

# Dark Matter at Colliders

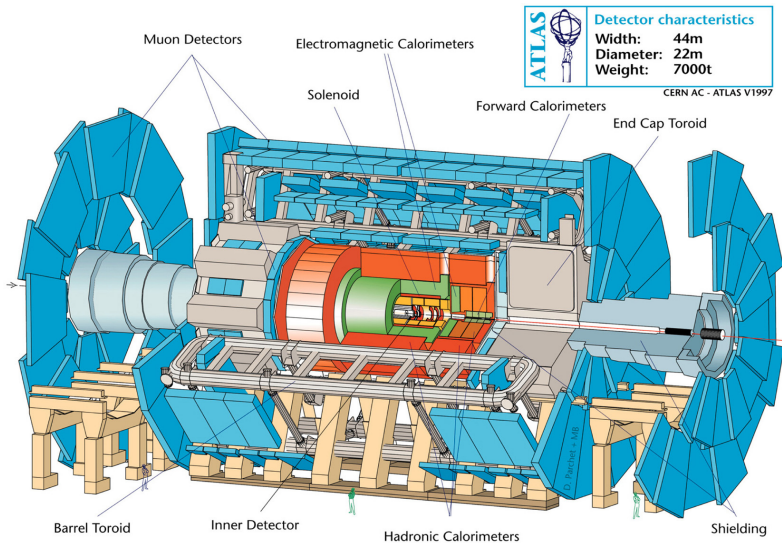
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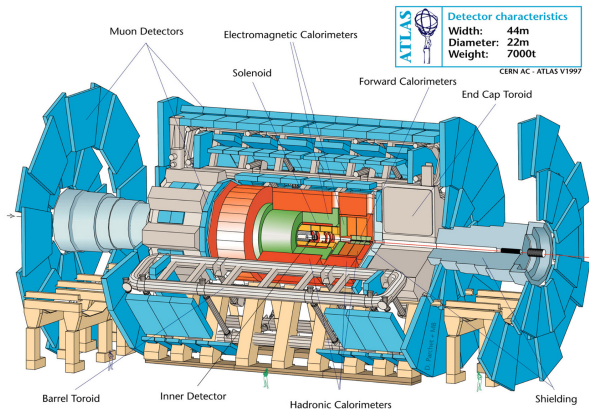
# A typical collider detector

The ATLAS detector at the LHC



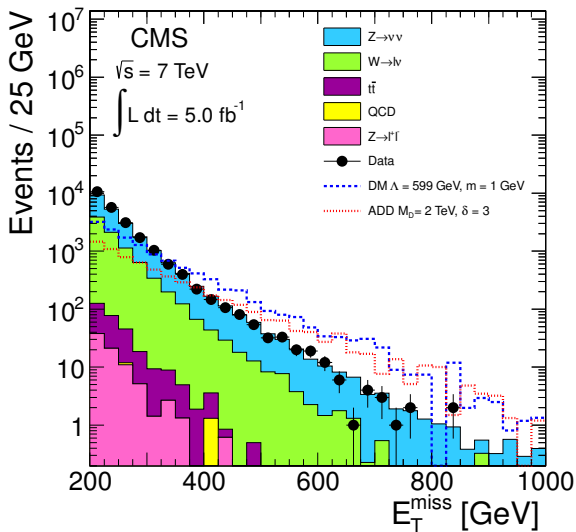
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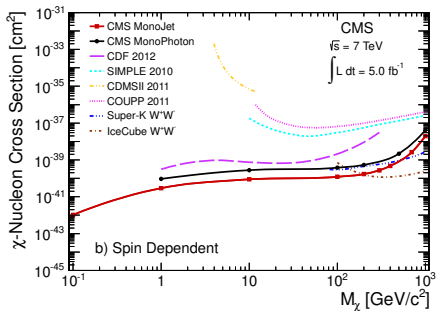
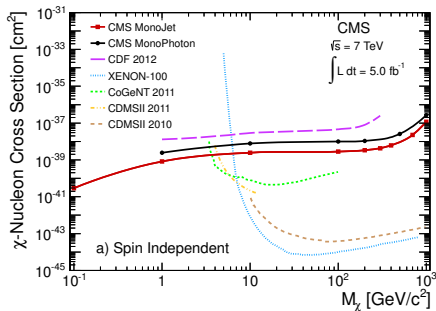


- Can only detect particles with **electromagnetic** or **strong interactions**
- Can distinguish  $e$ ,  $\mu$ ,  $\gamma$ , **hadronic jet**  
(to some extent  $b$ -jets and  $\tau$ -jets can be identified)

# 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!