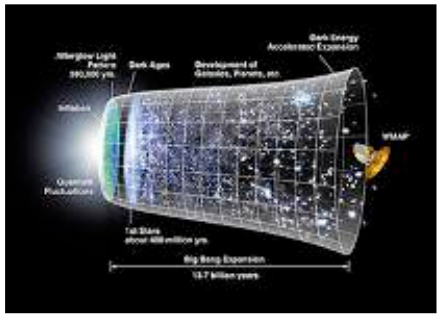
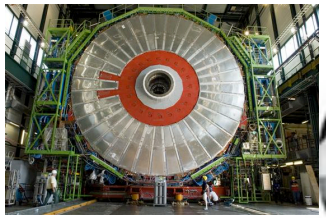
De onderzoeksgroepen

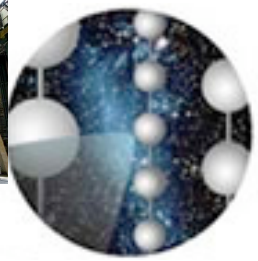
Vakgroep Natuurkunde

String theory



Elementaire Deeltjes

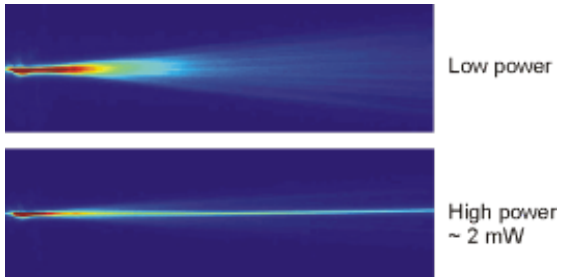


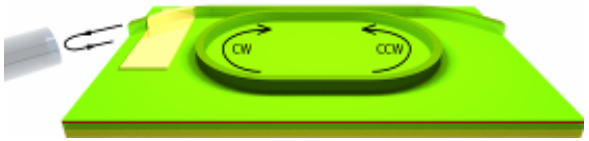


Astrofysica

Observationele sterrenkunde

Dynamics in Photonic Systems



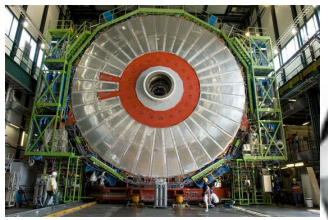


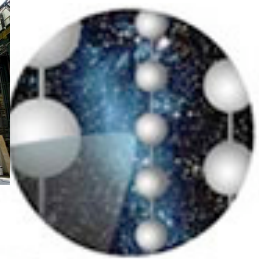
Theoretische Wiskunde - Natuurkunde

De onderzoeksgroepen

Vakgroep Natuurkunde

Elementaire Deeltjes

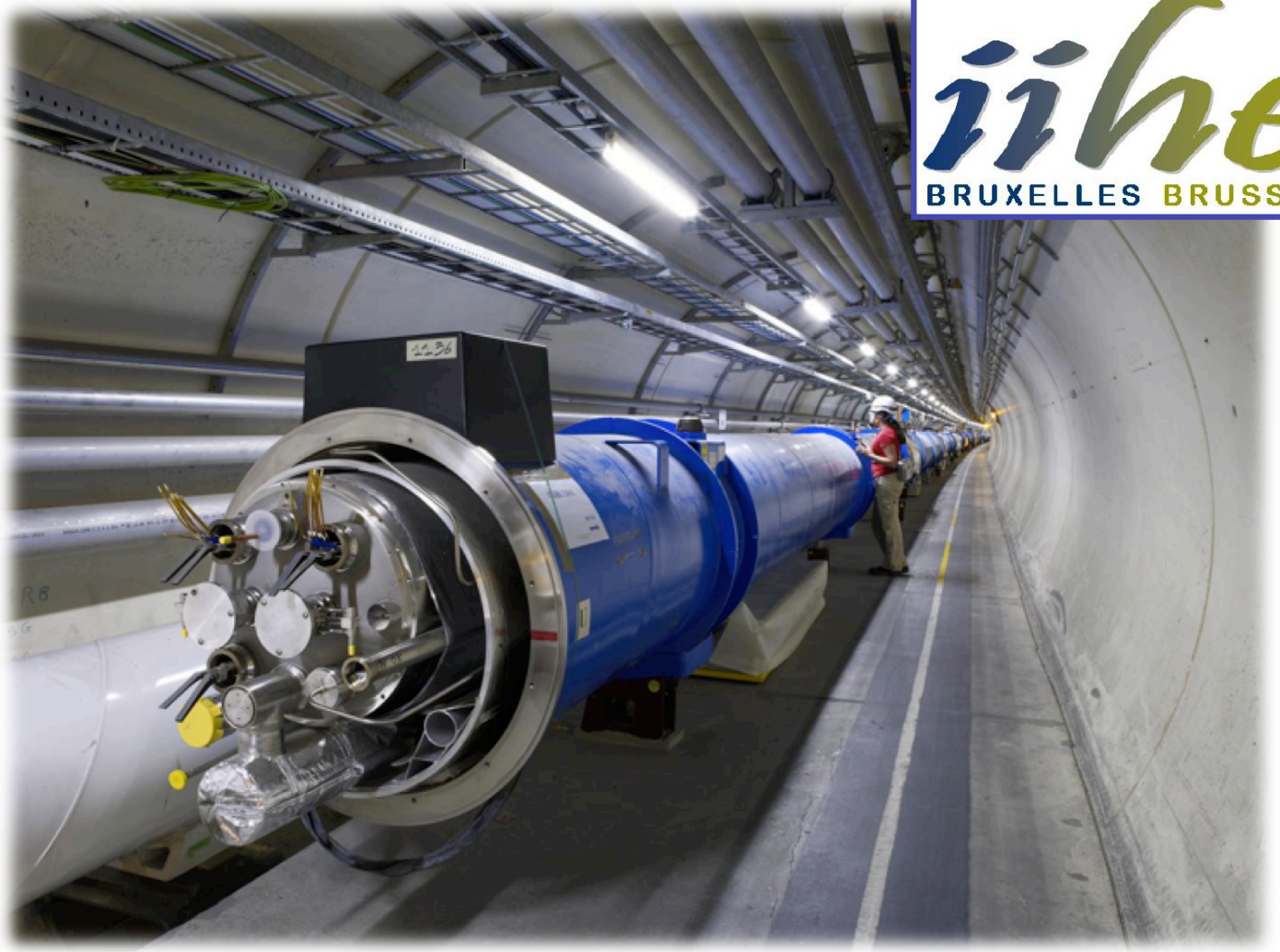




De onderzoeksgroep Elementaire Deeltjes

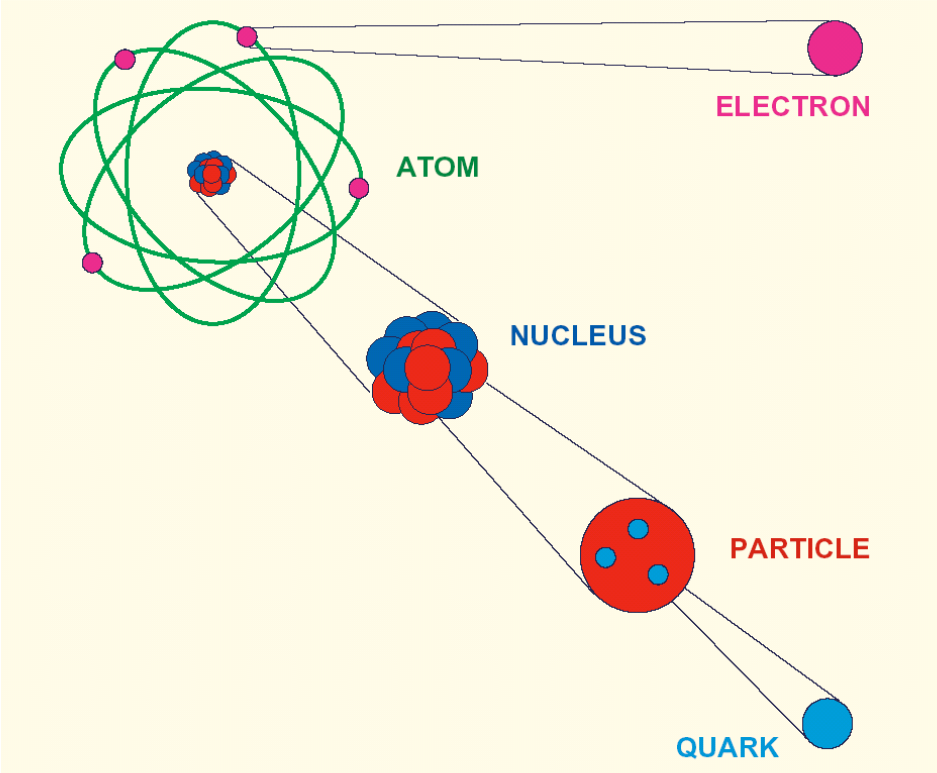
J. Lemonne

C. De Clercq

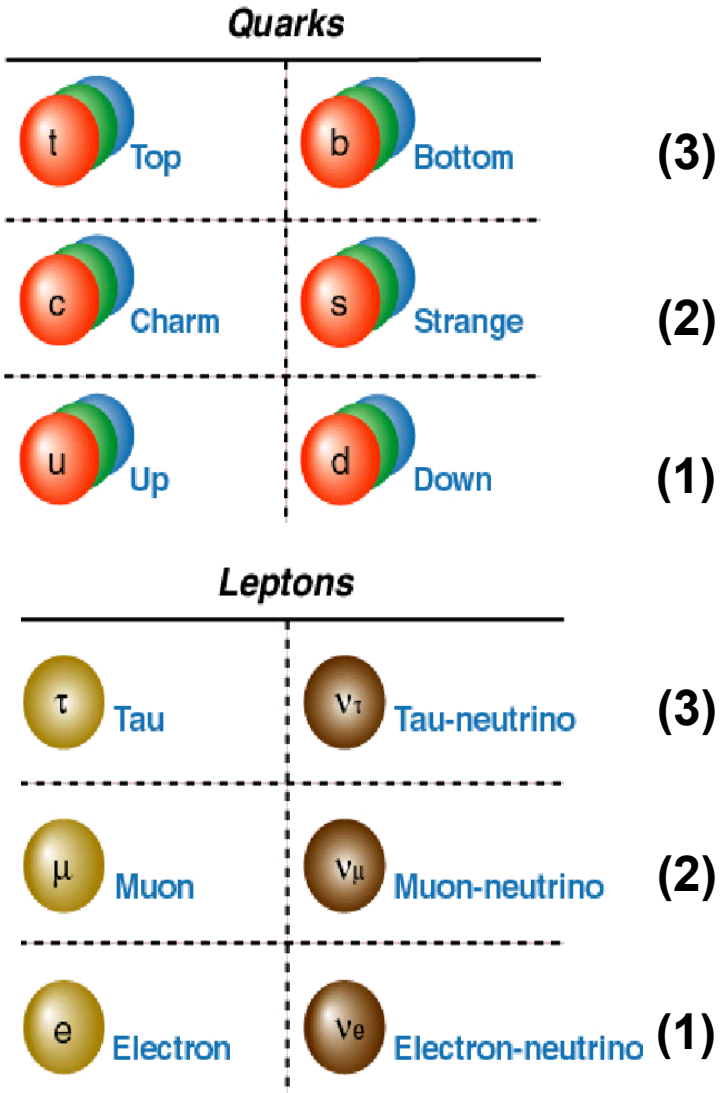


Elementaire bouwstenen
Fundamentele natuurkrachten

Standaard Model van de elementaire deeltjes

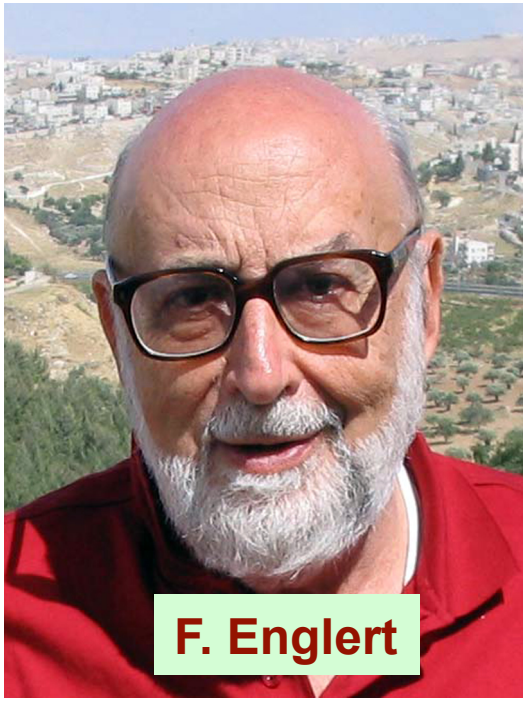


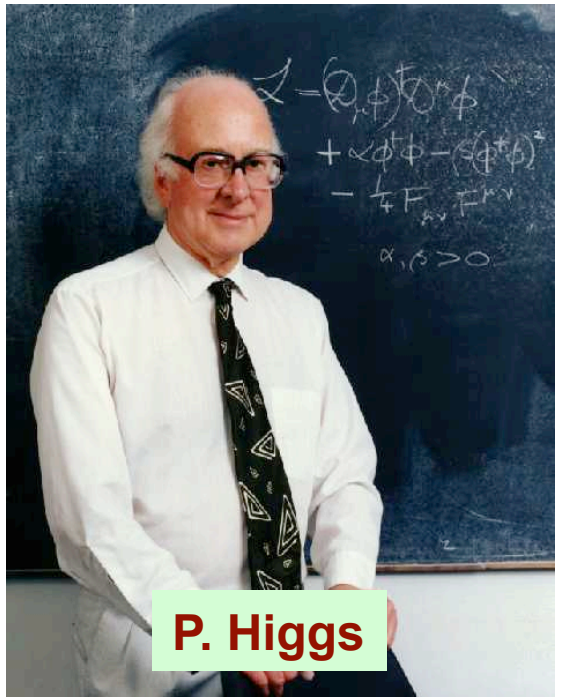
Dit zijn de bouwstenen van alle materie.



Oorsprong van de massa in het heelal ?
Waarom lichte, waarom zware deeltjes?

Brout-Englert-Higgs mechanisme (anno 1964)



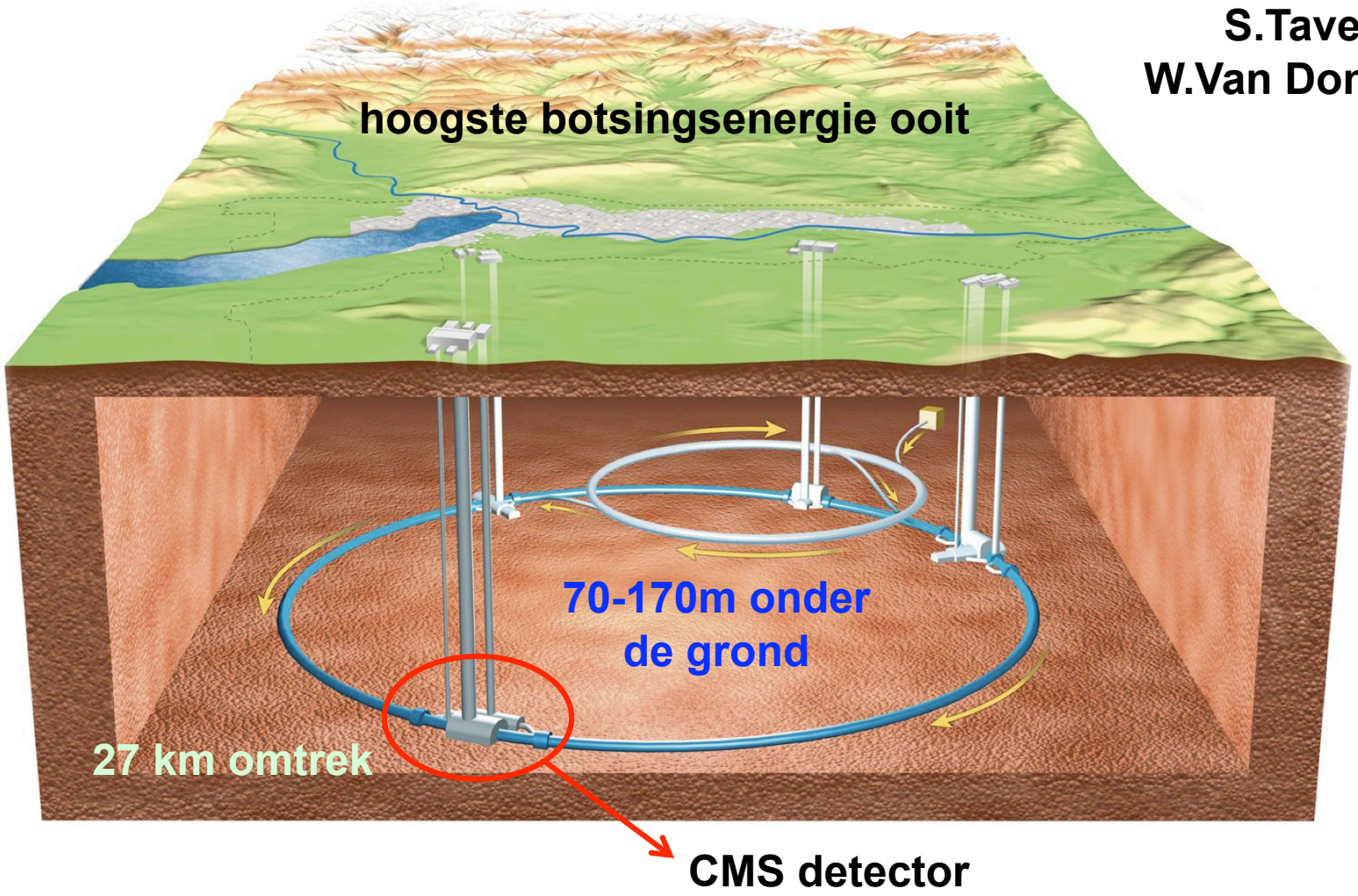


“Higgs boson”
werd nog nooit waargenomen

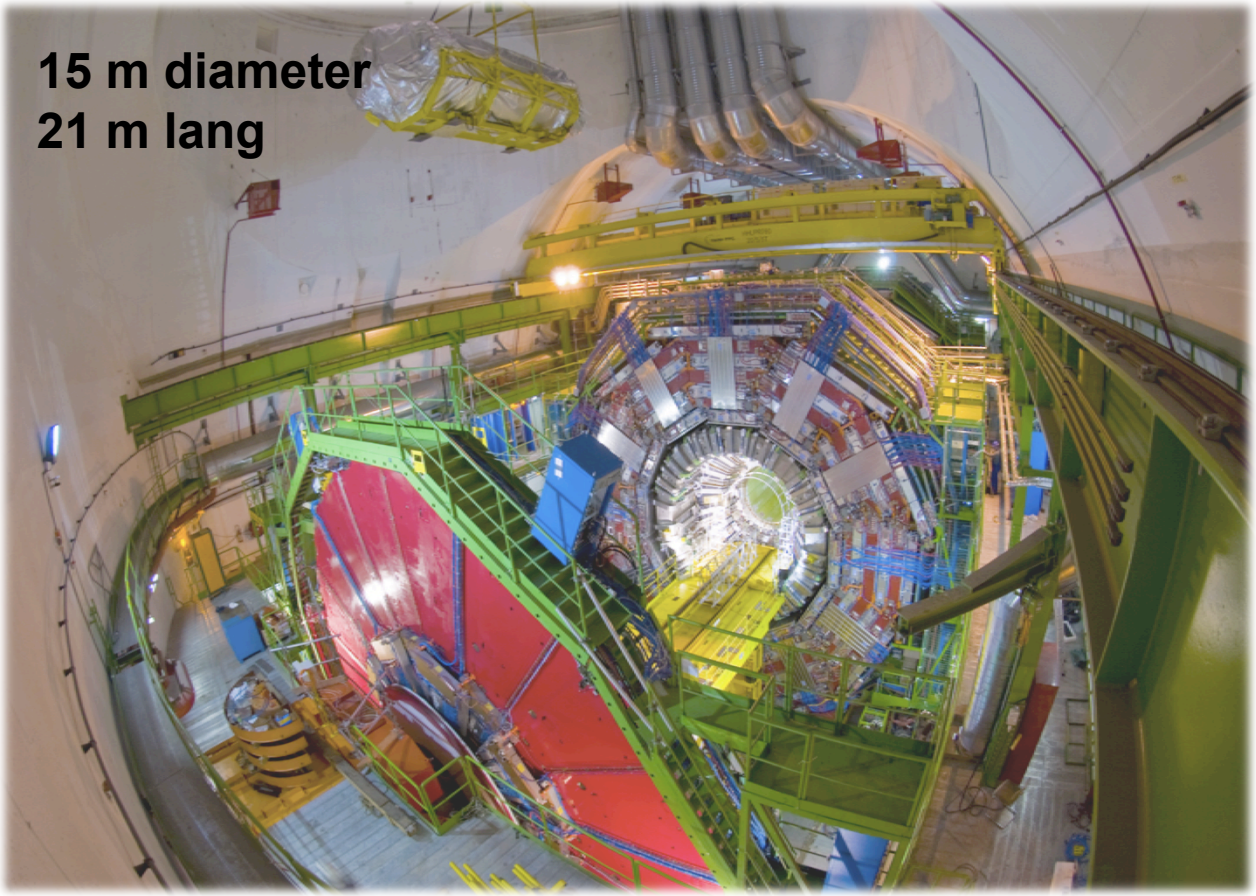
LHC (proton versneller) te CERN in Genève

Large Hadron Collider

J.D'Hondt
R.Roosen
S.Tavernier
W.Van Doninck

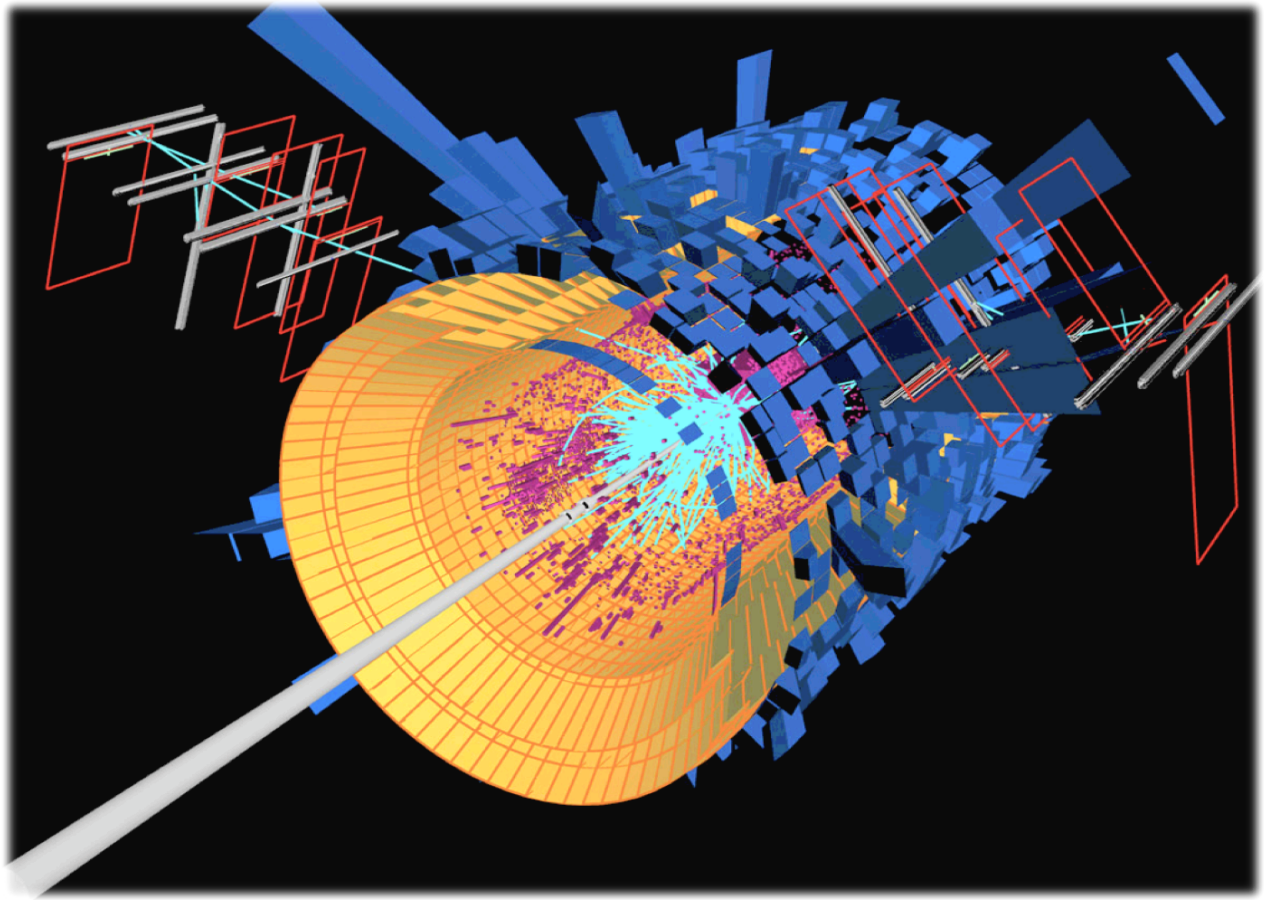


CMS (detector) : 3600 medewerkers - 183 instituten - 38 landen
Compact Muon Solenoid



Miljoenen botsingen per seconde

CMS (detector)
Compact Muon Solenoid



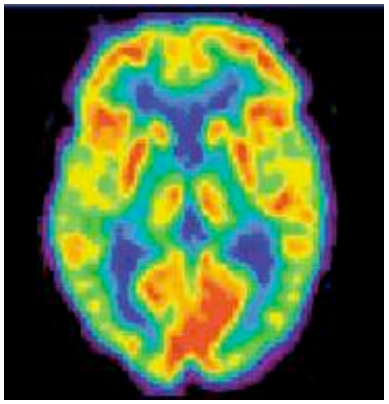
Analyse van miljoenen uitleeskanalen per botsing

De onderzoeksgroep Elementaire Deeltjes

IceCube

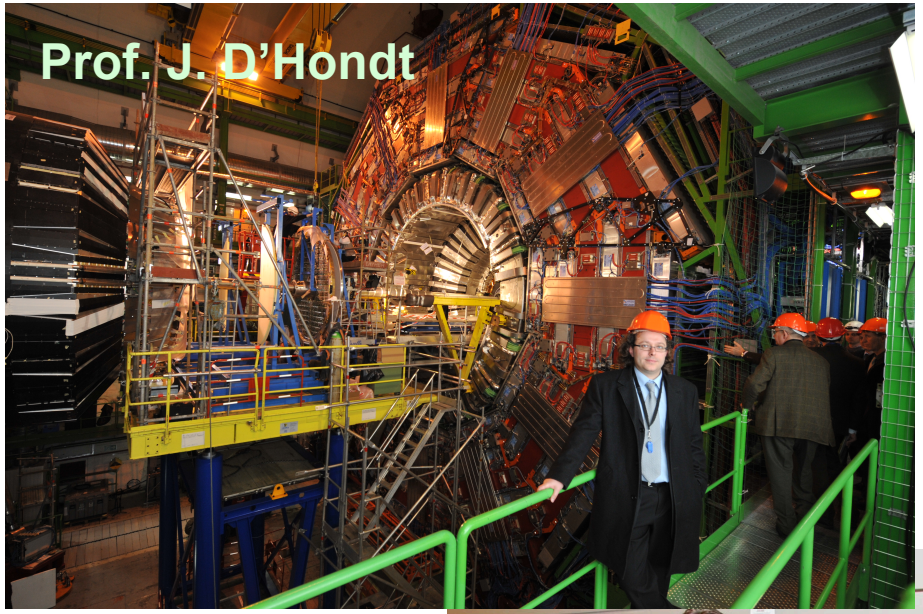
C.De Clercq
N.Van Eyndhoven

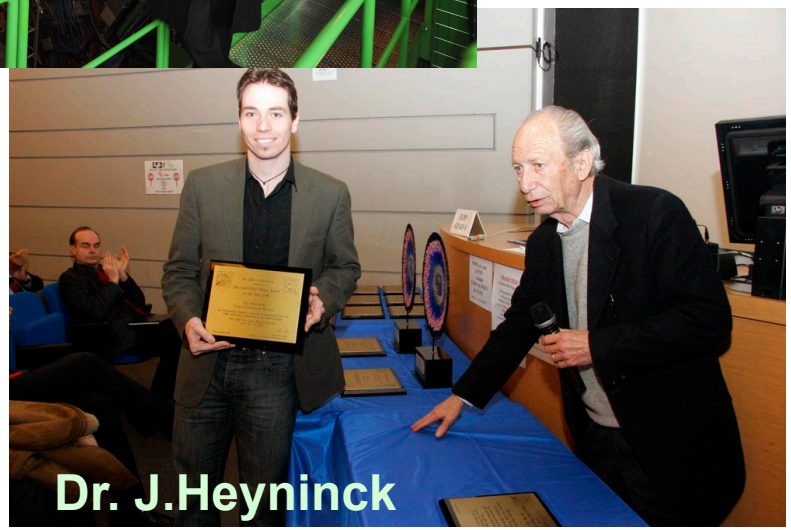
Medische fysica en PET scanners



S.Tavernier
P.Bruyndonckx

Belang en verdiensten





- Sinds 2000, 2x de "CMS Thesis Award" **naar VUB vorsers (J.Heyninck & S.Lowette)**
- 2 jaar de leiding van de internationale CMS groep (Top Quark fysica) door **Jorgen D'Hondt**

De onderzoeksgroep Elementaire Deeltjes

Recent hoog bezoek te CERN