

# DESCOBRINDO AS PARTÍCULAS ELEMENTARES



No IF-UFRJ, temos um projeto registrado no SigProj e uma disciplina de extensão

- Palestras em escolas
- Organização do Masterclass Internacional
- Realização de eventos locais
- Publicação em redes sociais e criação de material de divulgação científica

## Palestras Ministradas

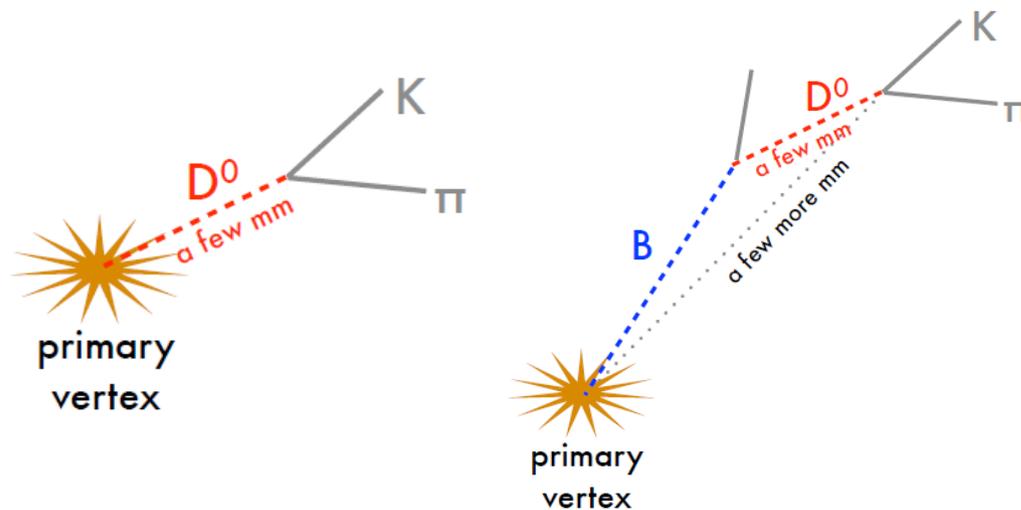
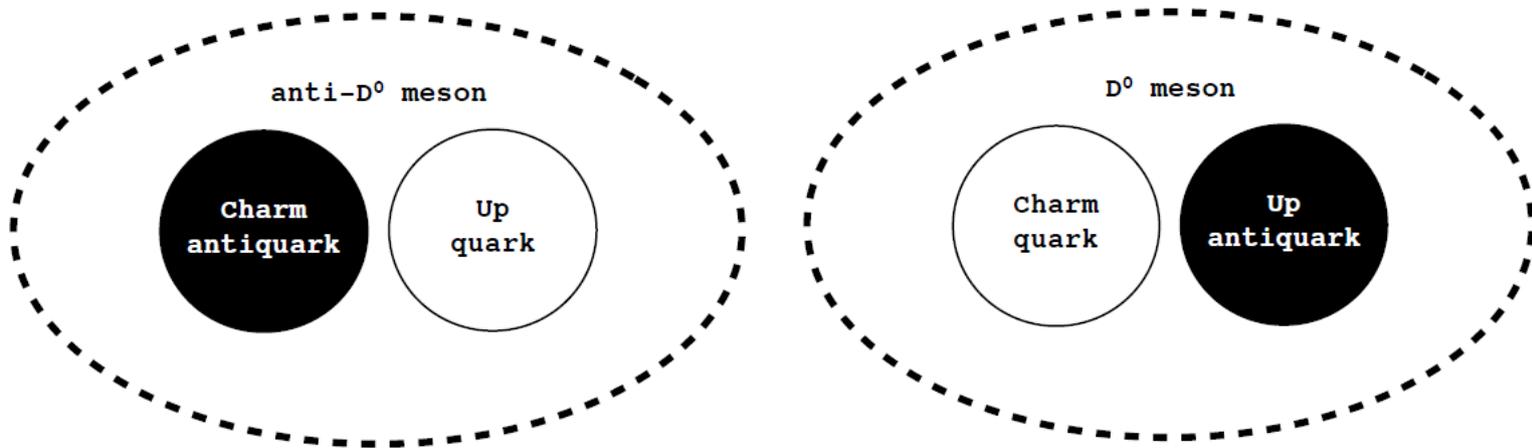
Professor	Data	Colégio
Bruno Souza de Paula	25/08/2017	CE Canadá
Murilo Rangel	22/08/2017	CE Central do Brasil
Murilo Rangel	30/09/2016	CE Central do Brasil
Murilo Rangel	13/11/2015	CE General Osório

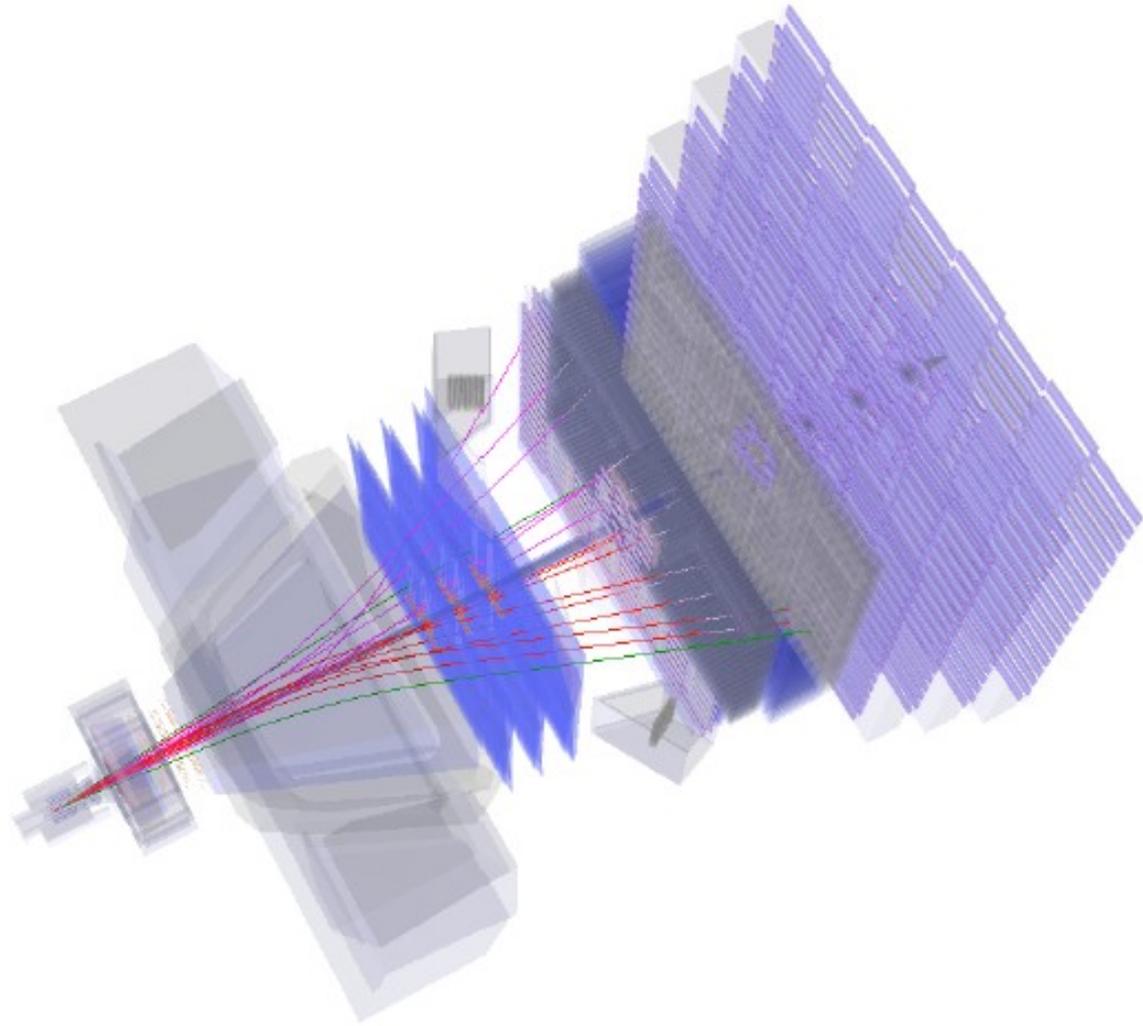
## Edições Realizadas

Edição	Professores participantes	Colégios Participantes	Observações
Março de 2016	Bruno, Irina, Miriam	CEFET, FABEL, CAP UERJ, CP II, CE Caxias	International MasterClass
Agosto de 2016	Irina, Miriam		2ª Semana da Física UFRJ
Dezembro de 2016	Irina, Miriam, Erica, Murilo	CE Canadá, Intituto Nícia Macieira	Local, Ensino Médio
Fevereiro de 2017	Miriam, Sandra, Erica, Murilo	CE Alfredo Neves, CEFET, CP II, PENSI, CIEP 218	Especial Women in Science
Abril de 2017	Miriam, Erica, Murilo	CP II, Centro Educacional da Lagoa, CM Rui Barbosa, CIEP 218, Curso e Colégio Fator, Ícone Colégio e Curso	International Masterclass

# Masterclass do LHCb

- Foco na assimetria entre matéria e anti-matéria
- Decaimento do méson  $D^0$
- Análise de event displays e seleção dos candidatos





FreeSurfer Eve

Event Control | Viewer 1 Help

### Help

Zoom gives you closer look at collision

Click on the track to find out about particle properties

Carefully choose particles you want to save, because out of them you get a new mass which might not be right!

Add and Draw your results on histogram. Don't forget to save histogram when you finish!

Fullscreen shows the full view of LHCb detector and particle tracks

Hint shows you the hidden D0 and its children

Transparent view gives you a better look at particle tracks and the LHCb detector

You can hide the geometry to see all the particle tracks.

**Start**

Combination 1 View Data

Help Exit

---

**View**

Hide Geometry  Transparency

---

**Event manager**

Event number: 3

---

**Particle Info**

Name	pi+
Mass	132.57 MeV/c <sup>2</sup>
E	5490.92 MeV
q	1.00
chi2	0.59
px	-125.11 MeV/c
py	542.00 MeV/c
pz	5458.95 MeV/c

---

**My Particles**

My particle: pi+

My particle: pi+

Mass: 1024.14

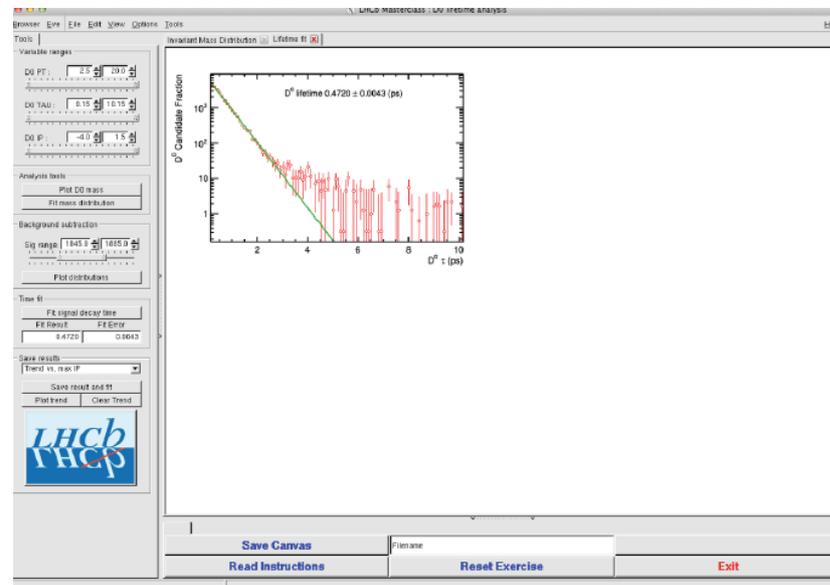
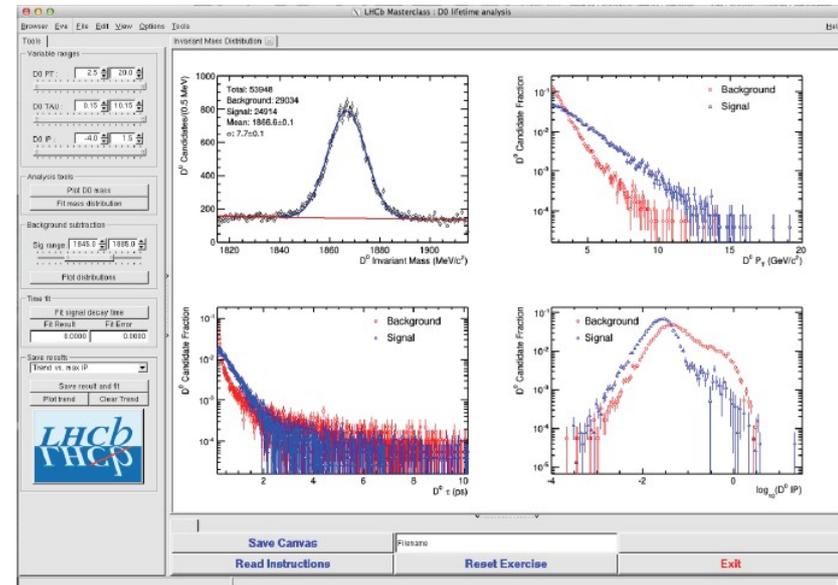
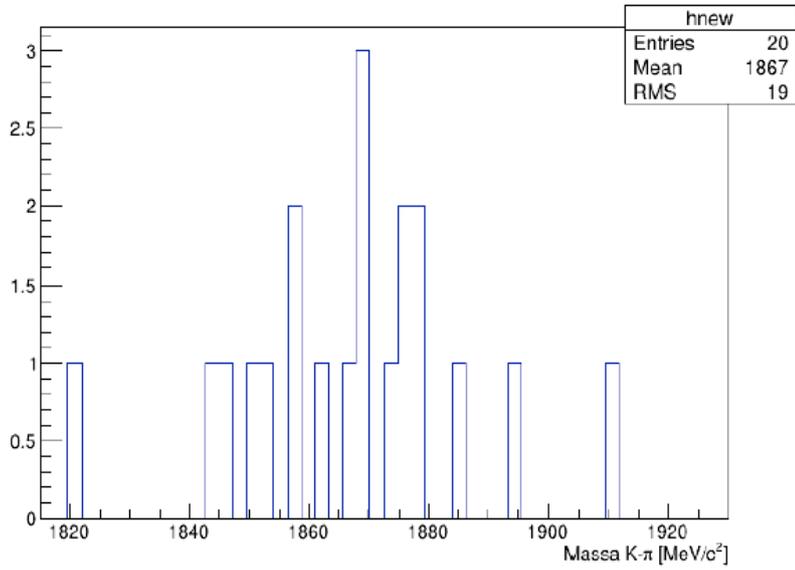
---

**Histogram**

---

**Legend**

- K- —
- K+ —
- pi- —
- pi+ —
- D0 —





VidyoDesktop

100%

U.S. International - PC

Wed 5 Apr 11:43

Leandro

VidyoDesktop™ - Masterclasses\_2017\_VC2@vidyoportal.cern.ch



MC Plymouth Uni-Plymouth-UK

Giovanni Passalunghi

Mick Mjølde

Dortmund

MC INFN PISA ITALY

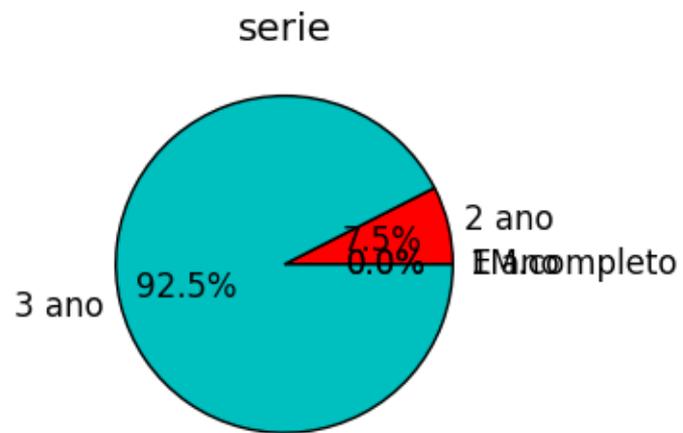
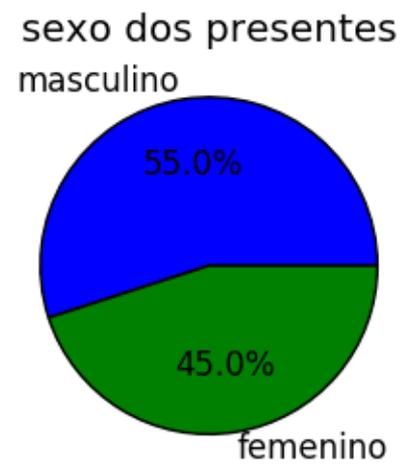
MC Moderator CERN

Federico Leo Redi

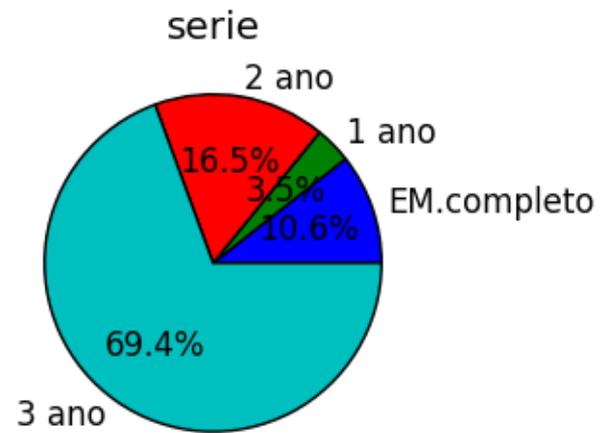
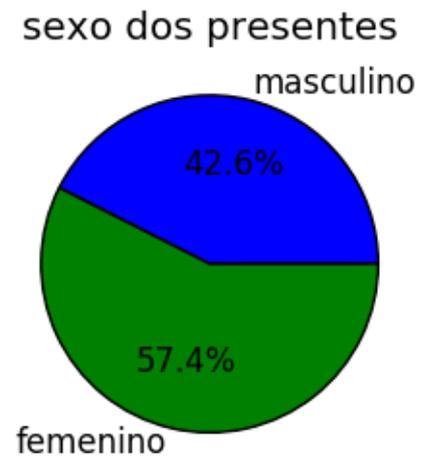
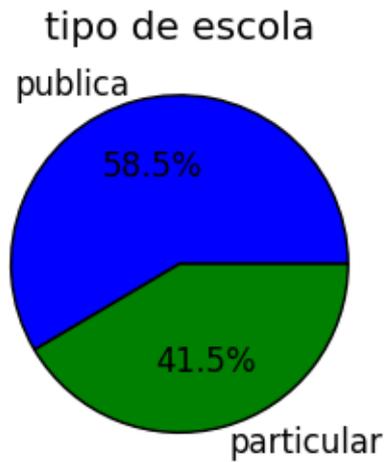
Sell View



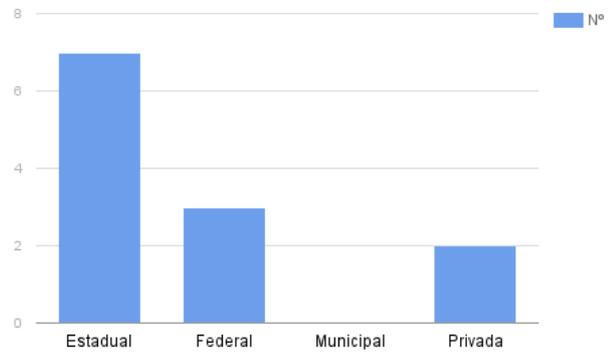
março 2018



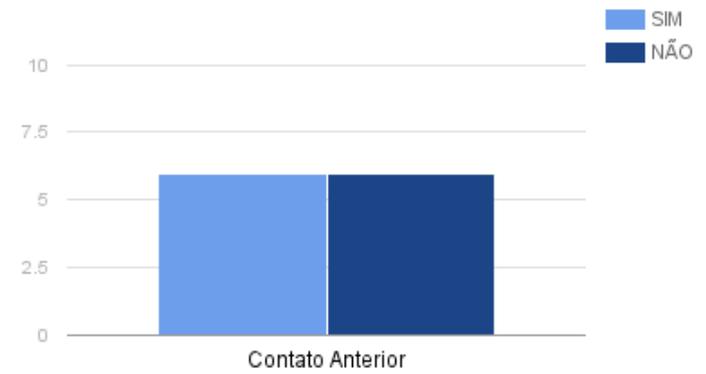
todos os masterclass



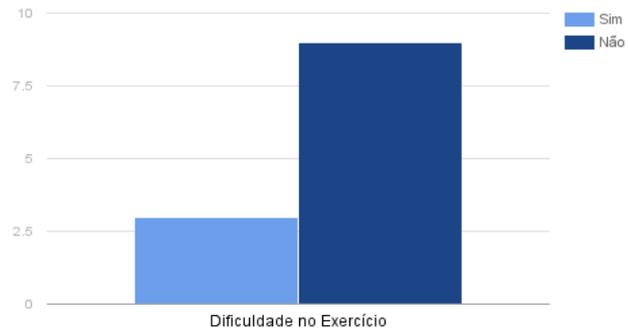
Rede de Ensino



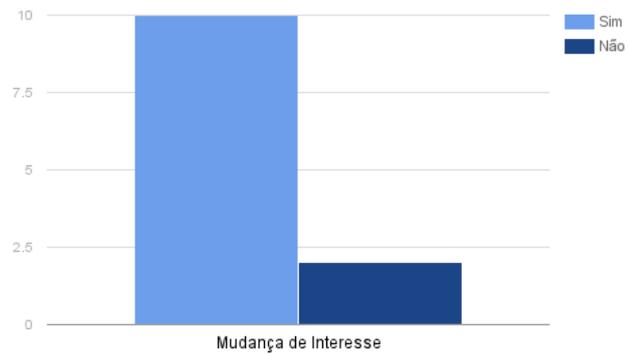
Contato com Física de Partículas



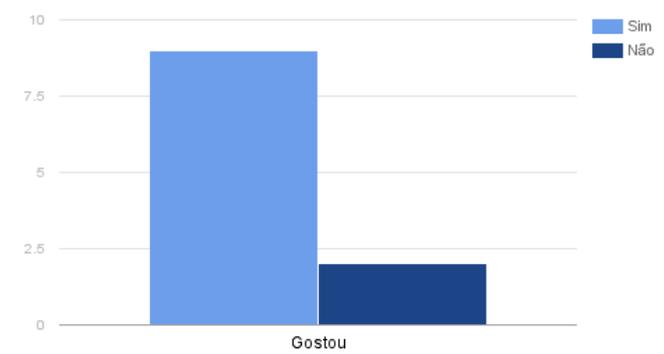
Dificuldade ao Realizar o Exercício



Mudança de Interesse pela Ciência Pós-Exercício



Gostou de Fazer o Exercício



Obrigado!!