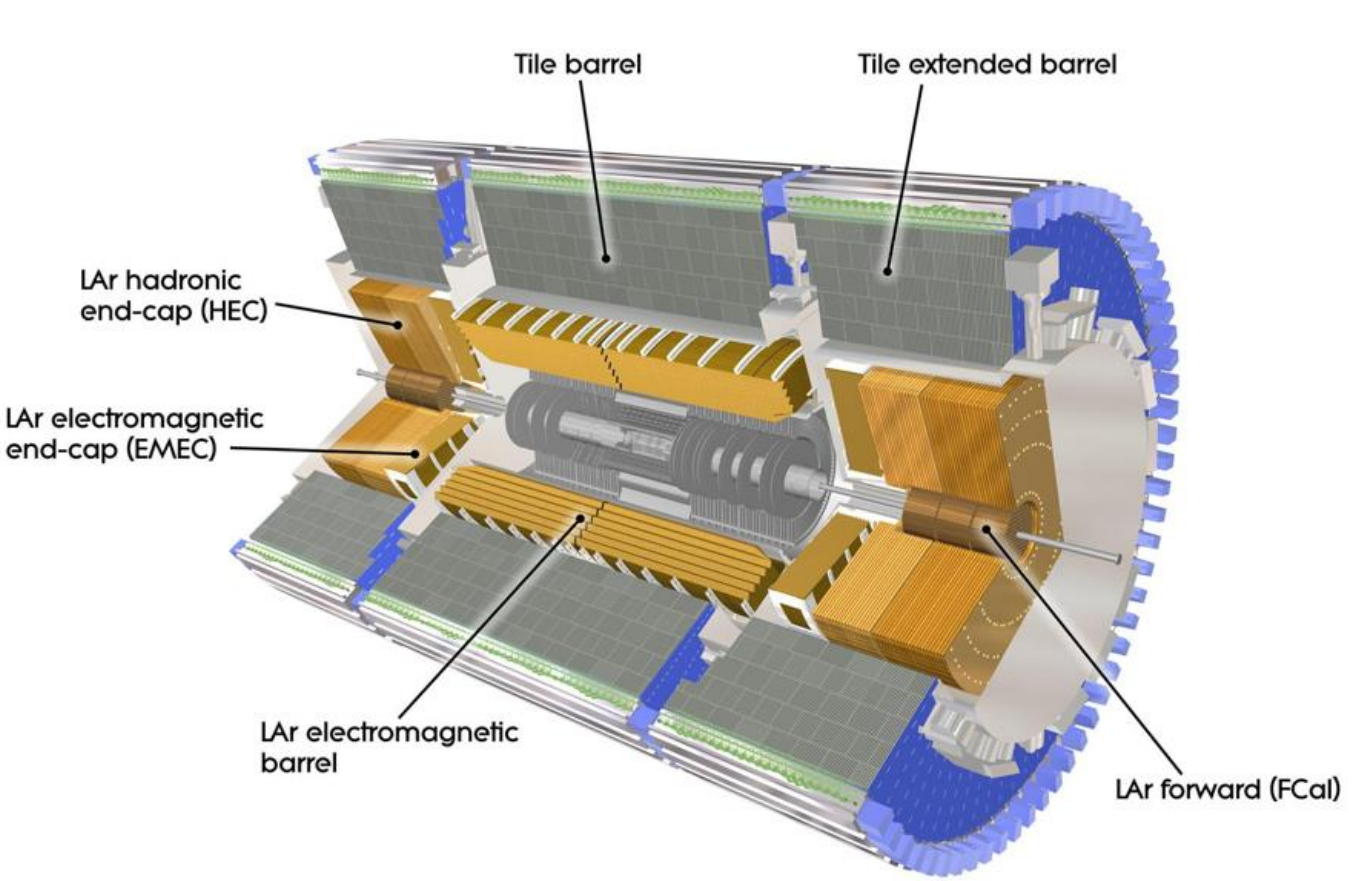
Detektor ATLAS

- 45×25×25m



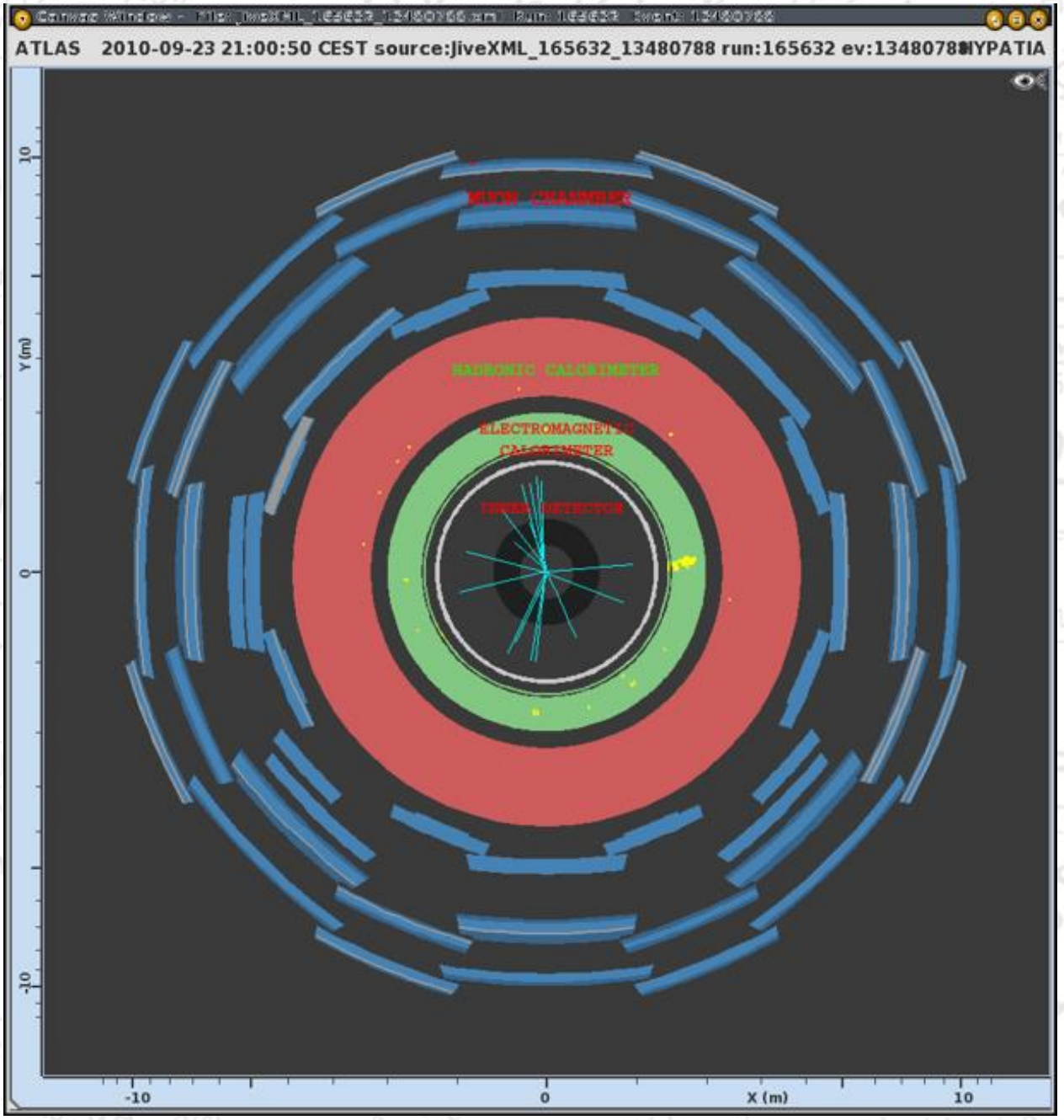
Detekce částic

- Pomocí vrstev kalorimetrů

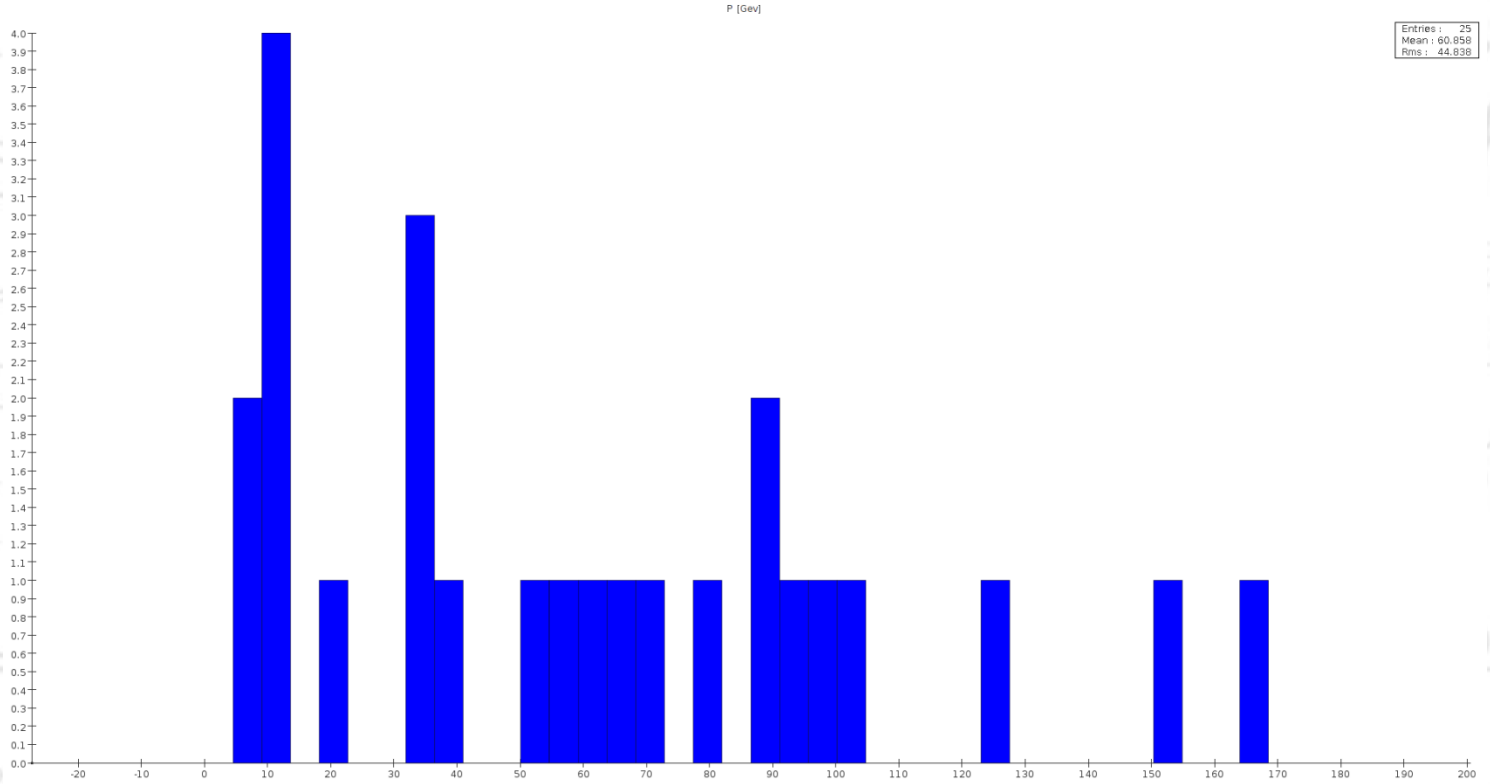


Výpočty

- program HYPATIA
- náboj, zakřivení částice → hybnost
- hybnost, energie → hmotnost

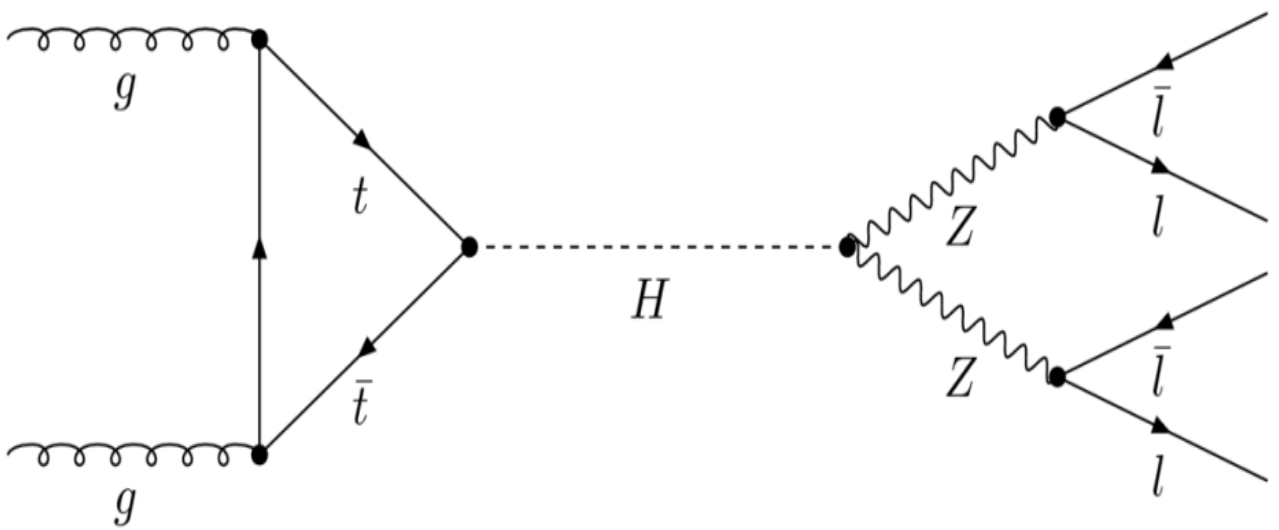
- 
ATLAS 2010-09-23 21:00:50 CEST source:JiveXML_165632_13480788 run:165632 ev:13480788
MUON CHAMBERS
HADRONIC CALORIMETER
ELECTROMAGNETIC CALORIMETER
INNER DETECTOR
Y (m)
X (m)
10
0
-10

Hybnost



Výsledky

- Z: 90,7 ± 0,9 → 91,1876 GeV
- H: 122 → 125 GeV



Poděkování

- Janě Fodorové
- Ing. Vojtěchu Svobodovi
- Vám za pozornost!