

Dark Matter at Colliders

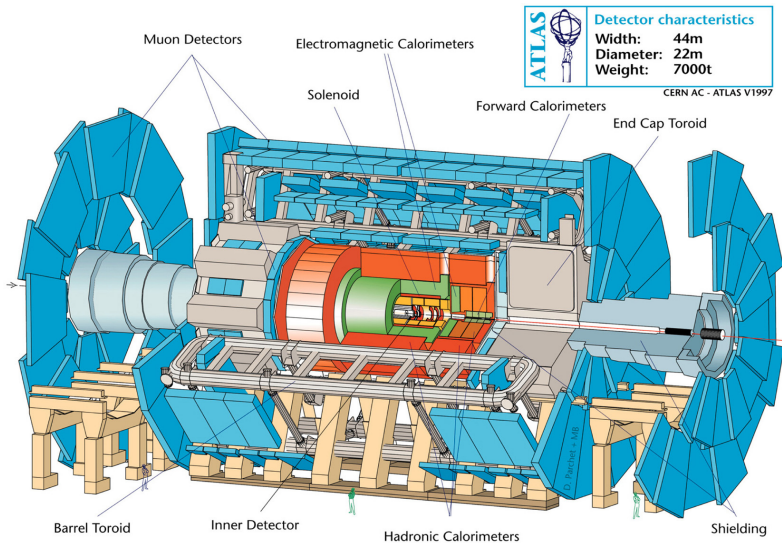
Joachim Kopp

Max Planck Institut für Kernphysik, Heidelberg

April 9, 2014

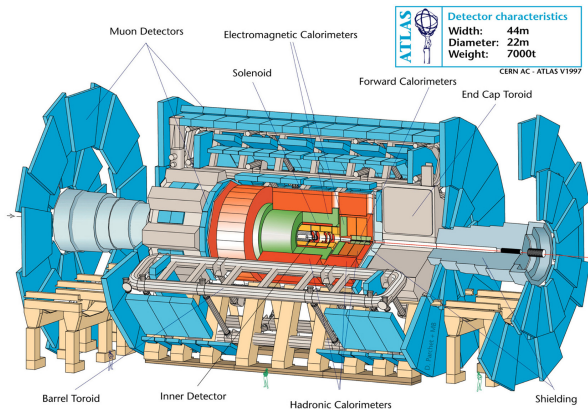
A typical collider detector

The ATLAS detector at the LHC



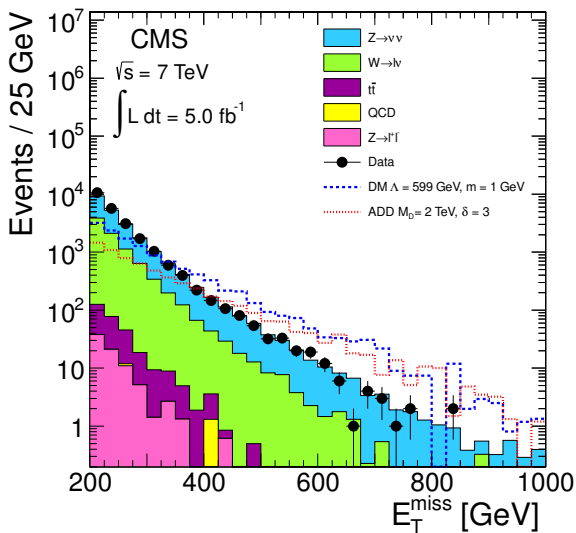
A typical collider detector

The ATLAS detector at the LHC

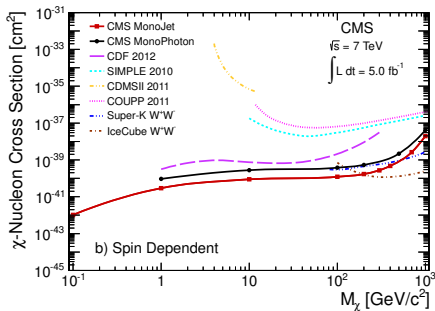
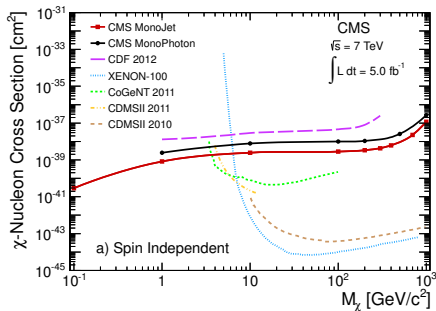


- Can only detect particles with **electromagnetic** or **strong** interactions
- Can distinguish e , μ , γ , **hadronic jet**
(to some extent b -jets and τ -jets can be identified)

The CMS monojet search



Monojets and monophoton vs. direct detection



- These comparisons **only valid** if effective field theory description is valid up to several TeV!