tof update

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STAR Analysis Mtg
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pVPD

run-2
  single-range ADC readout
  auau central resn ~ 24ps

run-3
  dual range ADC readout (6:1)
  dAu minbias resn ~85ps
  pp minbias resn ~140ps

run-4
  dual range ADC readout (20?:1)
  new base-plate design (w/ scheblein & brown)

continuing its slow march downstream...
  now straddling cross-beam, another ~5”

otherwise no major changes for run-4...

expect good performance....
TOFp

third run, again no major changes planned
41 slats, Δη~0.9

run-2 auau central, ~2 hits/unit-η/event

calibrations code done

embedding/efficiencies still a WIP...
run-2 auau central (~1.8M matches)
run-3 dau minbias (~0.48M matches)

tray now under maintenance in WAH...
will move 1 slot CW to sector 20 center

NIm paper accepted
TOFr (run-3)

28 MRPCs on 2 HV busses
6 F/T plates close the box & separate FEE layer
read out 72 chs into camac via TOFp DAQ
slewing by (amplified) ADC

several calibrations and efficiency simulations exist

stop resn ~85 ps in dAu

pT PRL...
  being referee-reviewed
  major boost to TOF proposal
electron, K*, etc analyses in advanced stages too!

working toward common “match tree” for
TOFr and TOFp
  simple/consistent application of efficiency #s
  comparison of different calibration strategies
24 MRPCs on 1 HV bus
the FEE layer also closes the box (”TFEEp”)
TTST layer generates camac inputs...
read out 72 chs into camac via TOFp DAQ
slewing again by (amplified) ADC

includes 20 MRPCs from TOFr plus
4 new MRPCs (USTC&Tsinghua)

1. vastly simpler/saner mechanical design
   shoe-box style (no rails)
   PEM studs (no welding)
   PEM nuts (no tapping)
   welded feet (fewer holes in box)

2. read out 6 new TDC signals for ToT
   3 variants (1/TFEEp), 2 chs each
   compare slewing corrections
   ToT is default plan for TOF

3. first realistic attempt at
   integrating Jalepeno (HPTDC) w/
   pVPD, DAQ, & TRG.

TFEEp radiate heat into box, heating the gas
higher noise rates and HV currents
TOFp-style cooling loop added
thermocouples diverted from TOFp

("pigtail" signal cables not shown)
new effort to add 48 more chs into tofp daq
new cables
new rack&cooling
new crates
new NPS
rev. software
12 MRPCs → 20