

Muon $g - 2$ @ Fermilab

- Muon ring from Brookhaven experiments
- Data acquisition supposed to start 2016
- Accuracy improvement by a factor of four!

Muon experiments @ J-PARC

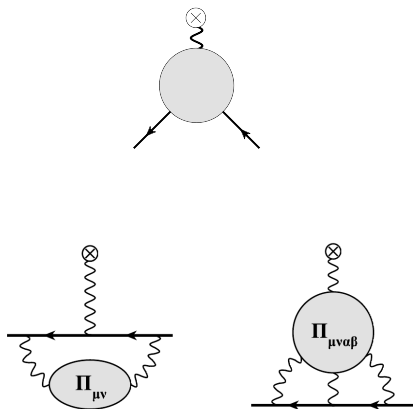
- Experiments with ultra cold muon beam
- Completely new way to determine $g - 2$
- Different systematic errors!

Theory needs to keep up!

Standard Model & QCD Contributions

Standard Model $g - 2$

In units of	10^{-10}	
Experiment	11659208.9	(6.3)
QED	11658471.9	(0.0)
Weak	15.3	(0.2)
HVP	685.1	(4.3)
HLbL	11.6	(3.9)
SM	11659183.9	(5.8)
Difference	25.0	(8.6)



Method

