Schedule **Probability Impact Top Risks** (ranked by Probability x Cost Impact) EMU - Optical transmitter failures on DCFEBs 75% 0 months S&C - Oracle increases maint, fees for tape libraries & drives 50% 0 months ComOps - Fermilab overhead rates increase 50% 0 months Risks Open Realized this quarter Tracker - Pixels Phase 1 Detector loss of a CO2 cooling loop 5% 0 months HCAL - Other problems with Phase 1 Upgrade HB electronics 10% 3 months Risks Closed Managed this quarter

None

Risks Closed Retired this quarter

Risks Added this quarter

S&C - T2 disaster

S&C - Less raw data than expected

S&C - More raw data than expected

S&C - Increased LHC live time exposes operational limitations

Tracker - Detector checkout reveals new repair issue

EMU - Problems with LS2 CSC electronics installation

EMU - Cooling system water leaks before LS3

S&C - Tape migration is slower than anticipated

S&C - T2 hardware pricing uncertainty

S&C - T2 hardware retirement policy not realistic

CY19 Q1 Risk Register Summary Table

5%

5%

5%

10%

25%

20%

10%

1%

1%

0.3%

5%

2 months

0 months

0 months

0 months

1 months

3 months

2 months

0 months

0 months

0 months

0 months

Cost

Impact

\$75k

\$100k

\$80k

\$300k

\$50k

\$400k

-\$400k

\$400k \$250k

\$50k \$50k

\$50k

\$100k

\$100k

\$500k

\$88k