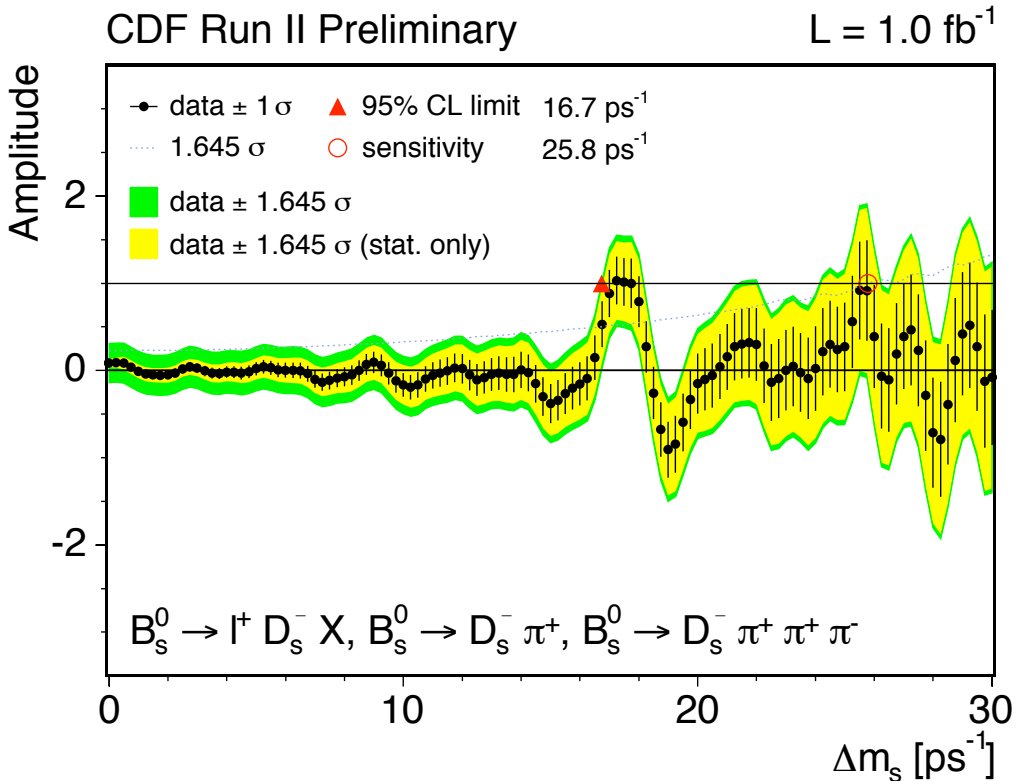
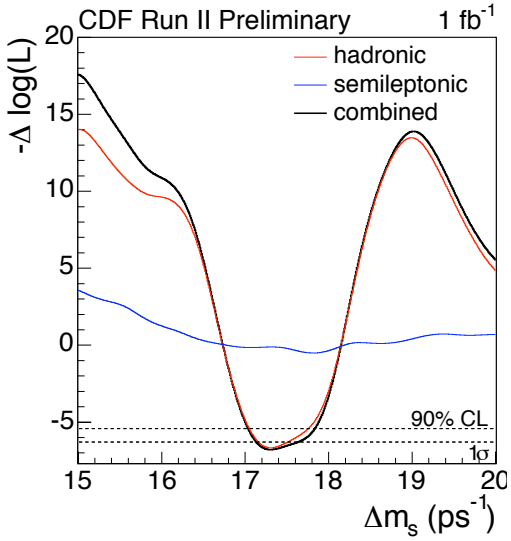
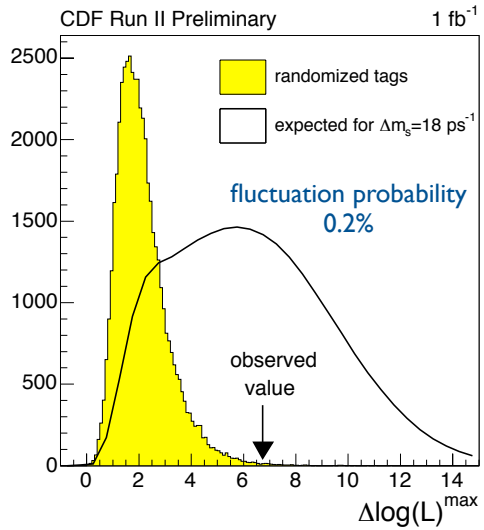
Measurement of B_s Oscillations







History of a measurement

Significance study

Optimize **same-side** tagger with particle identification - tof, de/dx - and calibrate it

Calibrate opposite-side flavor taggers

Calibrate proper decay time resolution

Measurement of B meson lifetimes

Develop unbinned mixing **analysis** framework and **techniques** for mass, proper decay time and flavor tagging

Establish mixing in the B^0 system

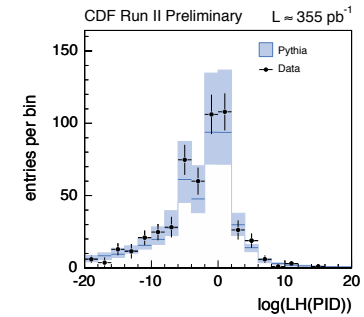
Establish **opposite-side** tagging methods

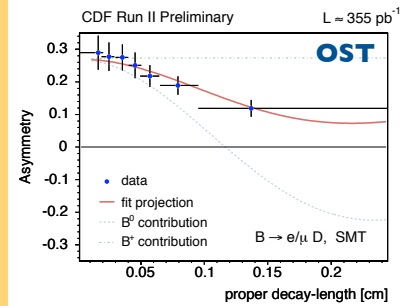
Establish same-side tagging in Run II

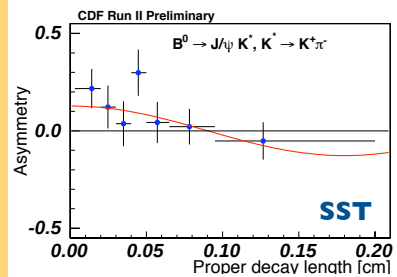
Extract B signals form trigger samples, first used in other analyses

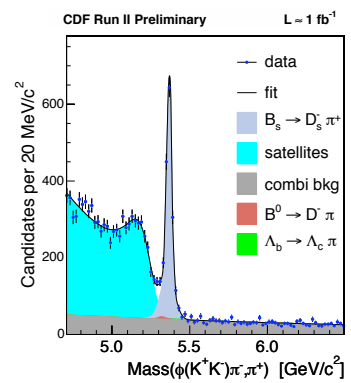
$$\Delta m_s = 17.31^{+0.33}_{-0.18} \pm 0.07 \text{ ps}^{-1}$$

$$\left|\frac{V_{td}}{V_{ts}}\right| = 0.208^{+0.008}_{-0.006}$$









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