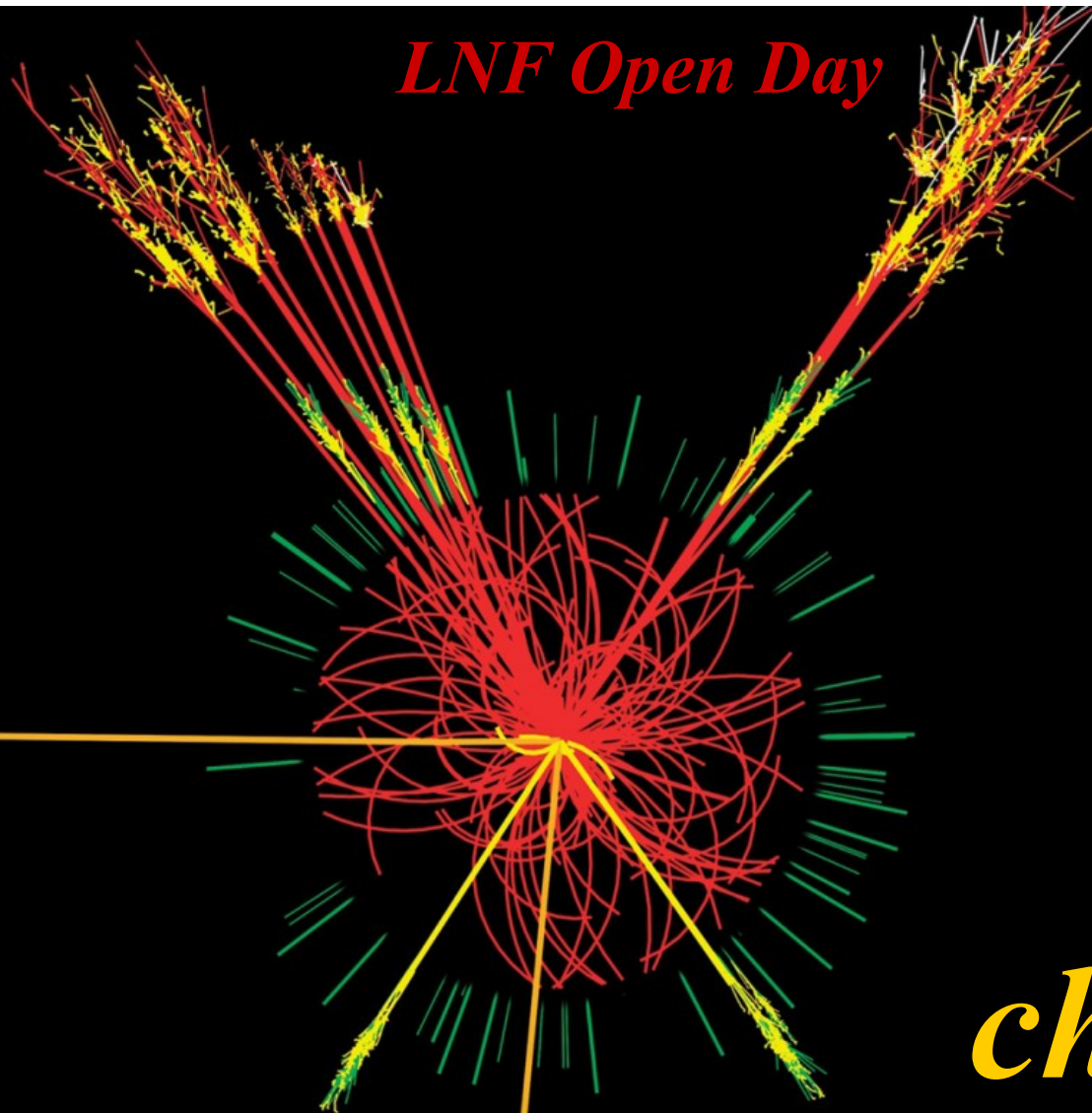


LNF Open Day

22 aprile 2013



*Ma a
che serve il
bosone di Higgs?*

Barbara Sciascia LNF-INFN

Galleggia o non galleggia?



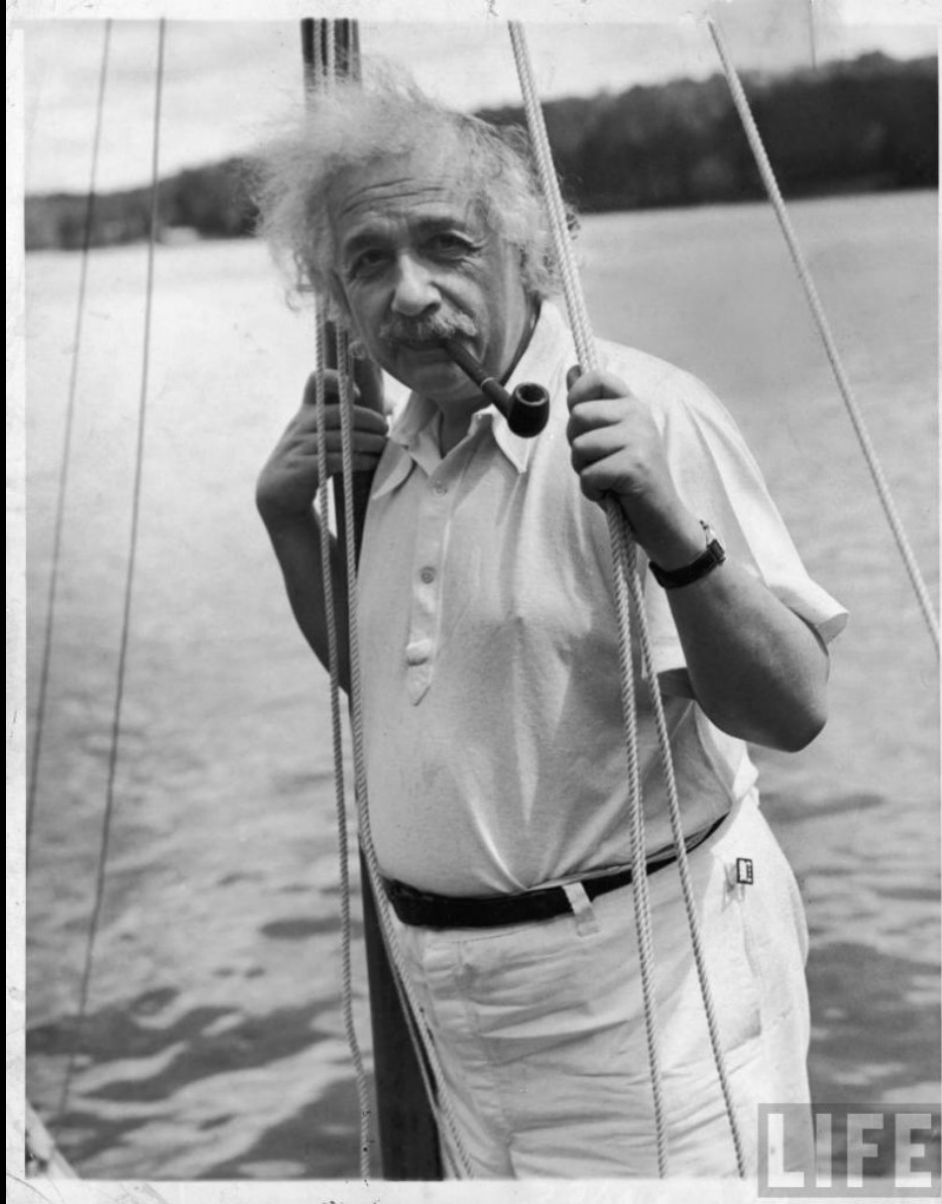
- Barbara Sciascia (INFN) - LNF Open Day, 22 aprile 2013



- Barbara Sciascia (INFN) - LNF Open Day, 22 aprile 2013

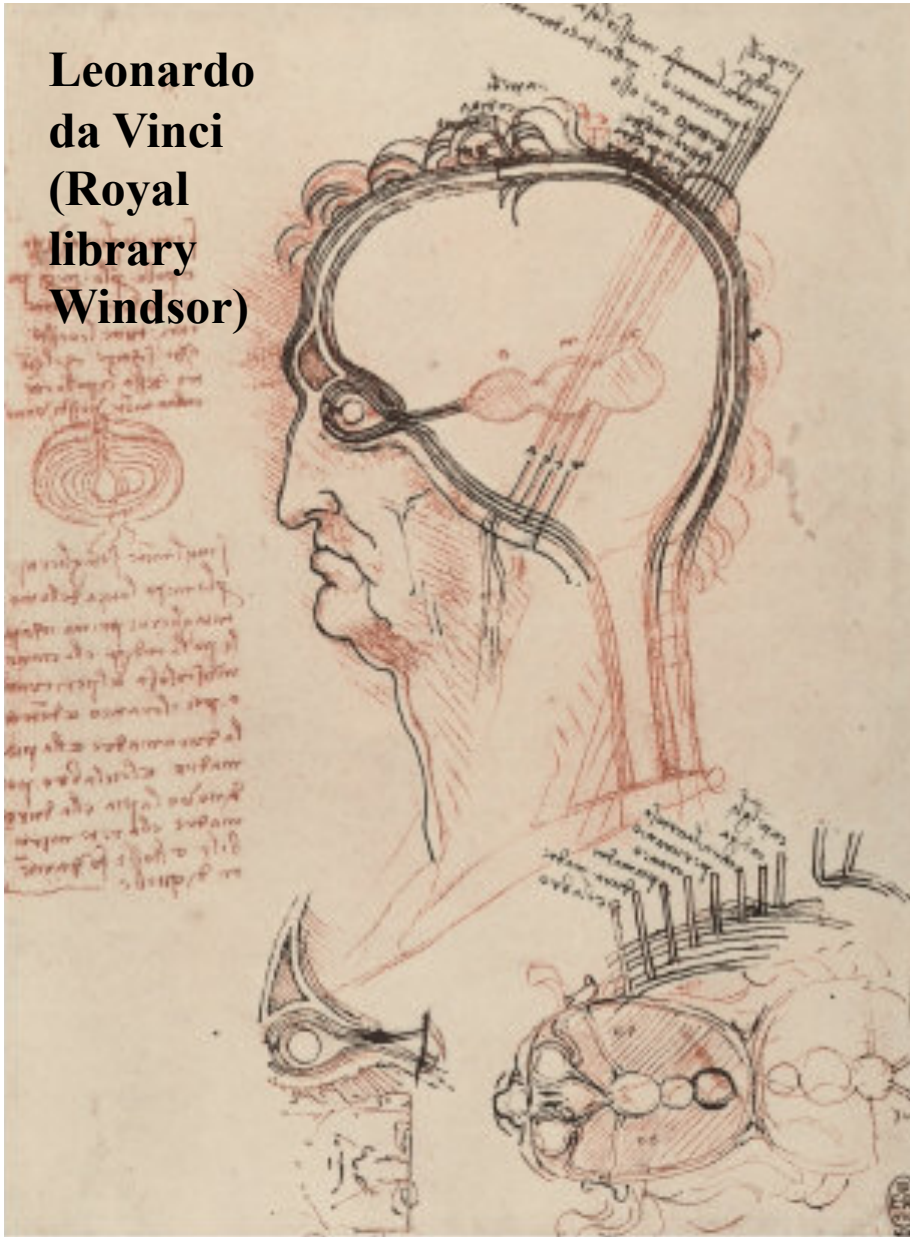


- Barbara Sciascia (INFN) - LNF Open Day, 22 aprile 2013



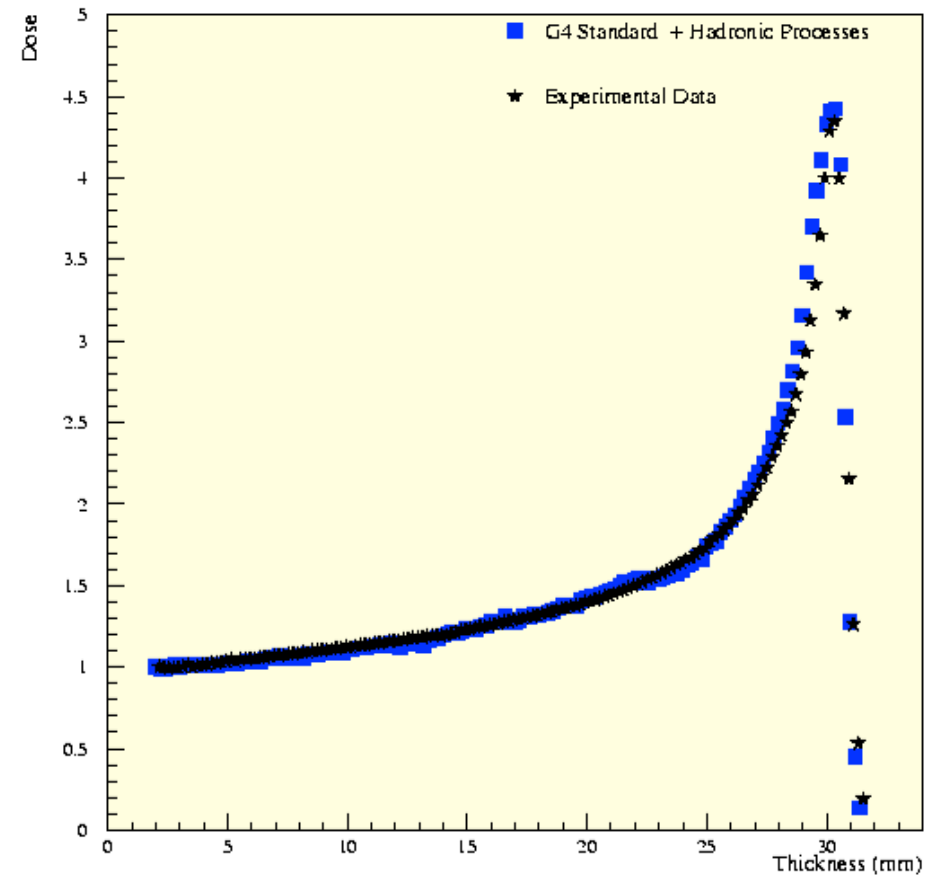
*Sono solo un
uomo curioso...*

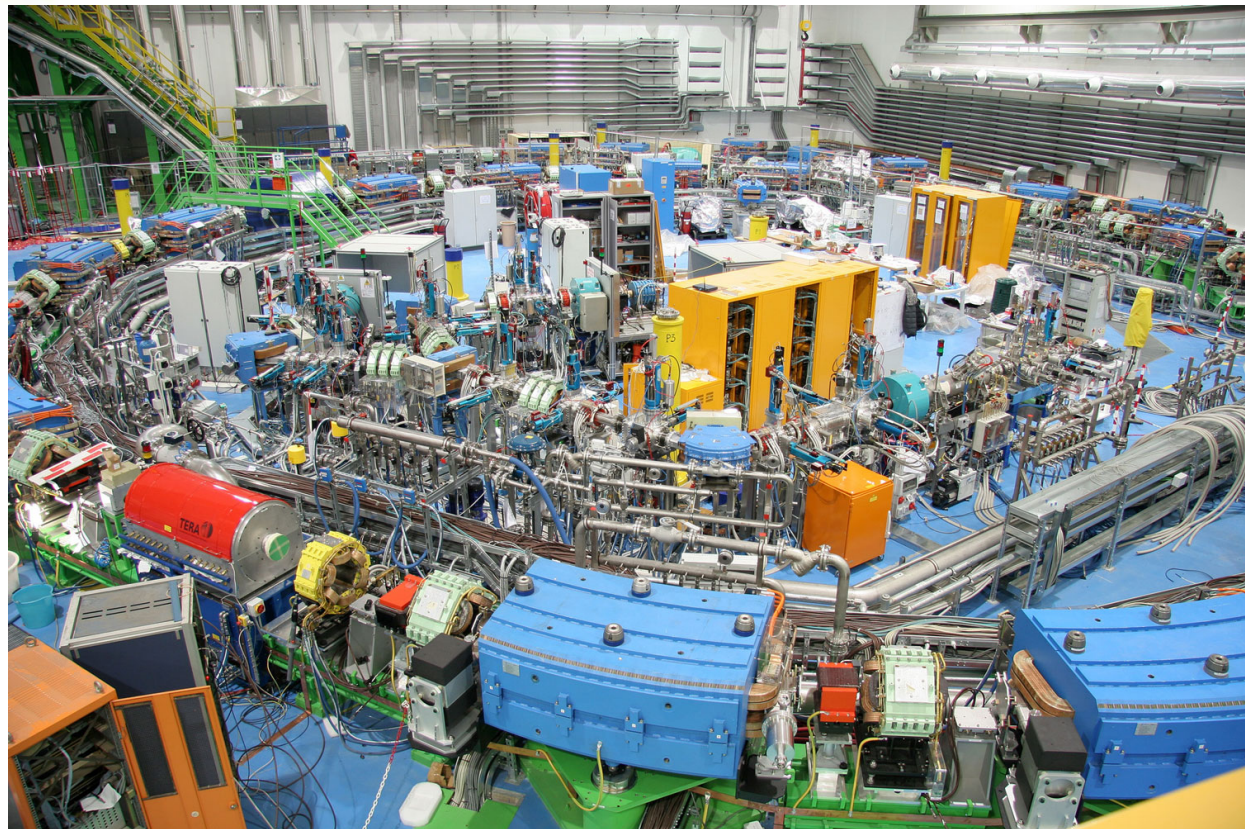
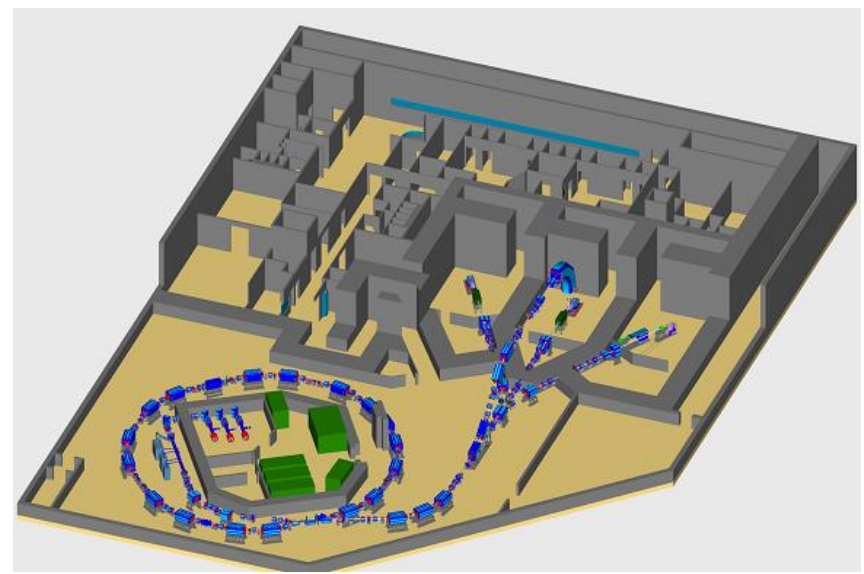
Leonardo
da Vinci
(Royal
library
Windsor)



Ostinatamente curiosi...

Protons - Bragg Peak - Water

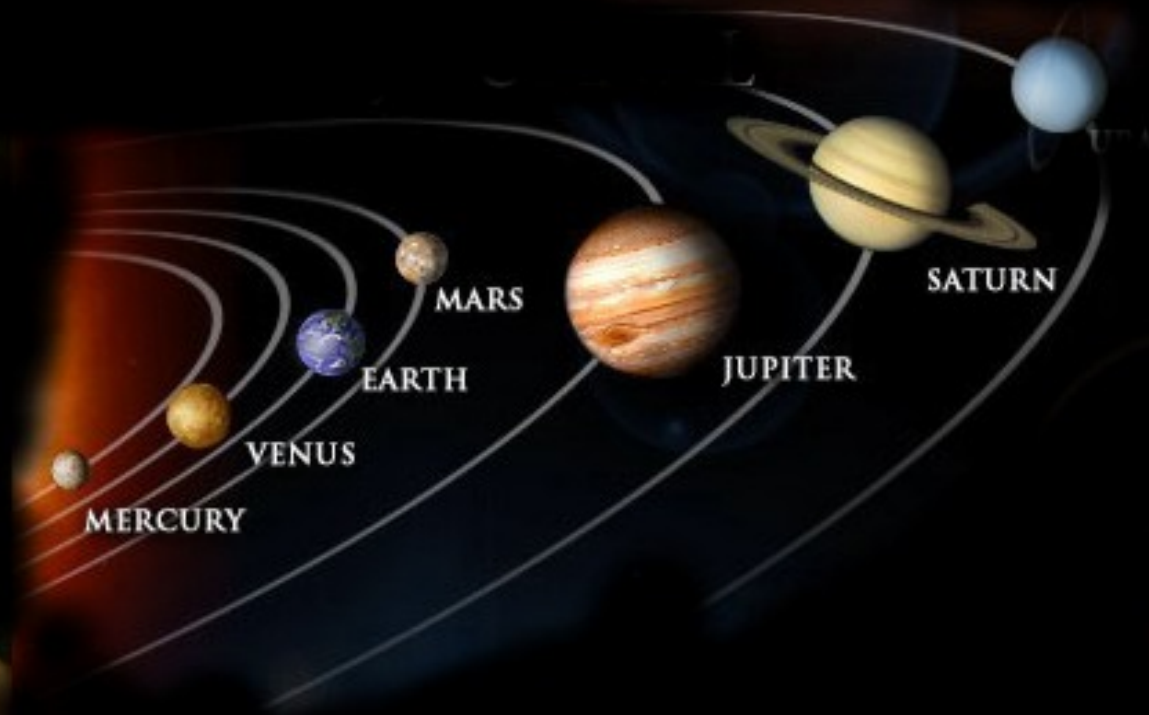




Tycho Brahe

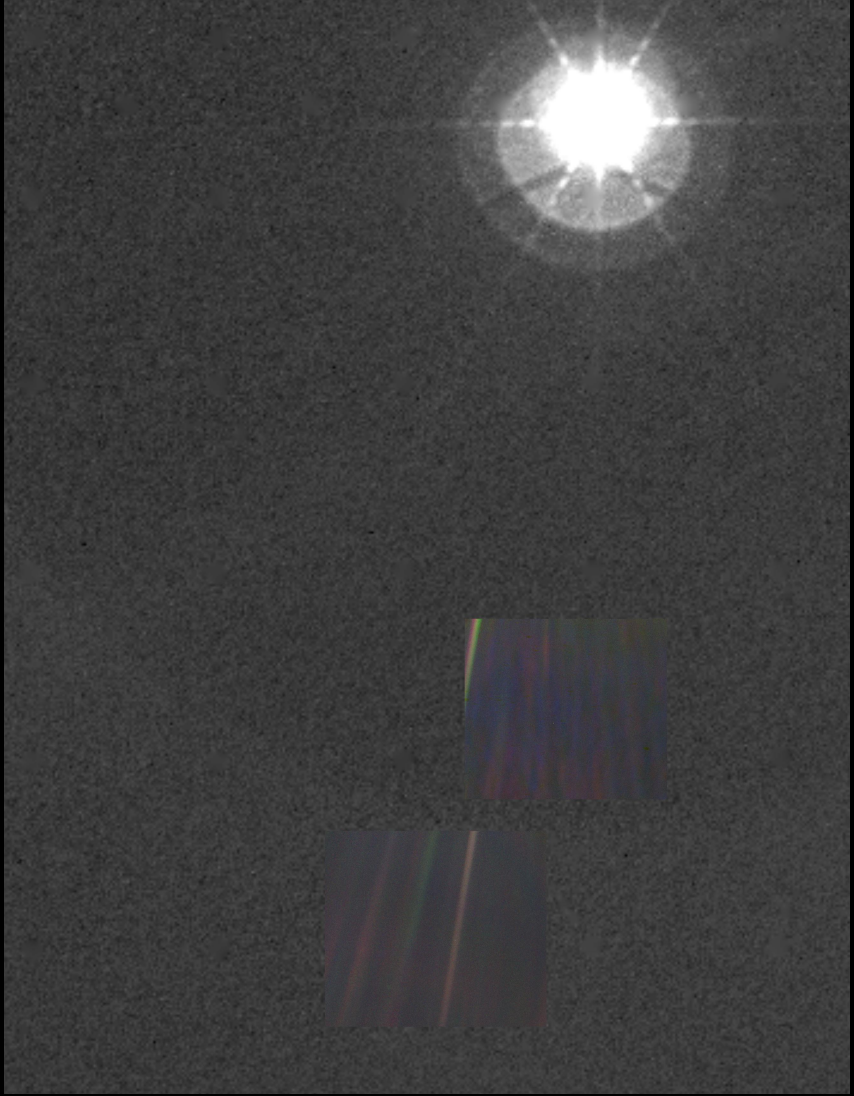
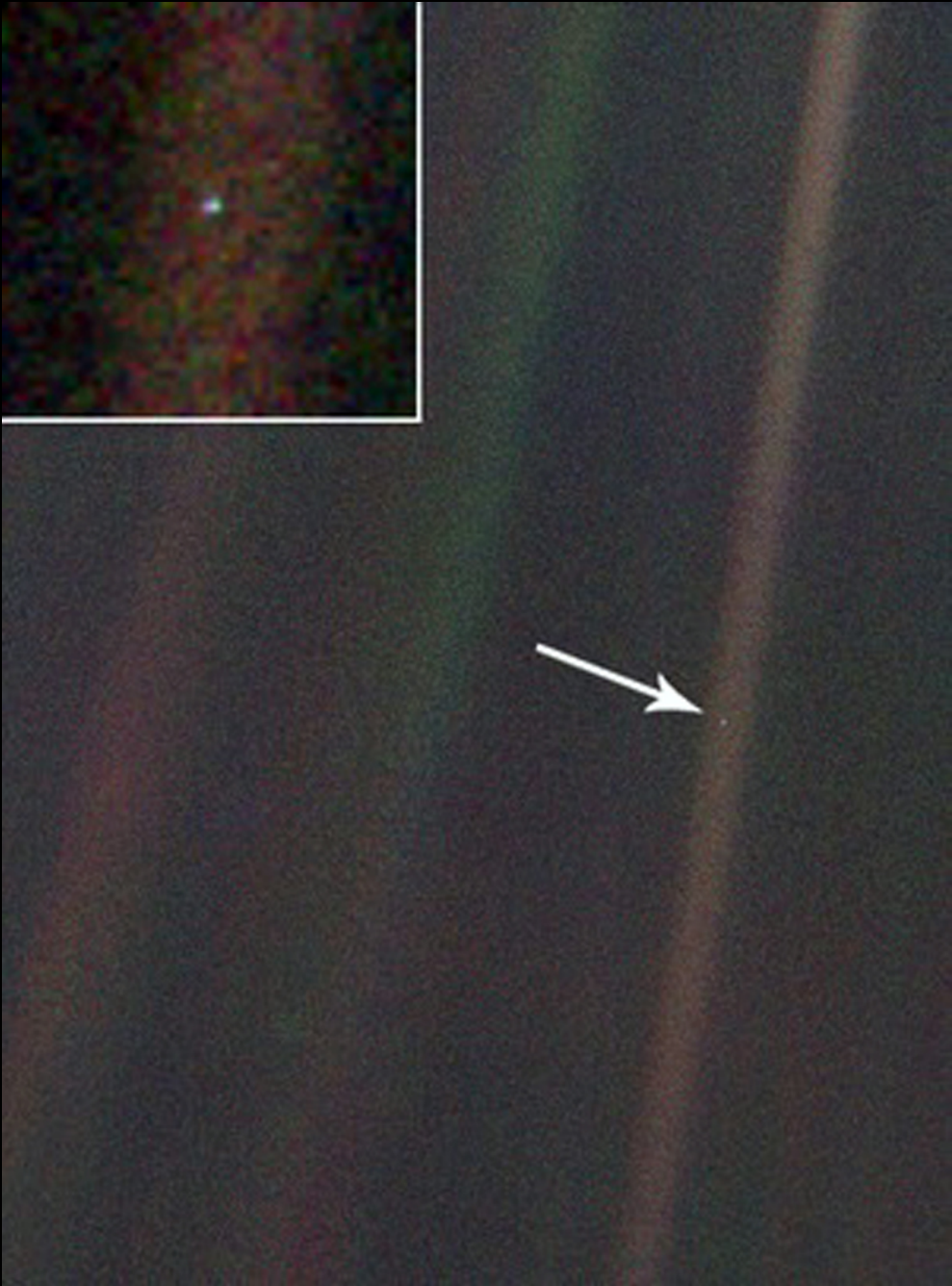


Johannes Kepler





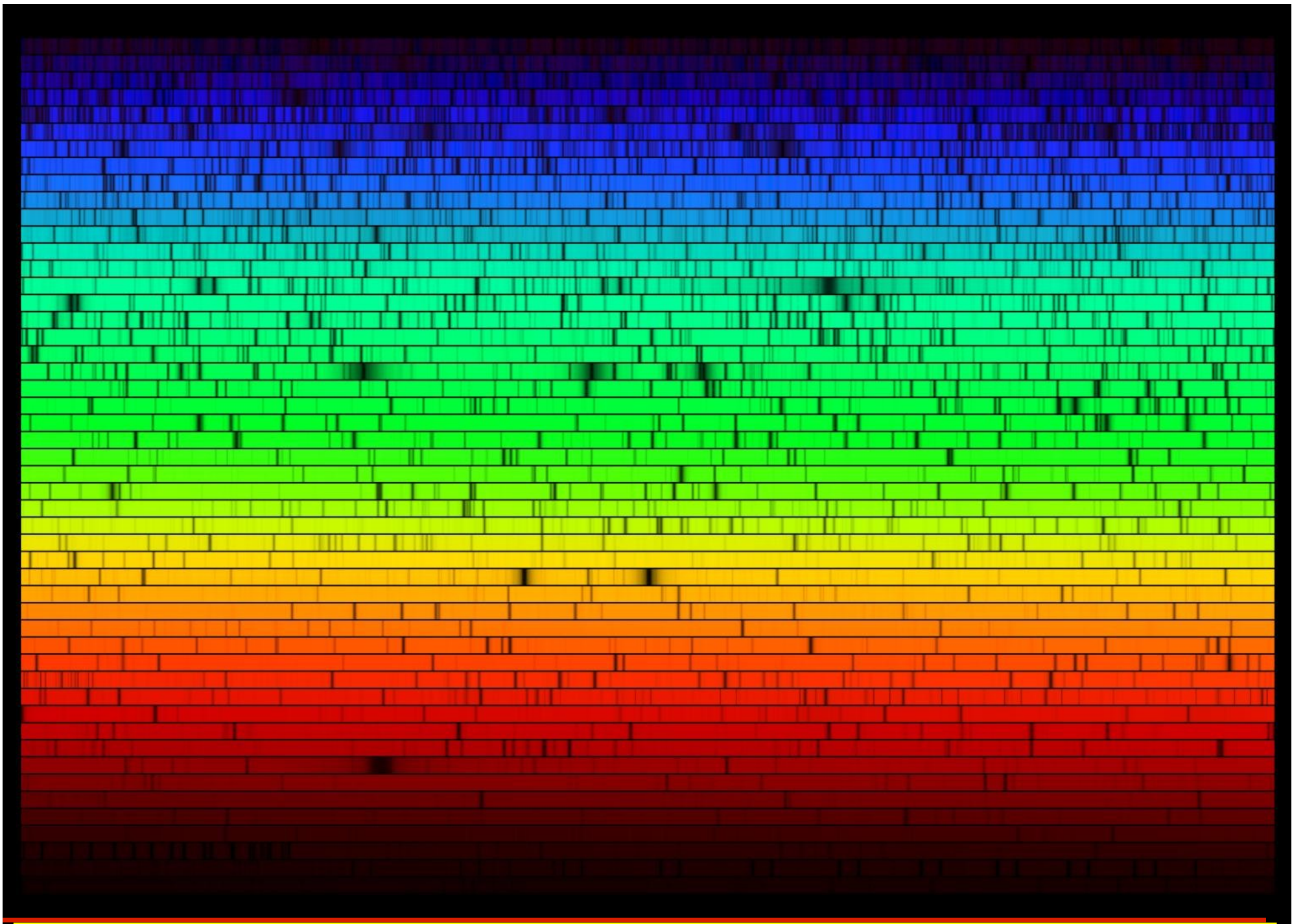
Newton



Tra teoria ed esperimento









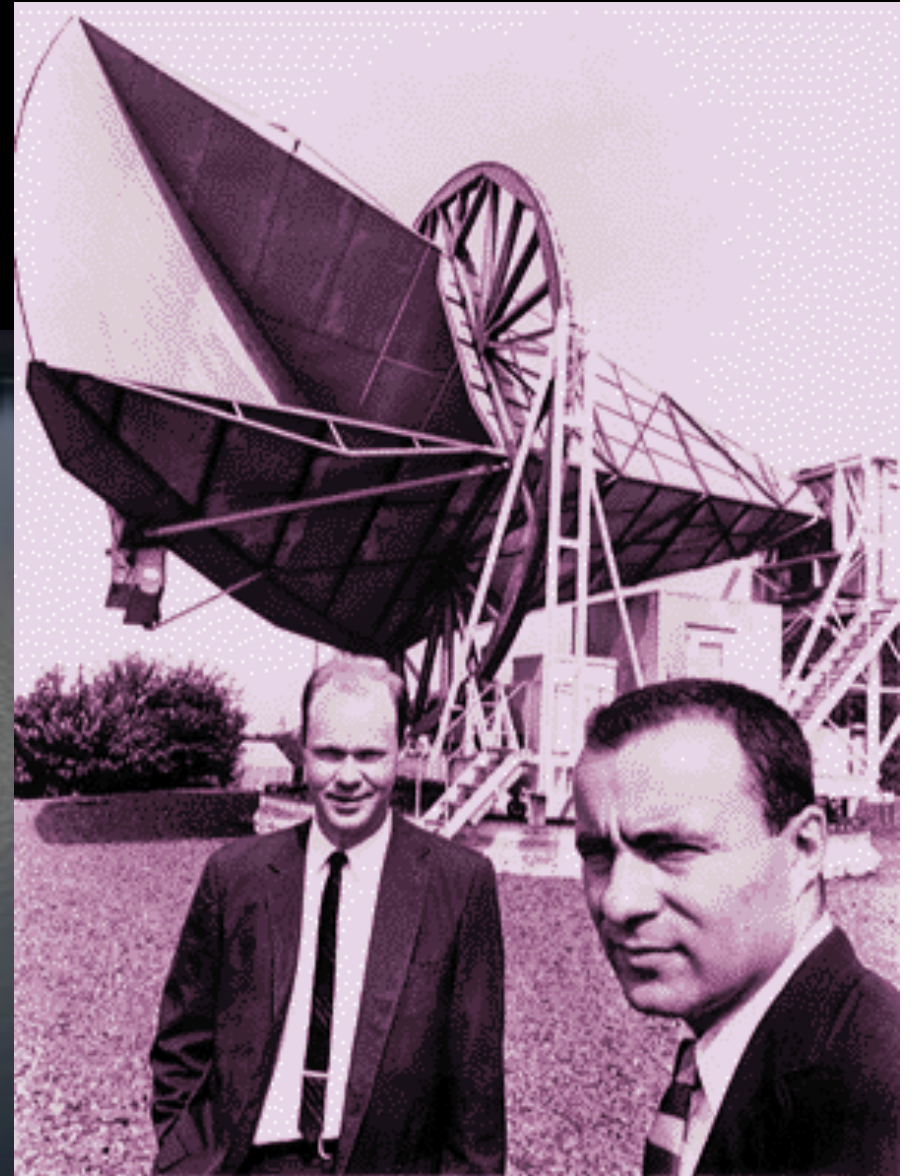
- Barbara Sciascia (INFN) - LNF Open Day, 22 aprile 2013

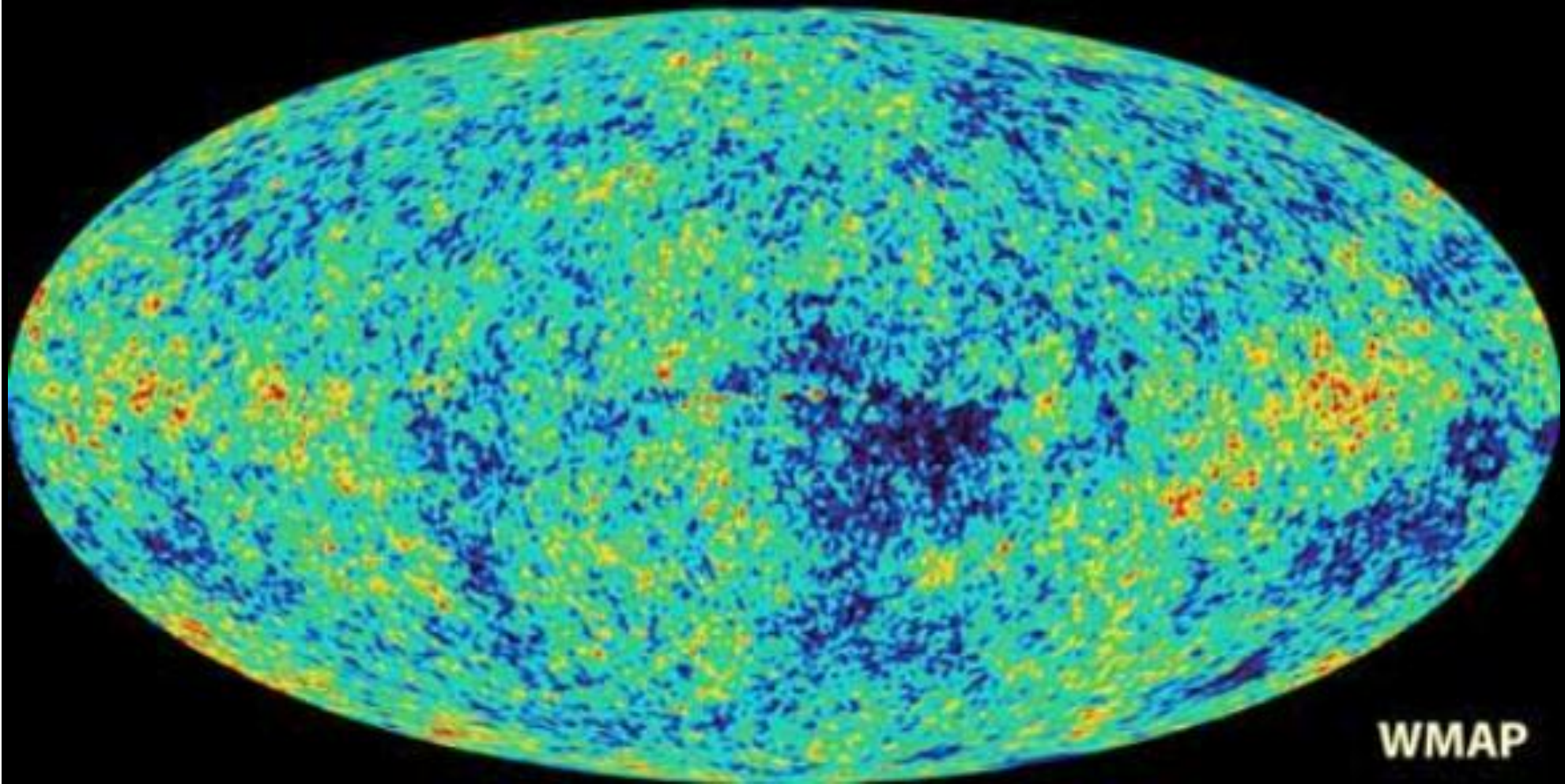


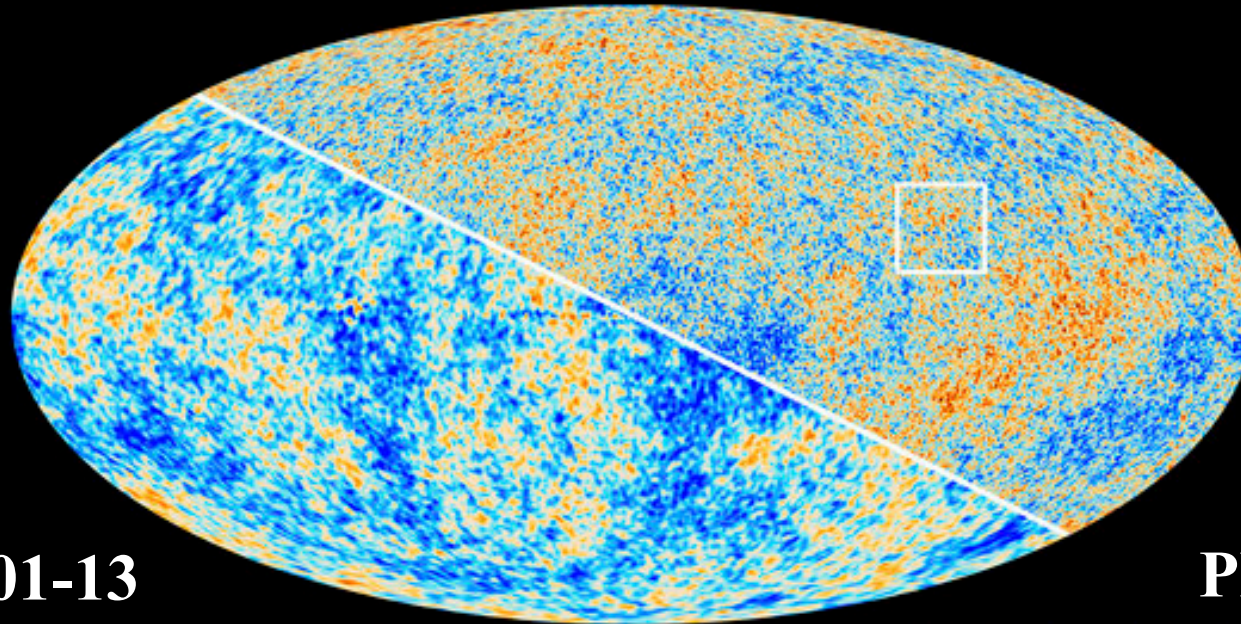
Hubble e Leavitt

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Arno Penzias e Robert Wilson

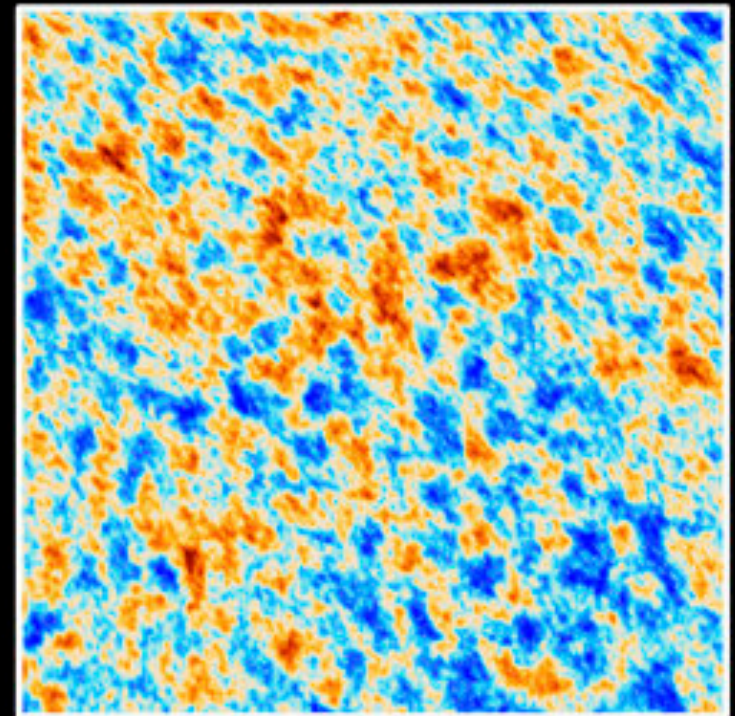
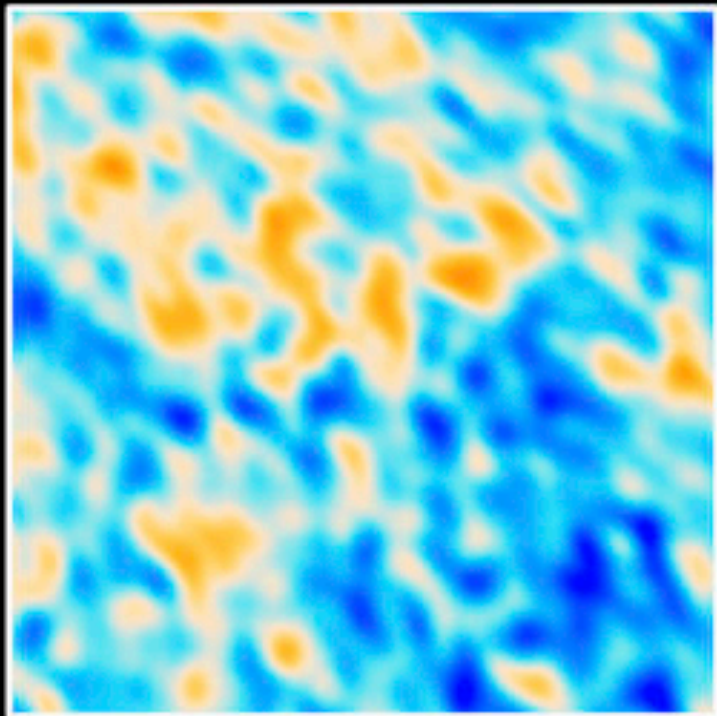


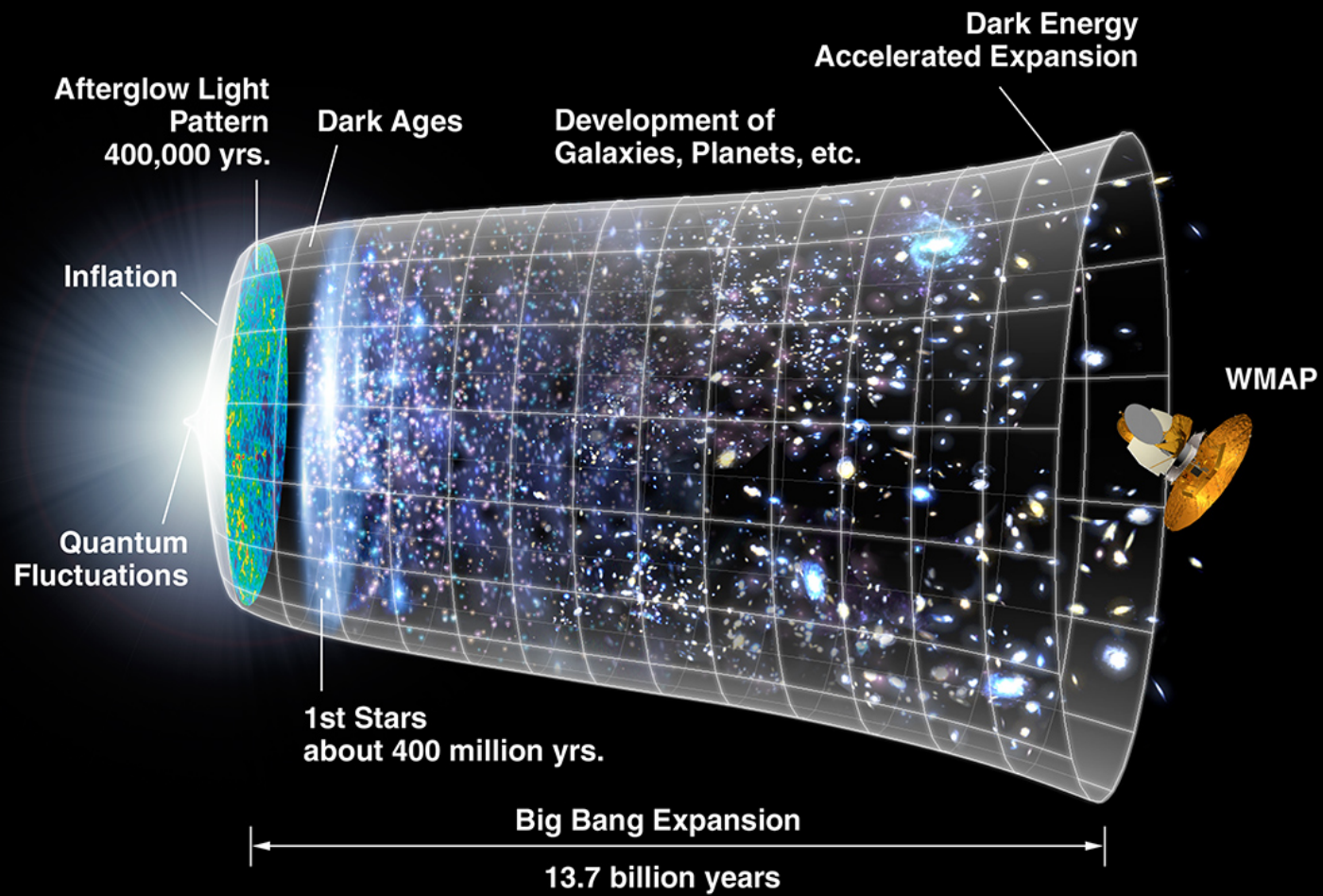




WMAP, 2001-13

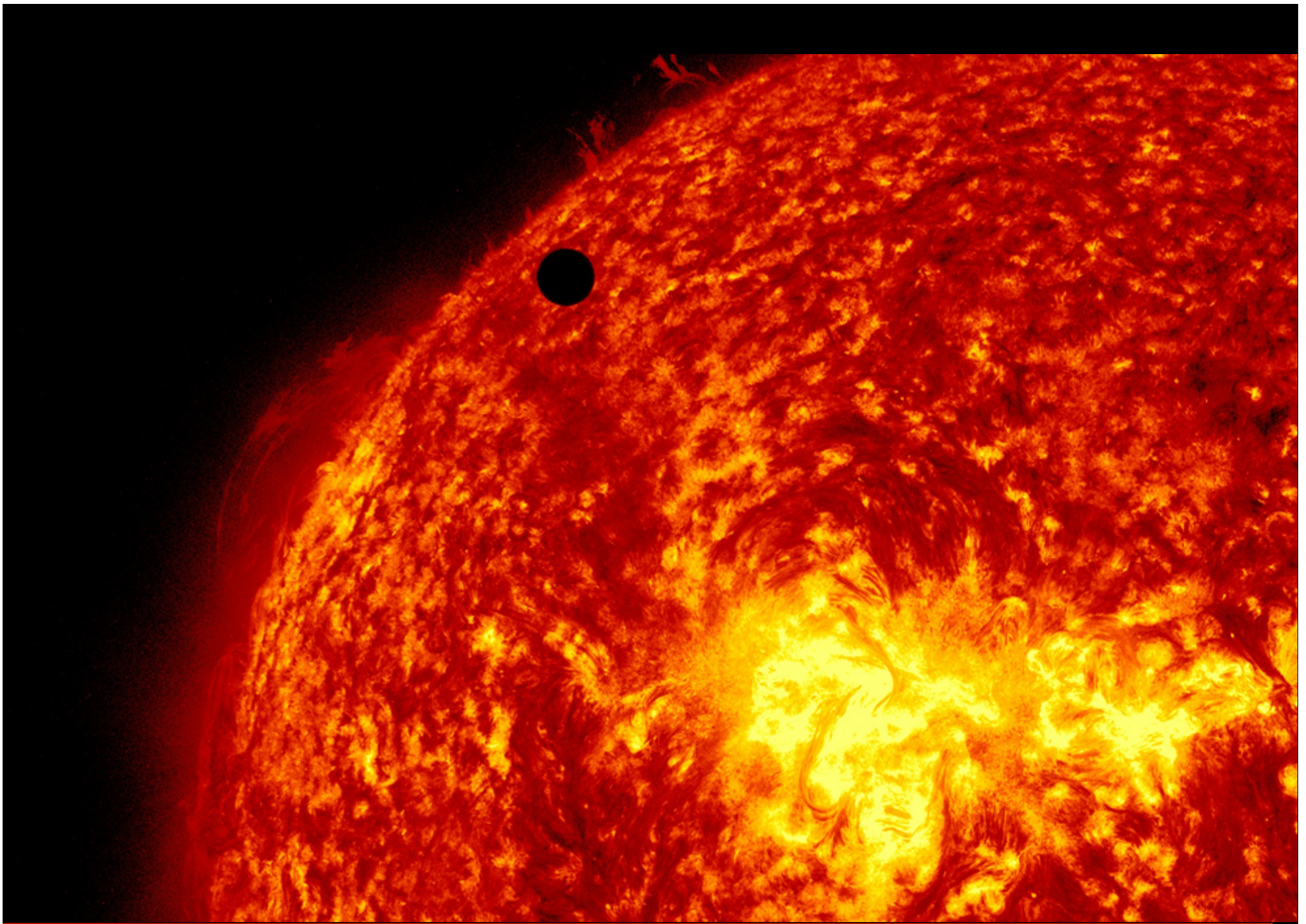
Planck, 2013





NASA/WMAP Science Team

<p>1968: SLAC</p> <p><i>u</i></p> <p>up quark</p>	<p>1974: Brookhaven & SLAC</p> <p><i>c</i></p> <p>charm quark</p>	<p>1995: Fermilab</p> <p><i>t</i></p> <p>top quark</p>	<p>1979: DESY</p> <p><i>g</i></p> <p>gluon</p>
<p>1968: SLAC</p> <p><i>d</i></p> <p>down quark</p>	<p>1947: Manchester University</p> <p><i>s</i></p> <p>strange quark</p>	<p>1977: Fermilab</p> <p><i>b</i></p> <p>bottom quark</p>	<p>1923: Washington University*</p> <p>γ</p> <p>photon</p>
<p>1956: Savannah River Plant</p> <p>ν_e</p> <p>electron neutrino</p>	<p>1962: Brookhaven</p> <p>ν_μ</p> <p>muon neutrino</p>	<p>2000: Fermilab</p> <p>ν_τ</p> <p>tau neutrino</p>	<p>1983: CERN</p> <p><i>W</i></p> <p>W boson</p>
<p>1897: Cavendish Laboratory</p> <p><i>e</i></p> <p>electron</p>	<p>1937: Caltech and Harvard</p> <p>μ</p> <p>muon</p>	<p>1976: SLAC</p> <p>τ</p> <p>tau</p>	<p>1983: CERN</p> <p><i>Z</i></p> <p>Z boson</p>

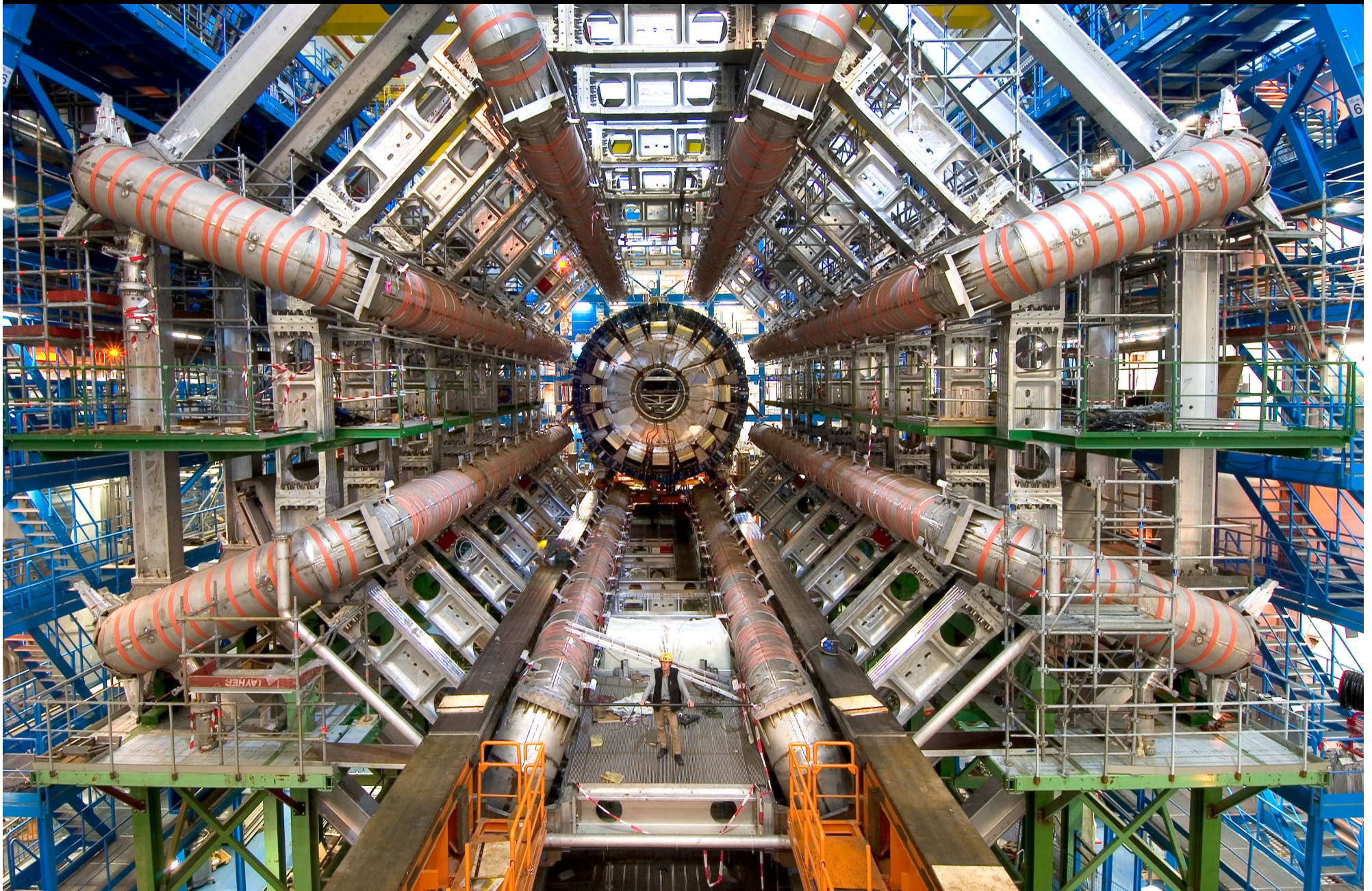


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SAY GOD PARTICLE

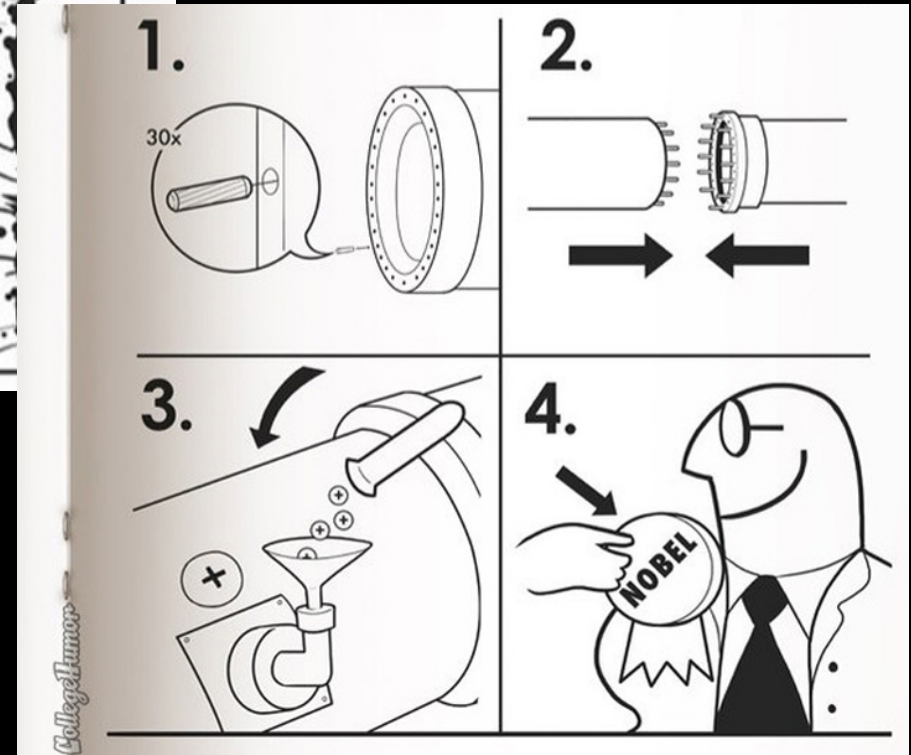
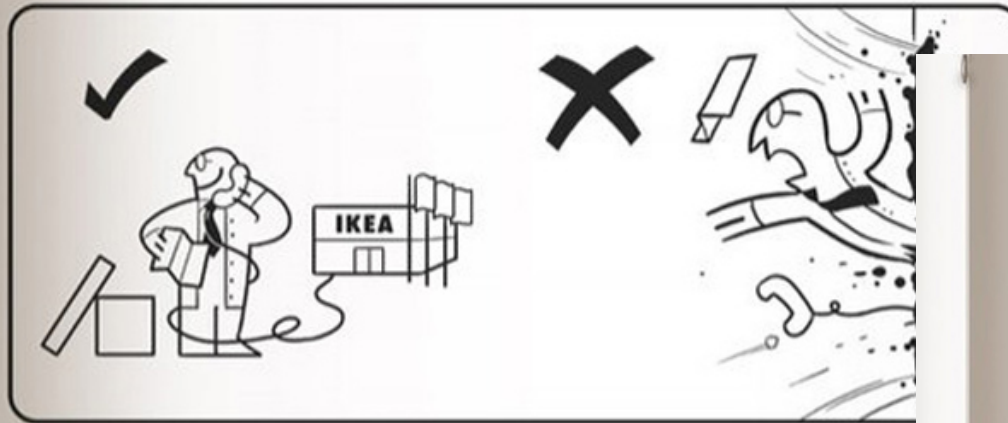
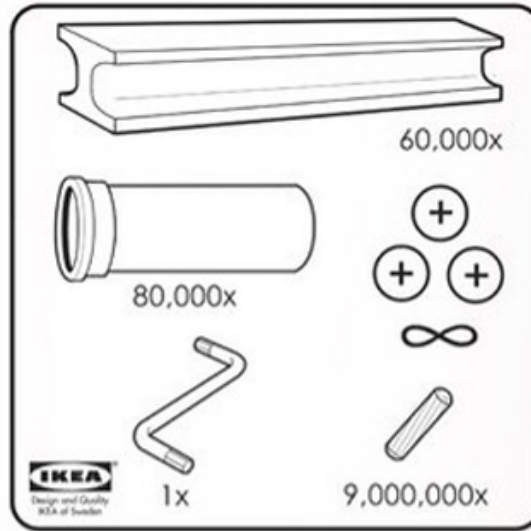
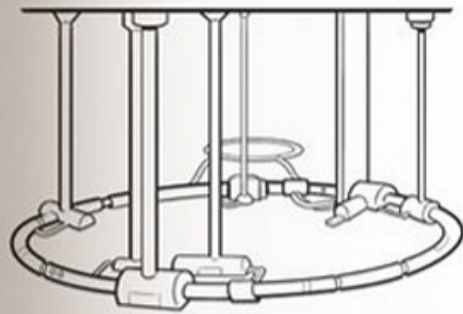


**ONE MORE
GODDAMN TIME**



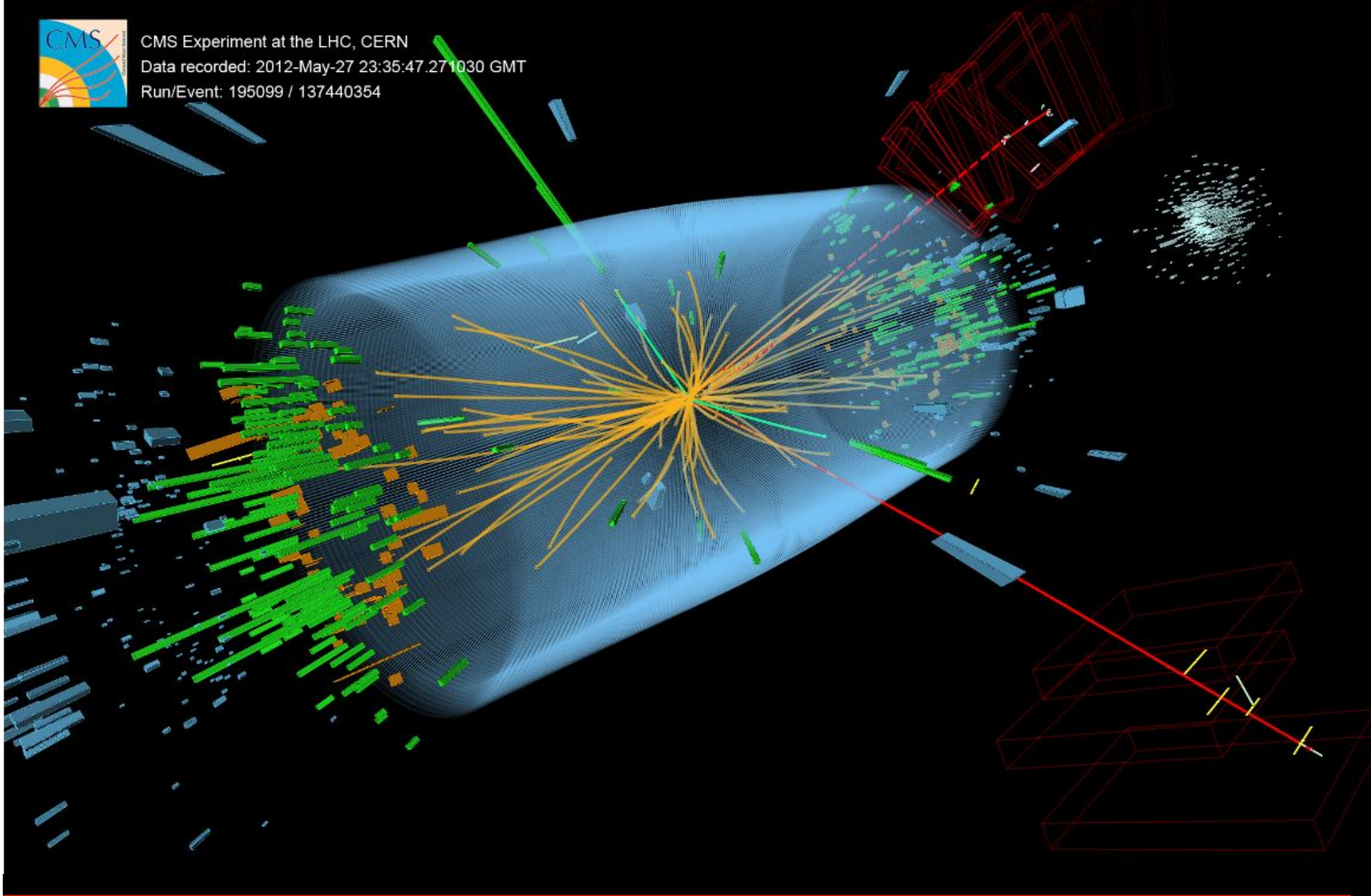
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HÄDRÖNN CJÖLIDDER

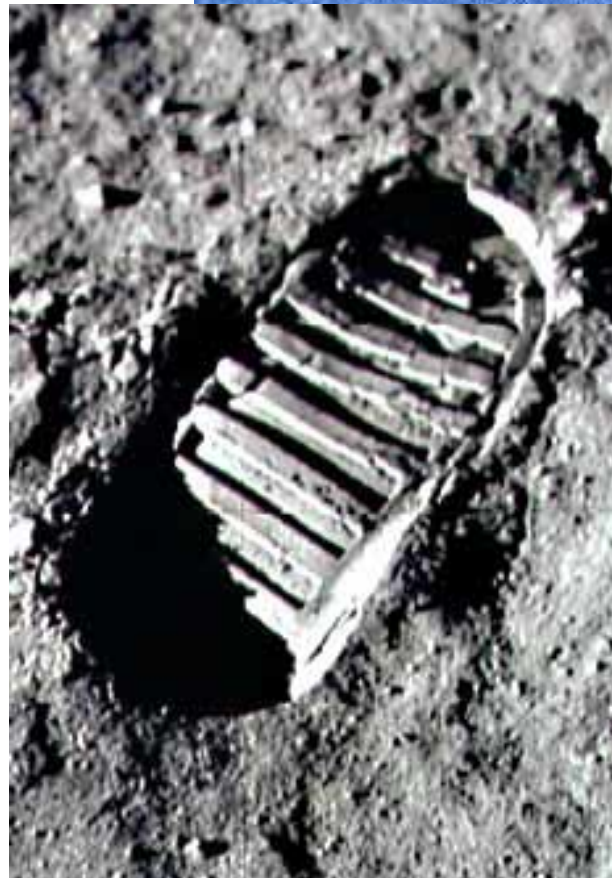
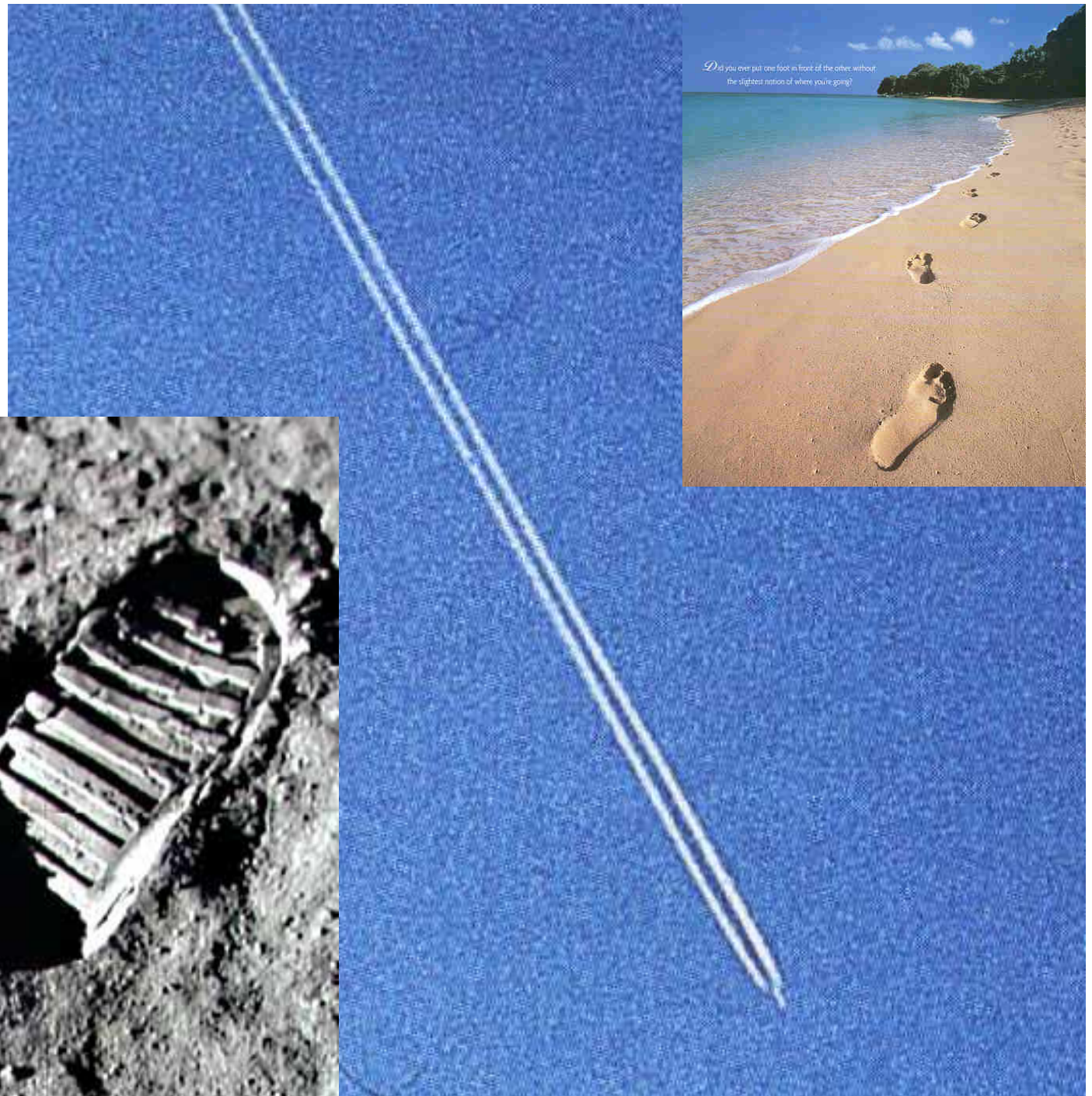




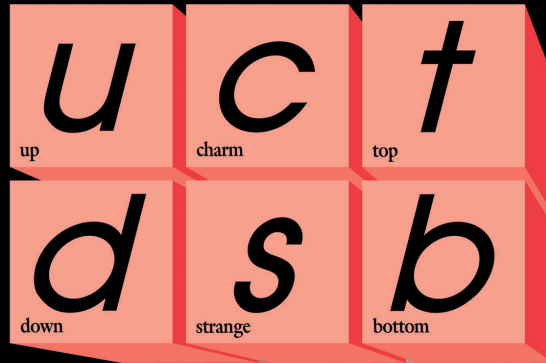
CMS Experiment at the LHC, CERN
Data recorded: 2012-May-27 23:35:47.271030 GMT
Run/Event: 195099 / 137440354



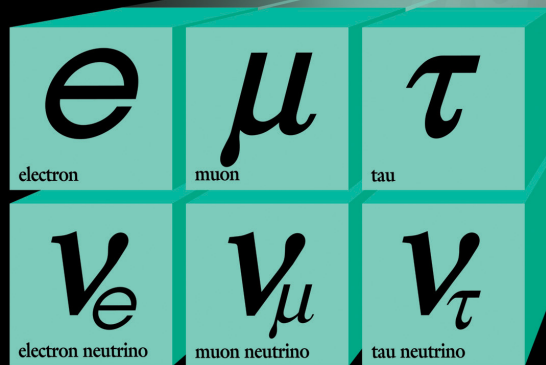
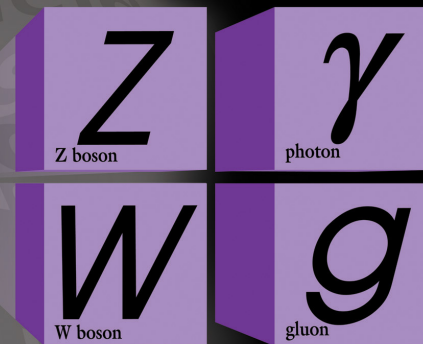
Rivelatori: alla ricerca di tracce...



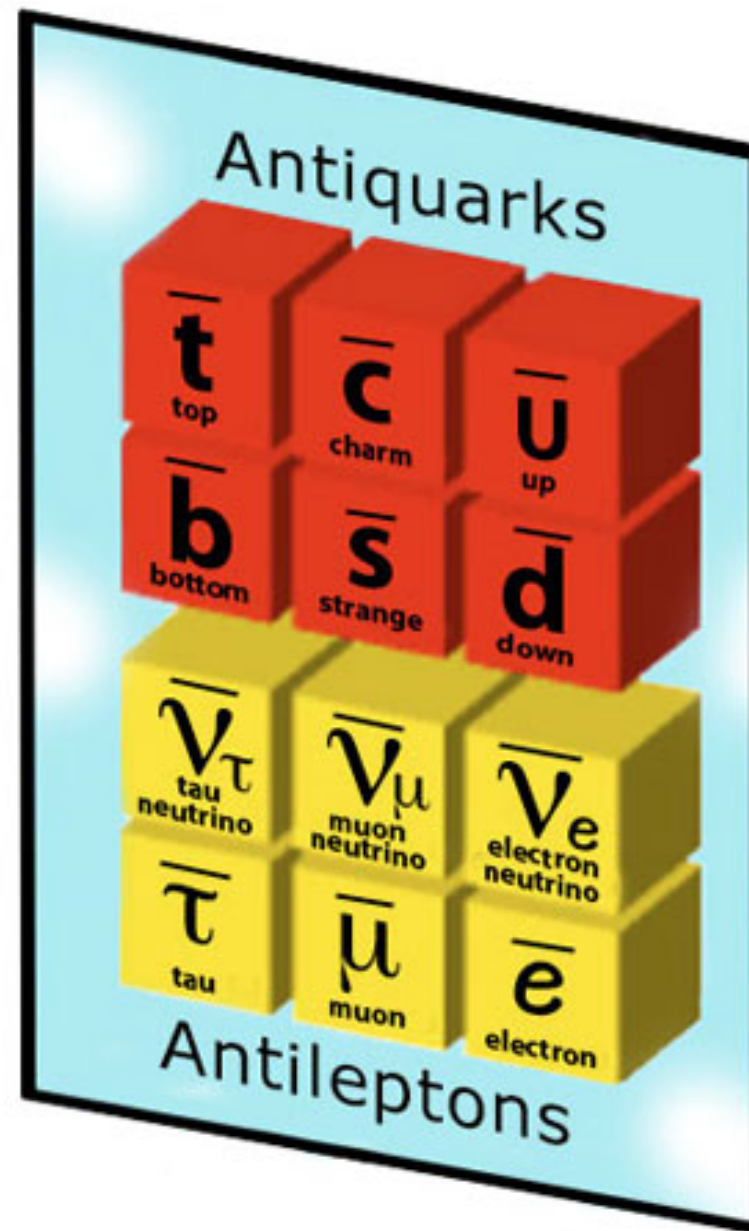
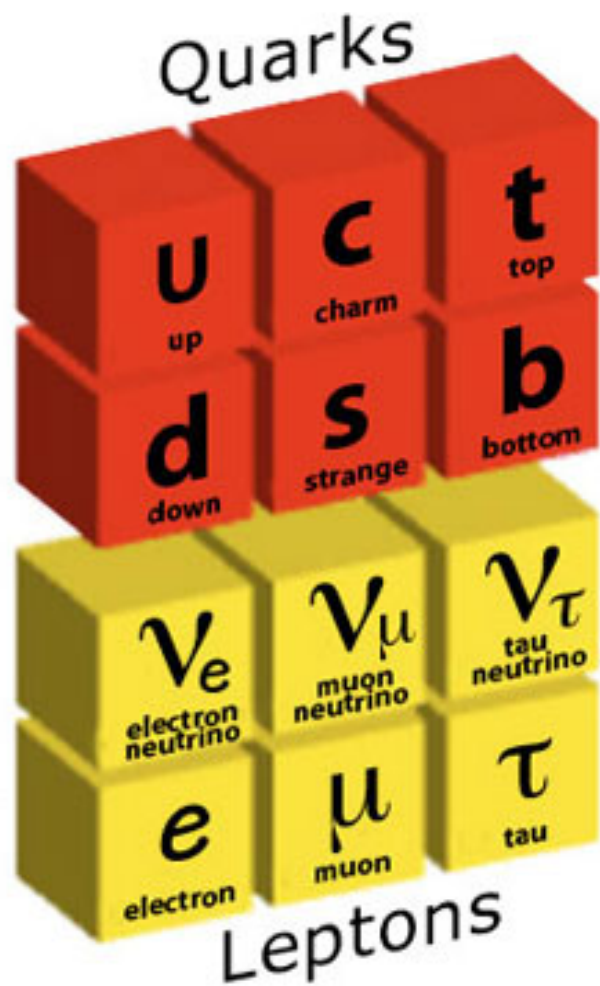
Quarks



Forces



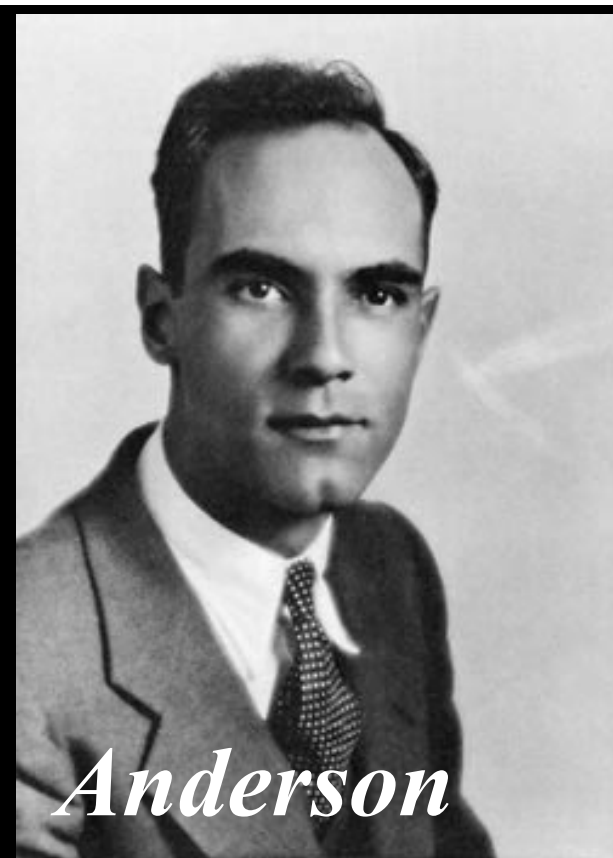
Leptons





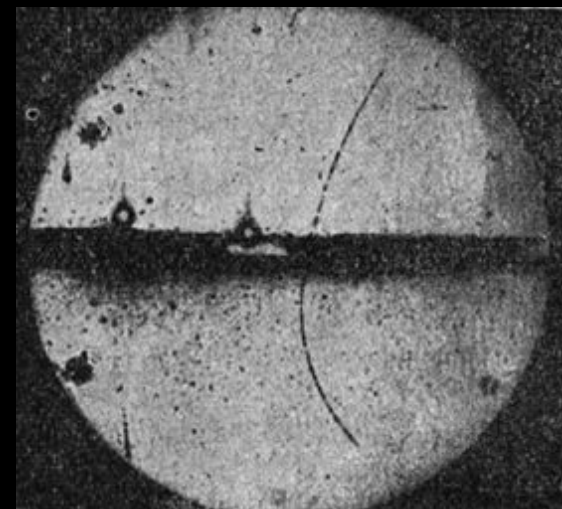
Dirac

Scoperta dell'antimateria

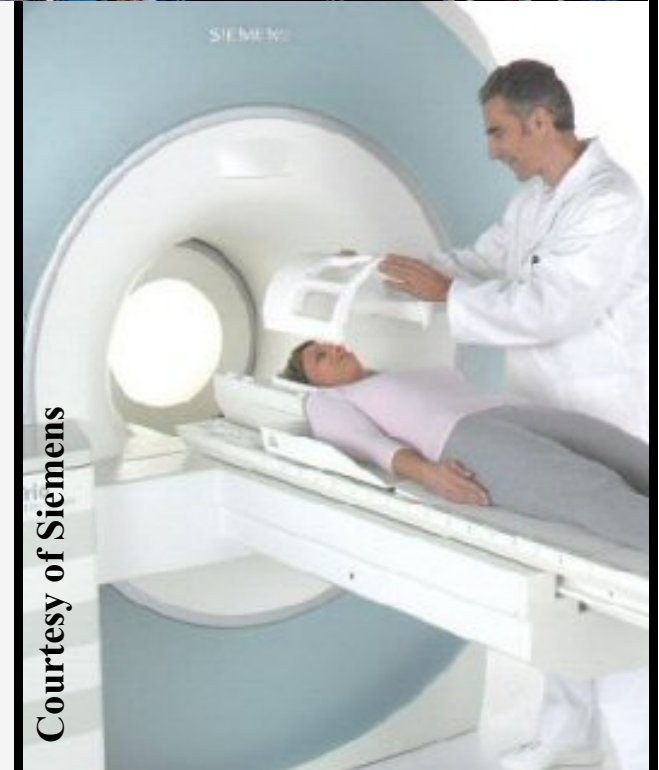
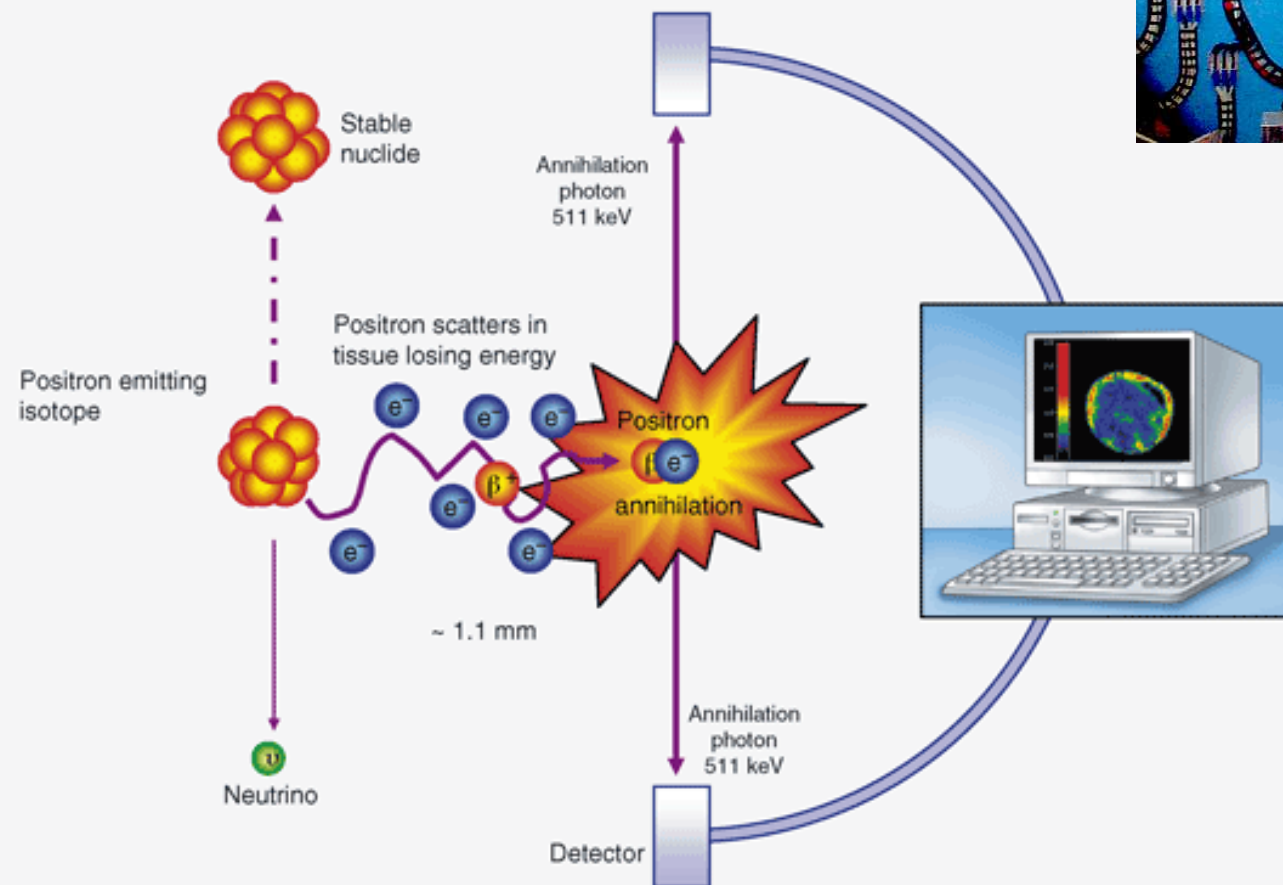
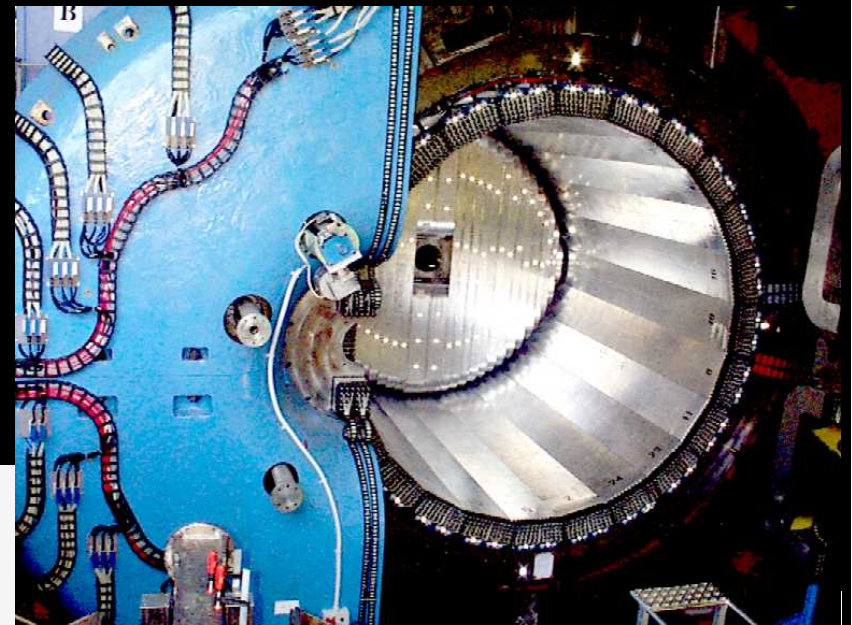


Anderson

$$(i\gamma^\mu \partial_\mu - m)\psi = 0$$



Positron Emission Tomography (PET)

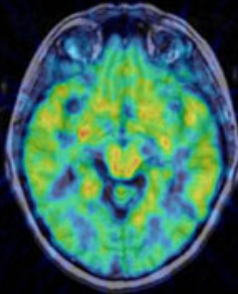


Courtesy of Siemens

PET

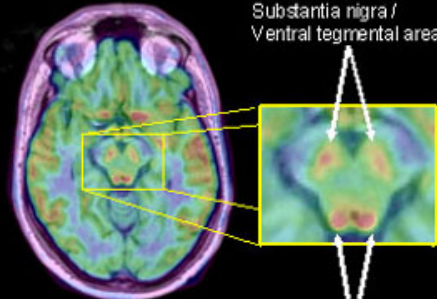
Old PET Camera

Resolution 4 mm



New PET Camera

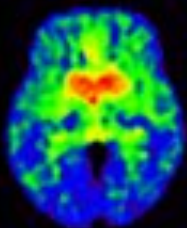
Resolution 2.3 mm



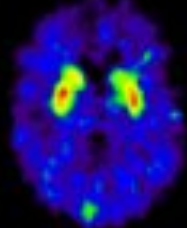
Substantia nigra /
Ventral tegmental area

Superior colliculi

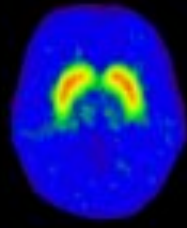
Dopamine D2 receptor
[¹¹C]FLB457



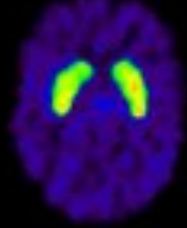
Smoker



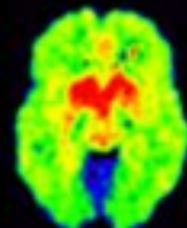
Alcoholic



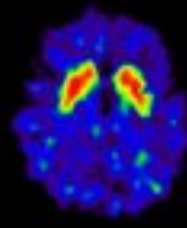
Obese



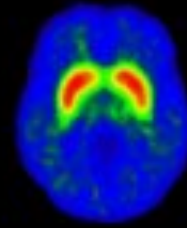
Cocaine



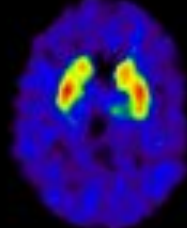
Non-Smoker



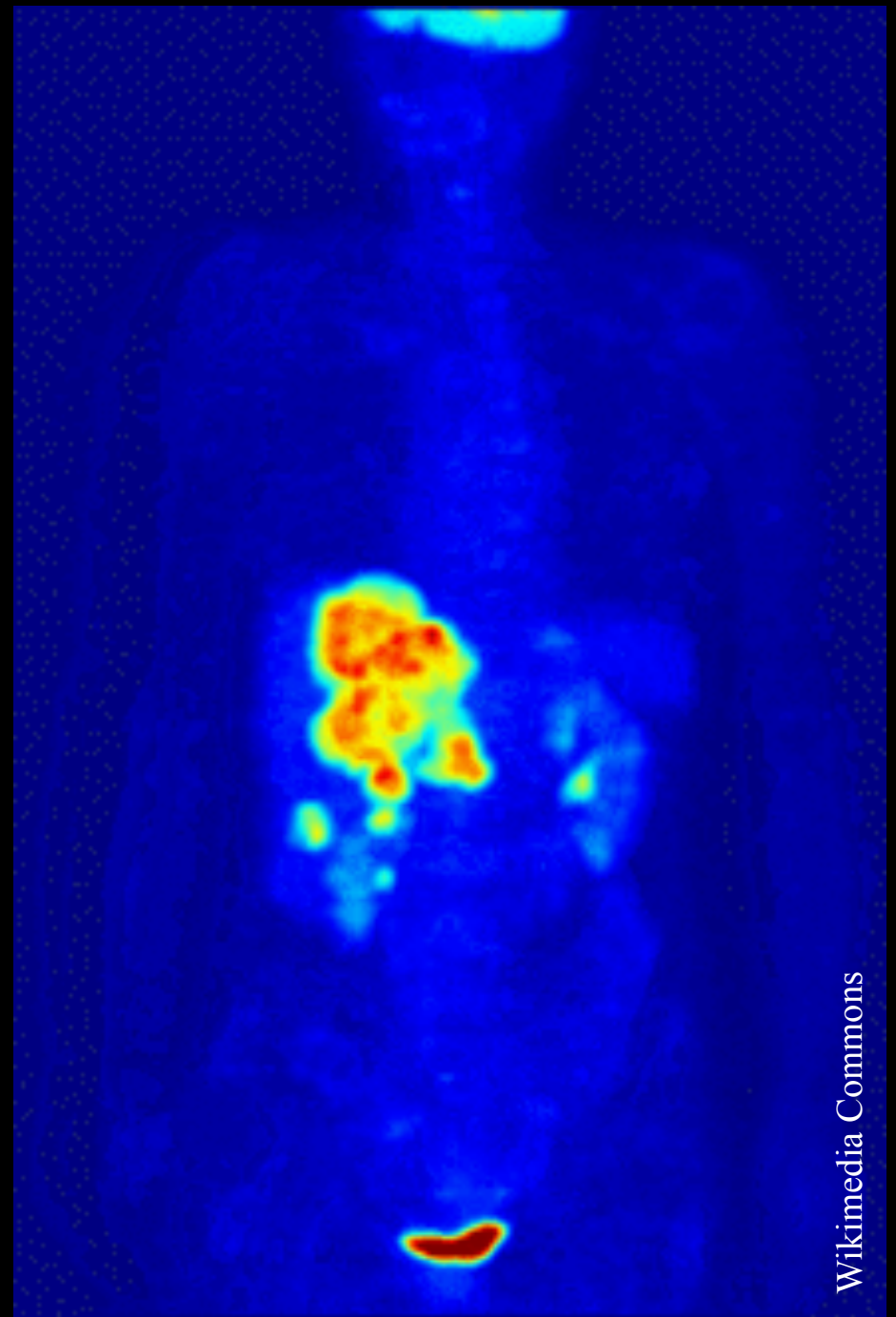
Normal



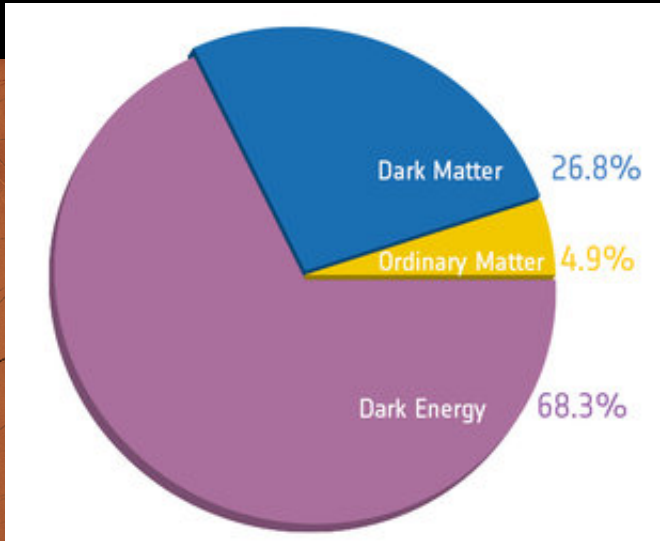
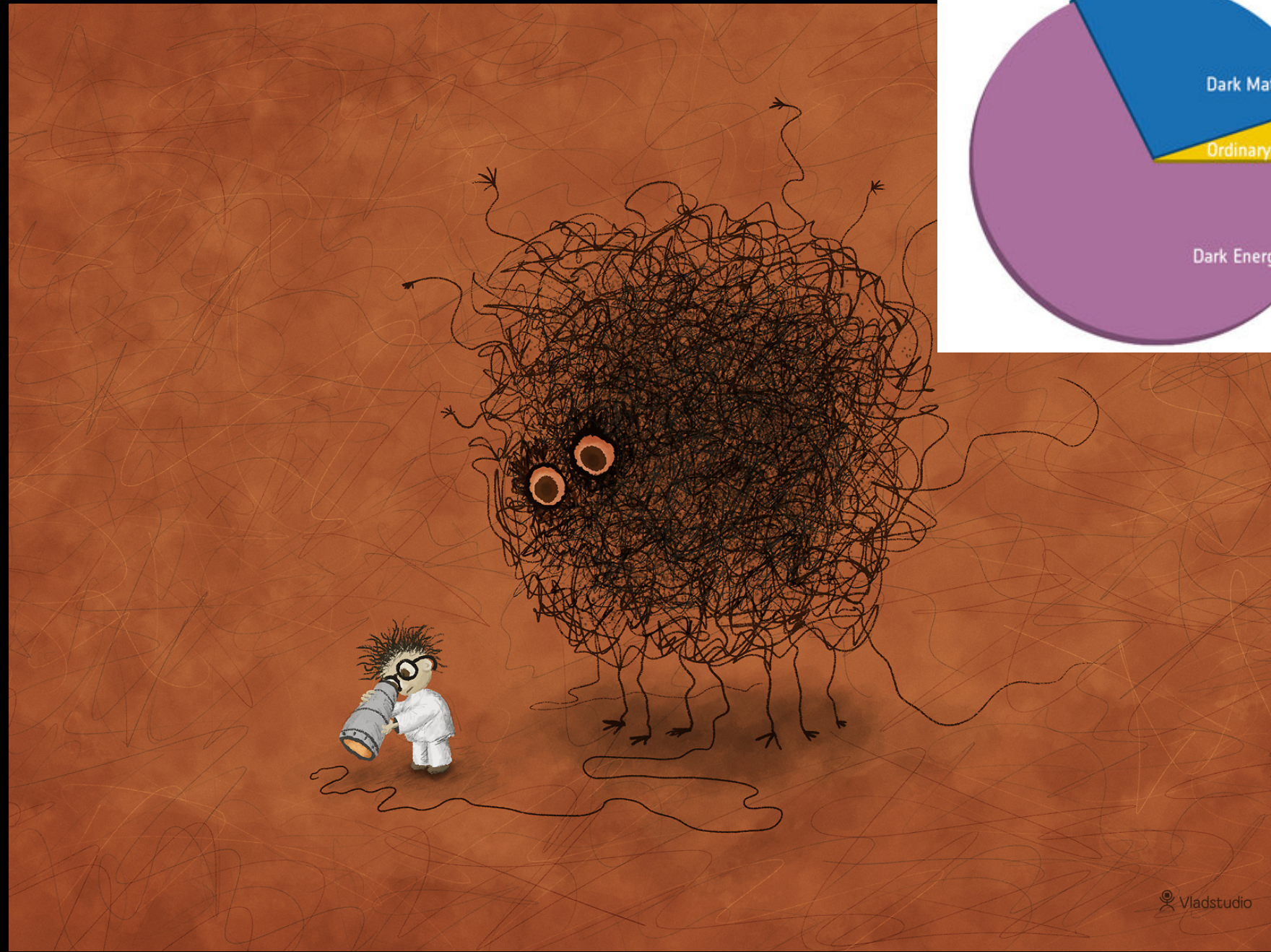
Normal



Normal



Wikimedia Commons



Vladstudio



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