

“Do microcosmo ao macrocosmo em Física de Partículas” Fevereiro 22-26

CURSO DE VERÃO



2016

<http://sites.ifi.unicamp.br/veraoifgw>



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Takaaki Kajita
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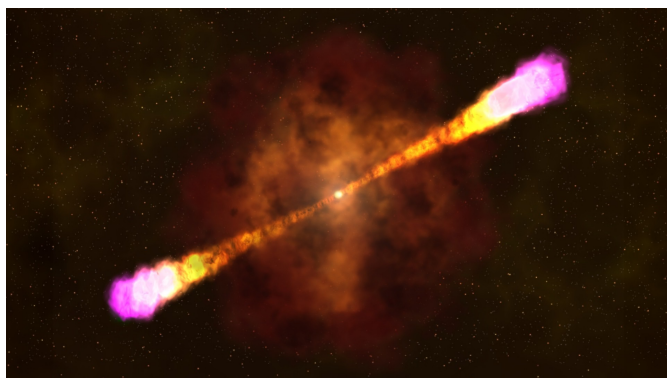
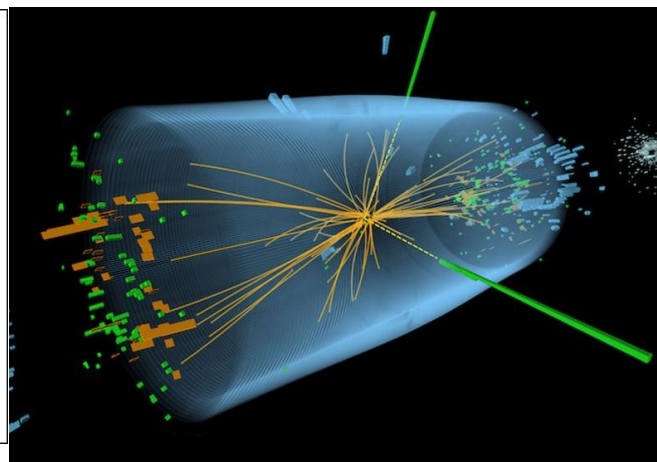


Photo: K. MacFarlane,
Queen's University
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Arthur B. McDonald
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The Nobel Prize in Physics 2015

- ▶ Takaaki Kajita
- ▶ Arthur B. McDonald

“for the discovery of neutrino oscillations”



	mass: +2.2 MeV/c ² charge: +2/3 spin: 1/2	mass: +1.276 GeV/c ² charge: +2/3 spin: 1/2	mass: +173.1 GeV/c ² charge: +2/3 spin: 1/2	mass: 0 charge: 0 spin: 1	mass: +125 GeV/c ² charge: 0 spin: 0
	u up	c charm	t top	g gluon	H Higgs boson
QUARKS	mass: +4.8 MeV/c ² charge: -1/3 spin: 1/2	mass: +95 MeV/c ² charge: -1/3 spin: 1/2	mass: +4.18 GeV/c ² charge: -1/3 spin: 1/2	mass: 0 charge: 0 spin: 1	
	d down	s strange	b bottom	γ photon	
	mass: 0.511 MeV/c ² charge: -1 spin: 1/2	mass: 105.7 MeV/c ² charge: -1 spin: 1/2	mass: 1.777 GeV/c ² charge: -1 spin: 1/2	mass: 91.2 GeV/c ² charge: 0 spin: 1	
	e electron	μ muon	τ tau	Z Z boson	
LEPTONS	mass: +0.2 eV/c ² charge: 0 spin: 1/2	mass: +0.17 MeV/c ² charge: 0 spin: 1/2	mass: +1.78 MeV/c ² charge: 0 spin: 1/2	mass: 80.4 GeV/c ² charge: ±1 spin: 1	
	ν_e electron neutrino	ν_μ muon neutrino	ν_τ tau neutrino	W W boson	GAUGE BOSONS

