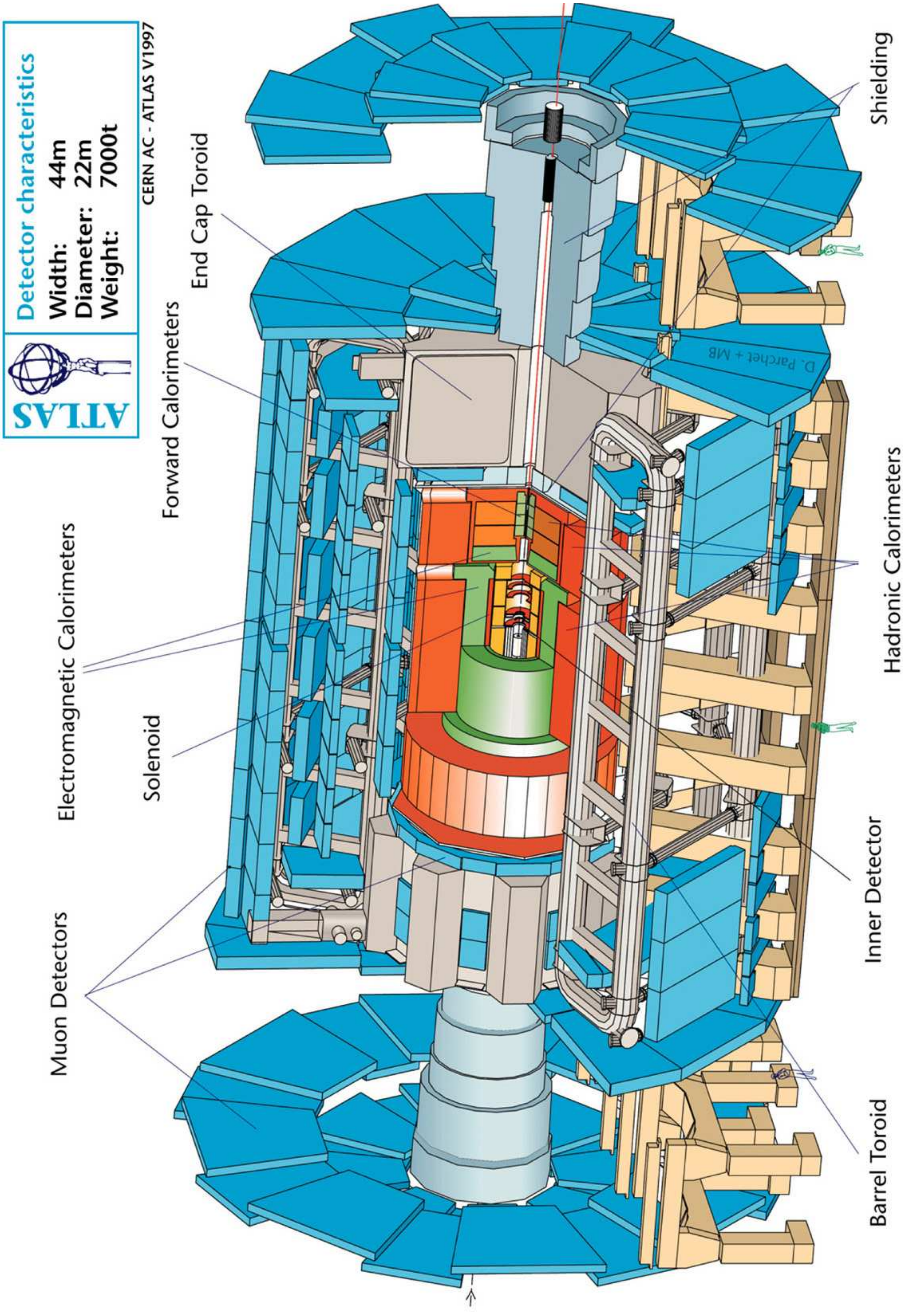
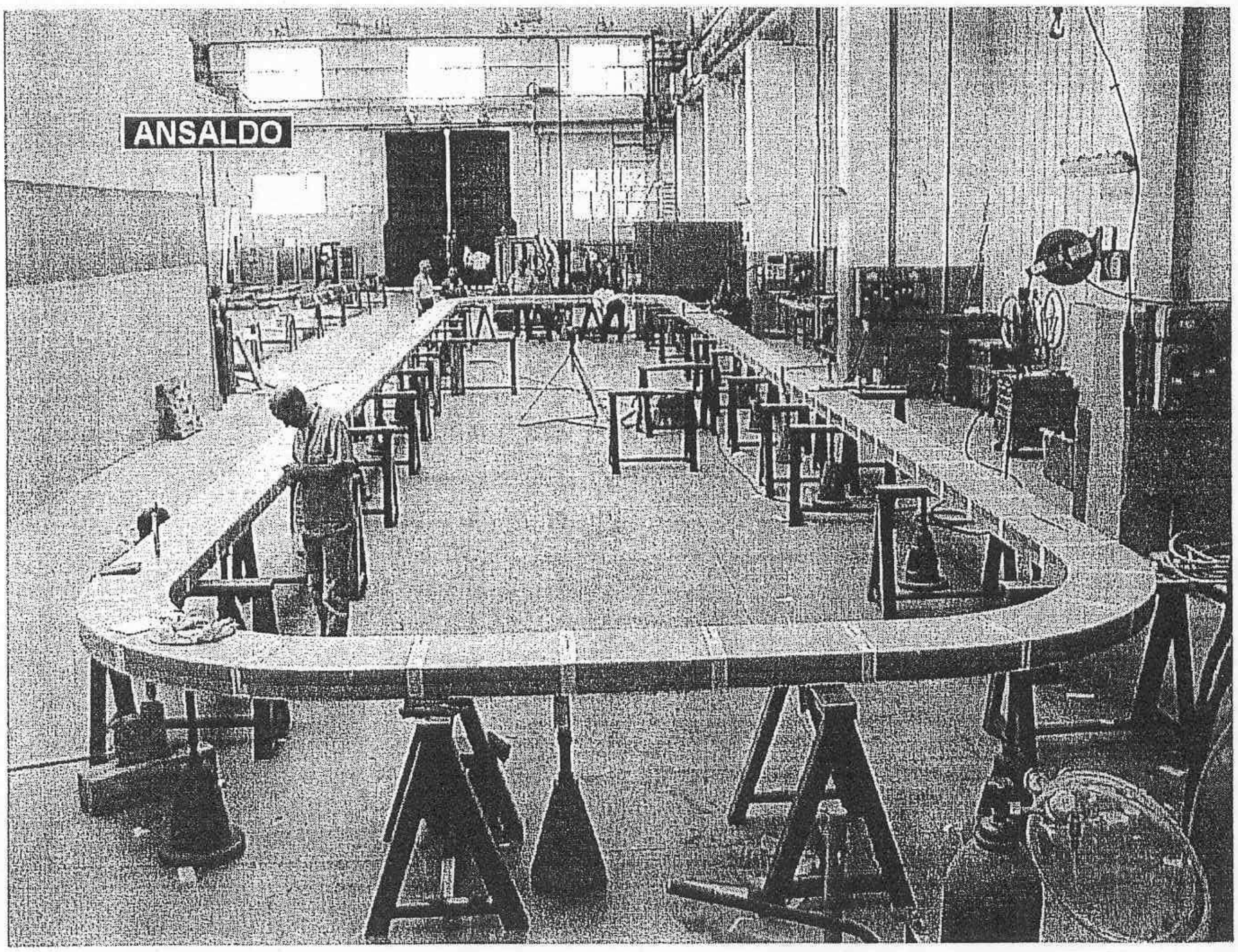

ATLAS
Detector characteristics
Width: 44m
Diameter: 22m
Weight: 7000t
CERN AC - ATLAS V1997
End Cap Toroid
Forward Calorimeters
Electromagnetic Calorimeters
Solenoid
Muon Detectors
Shielding
Hadronic Calorimeters
Inner Detector
Barrel Toroid
D. Parchet + MB

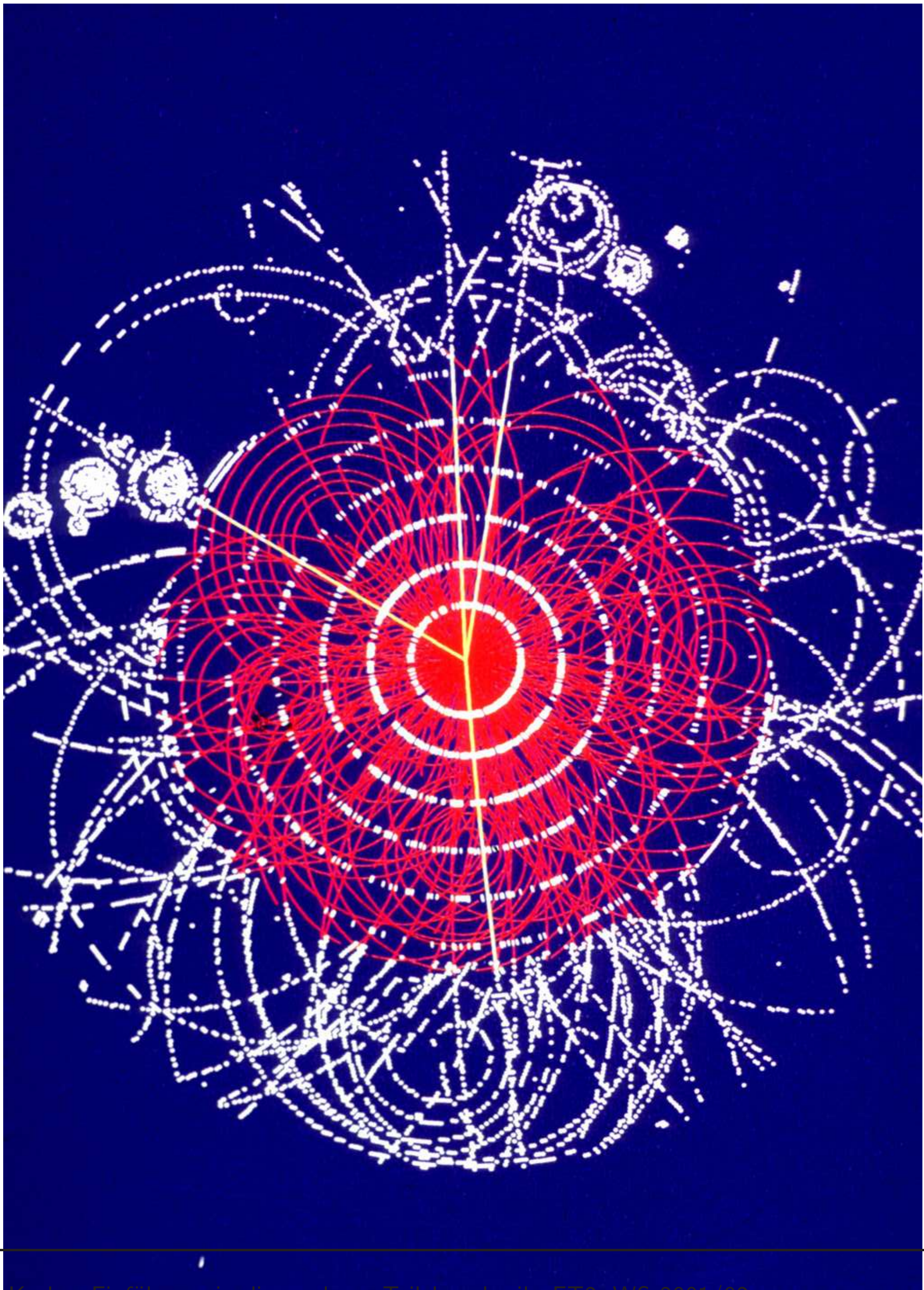


First impregnated double pancake Barrel Toroid coil

Higgs-Zerfall im ATLAS Detektor

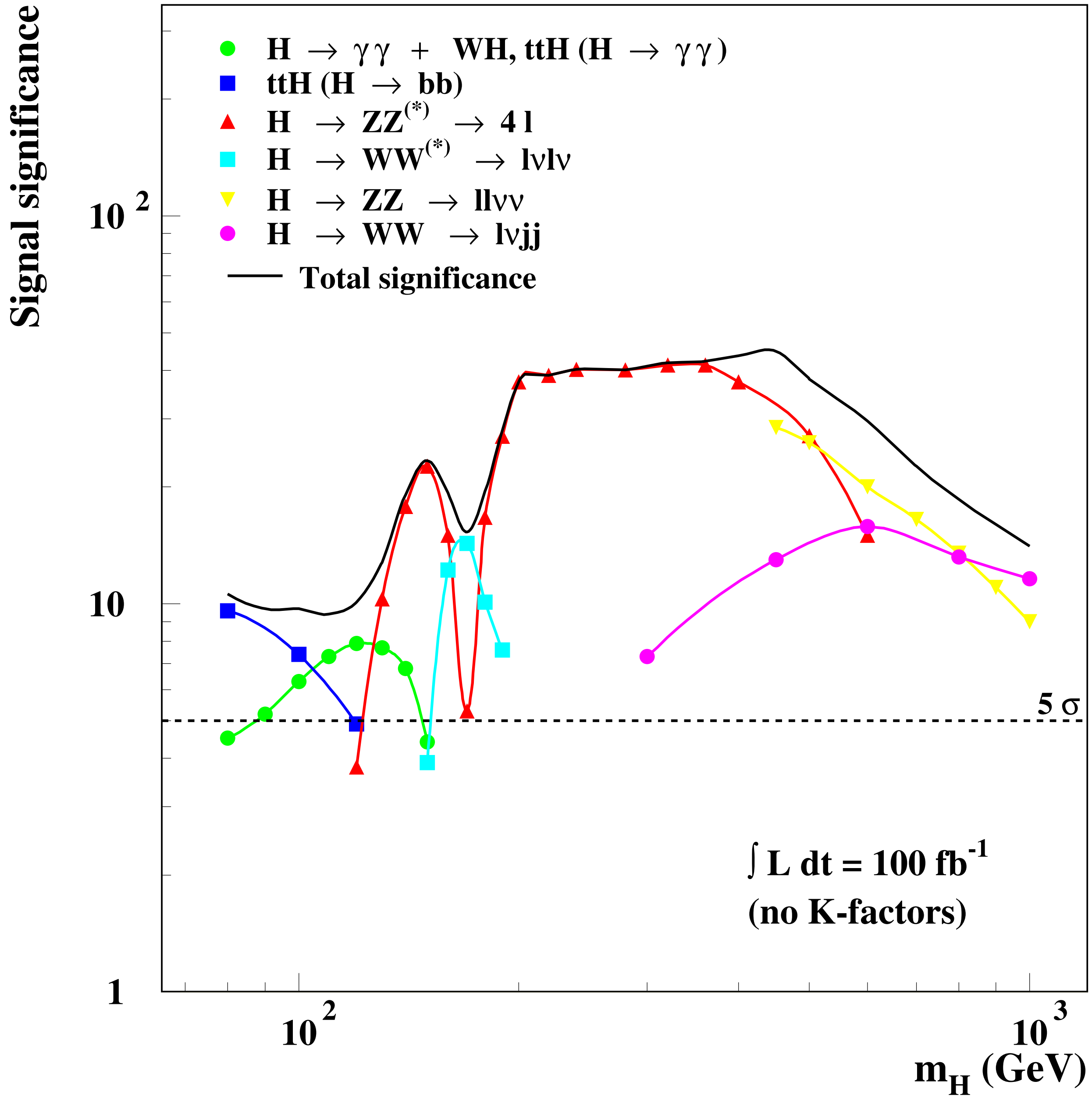
Computersimulation des Zerfalls eines Higgs-Teilchens im ATLAS Detektor am LHC:

$$\text{Higgs} \longrightarrow Z^0 Z^0 \longrightarrow (\mu^+\mu^-)(\mu^+\mu^-)$$



Suche nach dem Higgs-Boson am LHC:

Higgs-Signale des ATLAS-Experiments nach ca. 4 Jahren Laufzeit:



$110 < M_H < 700$ GeV im Goldenen Kanal:

$$H \longrightarrow Z^0 Z^{0(*)} \longrightarrow (e^+e^-)\,(e^+e^-)$$
$$\longrightarrow (\mu^+\mu^-)(\mu^+\mu^-)$$