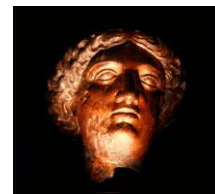


MINERvA

Main Injector Experiment v-A



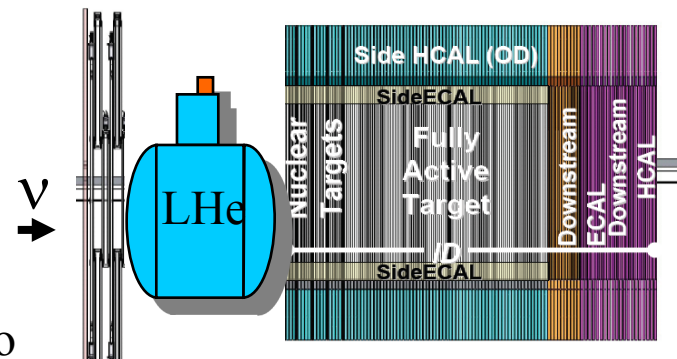
- ◆ MINERvA is studying A dependence of neutrino interactions in unprecedented detail, from He to Pb
- ◆ Uses high intensity NuMI Beamline at Fermilab and MINOS near detector as muon spectrometer

◆ *Nuclear physics goals*

- ◆ High precision measurement of the axial form factor to high Q^2 and search for A dependence of form factor
- ◆ Studies of quark-hadron duality in neutrino interactions, complementing JLab
- ◆ Search for nuclear shadowing of neutrino interactions
- ◆ Precision cross section measurements and studies of final states

◆ *Schedule*

- ◆ Low E anti- ν (avg E ~ 4 GeV) 11/09-3/10
- ◆ Low E ν 3/10-3/12
- ◆ Medium E ν (avg E ~ 8 GeV) spring 2013 to about 2016



Estimated total CC ν interactions:

Target	Fiducial Mass (ton)	Chg. Crnt Evt
Helium	0.25	0.6M
Hydro-carbon	3	8.6M
Carbon	0.6	1.4M
Iron	1	2.9M
Lead	1	2.9M
Water	0.3	0.7M

~ 70 Particle, Nuclear, and Theoretical physicists from 21 Institutions

