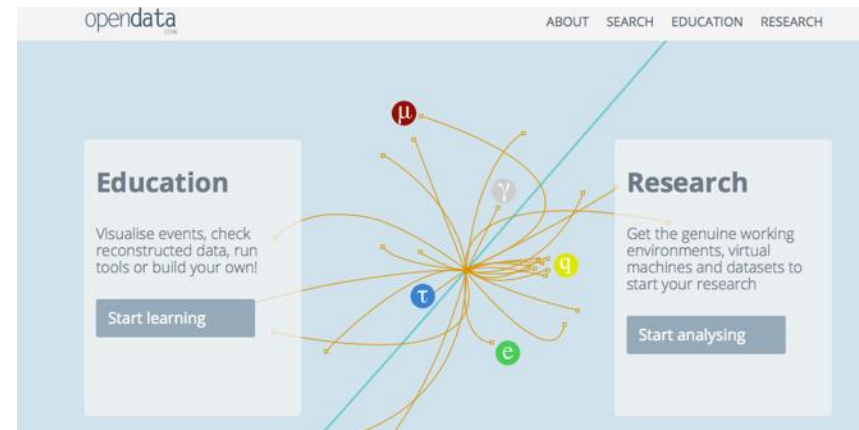
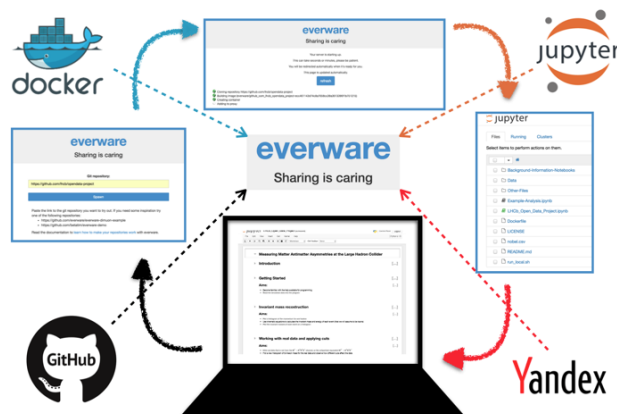
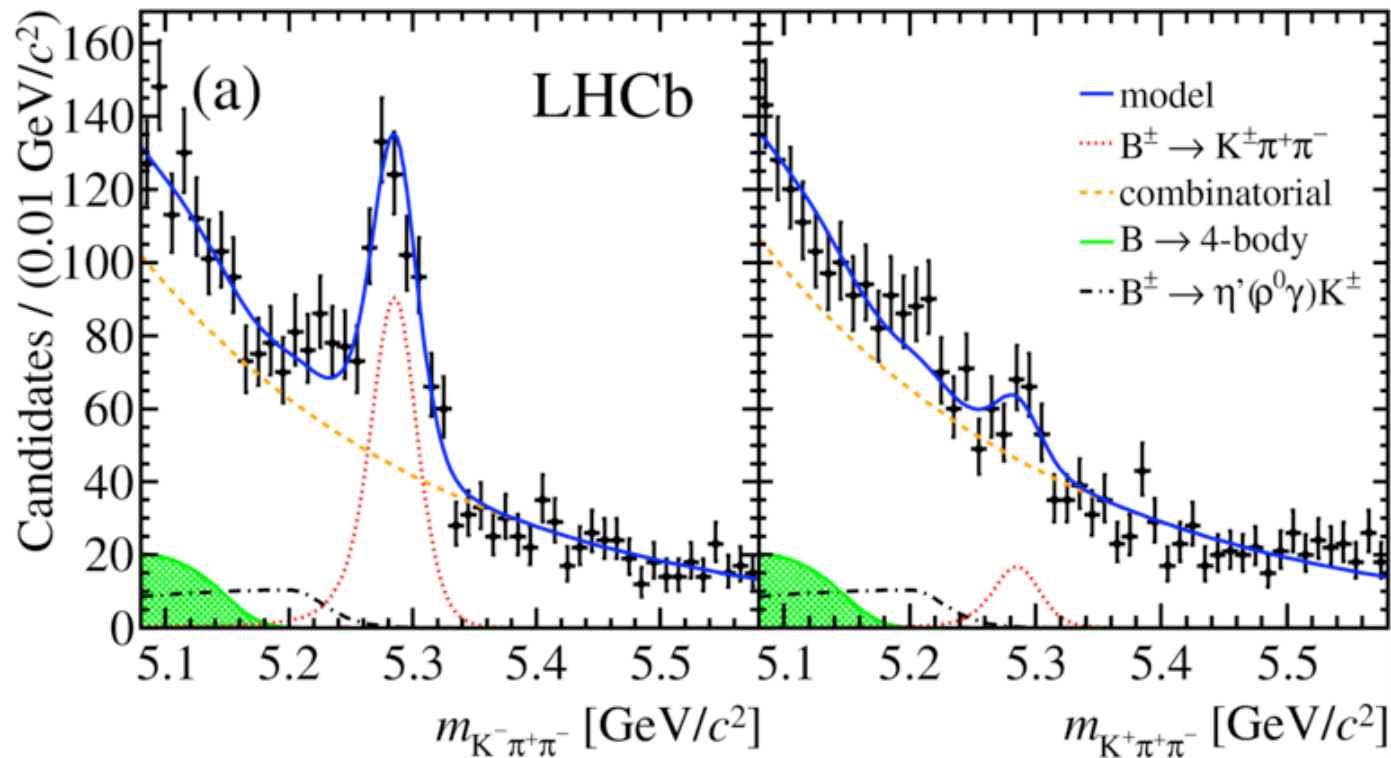


# Particle Physics Analysis for the CERN Open Data Portal: “Measuring Matter Antimatter asymmetries at the LHC”



C.Parkes, S.Amerio, A.Rogozhnikov, M.Gersabeck, Andrey Ustyuzhanin,  
G.Gilliver, T.Head, M.Litwinski, S.Dallmeier-Tiessen, D.Derkach, C.Burr,  
I.Babuschkin on behalf of LHCb

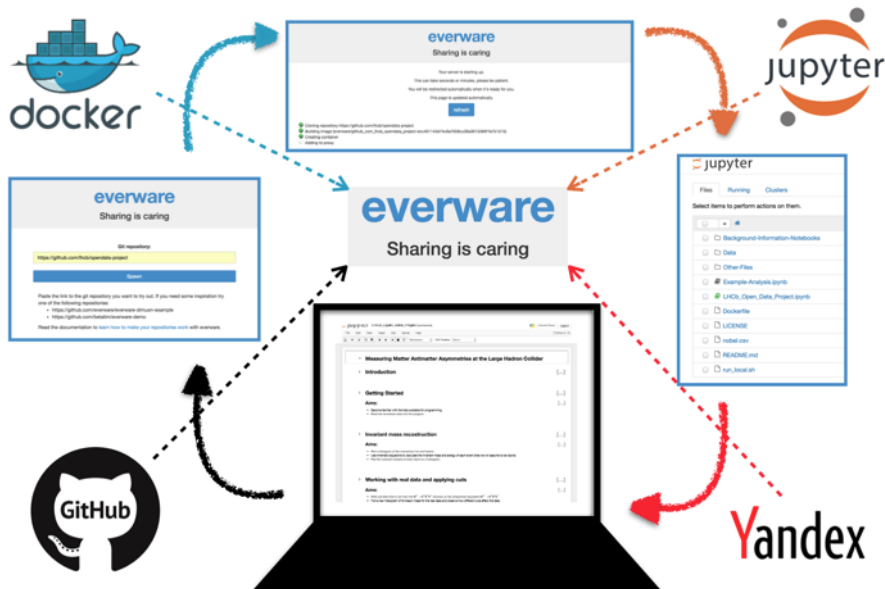
# Project – Background – CPV



- Very Large CP Violation observed in local regions of phase space
- Hence, ideal mode for this project
  - Neglecting subtleties, CP Violation can still be observed by users

# Project - Technology

- Entirely web-based
  - remove OS dependency, user IT requirements



Hosting provided by Yandex

- Jupyter Notebooks
  - Instructions, hints, user code
- Docker
  - Environment
- GitHub
  - Code storage
- CERN open data portal
  - Data (to appear, for the moment use cernbox)
- Everware
  - Bridge between Github/Docker/Jupyter

# Summary



- Novel Particle Physics Analysis Project Developed
  - Allows users to conduct a guided analysis
  - Embedded instructions and coding cells
- First launched summer 2016 for UK Royal Society summer Science Exhibition
  - Try Beta release [here](#),
  - to appear on CERN open data portal
  - See also outreach materials at [Antimatter-matters.org](http://Antimatter-matters.org)
- More technical everware talk on **Thu 12:15, Track 5**
  - <https://indico.cern.ch/event/505613/contributions/2228351/>



Thanks to: CERN open data portal team