Outline of the afternoon GlueX/Hall-D Talk

Purpose of This Talk

The talk will be presented during a 2hr parallel session held jointly with Hall-B. The intent of the organizers is to encourage lots of discussion between the reviewers and the Halls. How well that works depends on the reviewers and their personalities so we will prepare $\sim$ 40 minutes worth of slides. David will give the talk which will focus on more technical details of the GlueX/Hall-D software.

Slide Descriptions

1	Title slide collaboration info	30s (30s)
2	Outline slide Table of contents of slides with slide numbers	60s (90s)
3	Simulation Broad overview of pieces (*hdgeant*, *mcsmear*, *HDDS*, *HDDM*) and how they fit together	120s (210s)
4	HDDS Describe how HDDS is derived from AGDD and modified for our use. API designed so values are accessible from reconstruction using xpath syntax	120s (330s)
5	*hdgeant* General structure of GEANT3 simulation. HITS and DIGI are not used, but C-code used to accumulate hits. Why no GEANT4 yet.	120s (450s)
6	JANA framework Event level multi-threading factory model. Data on demand.	120s (570s)
7	JANA framework Performance results including scaling and opportunistic usage on ifarms.	120s (690s)
8	JANA framework Additional features: plugins, config. parameters, janactl, janadot, janaroot.	120s (810s)
9	Reconstruction overview Factory call graph with profiling info.	120s (930s)
10	Charged Particle Tracking Describe 3-stage structure (candidates-¿wire based-¿time based). Show call graph and describe design structure that allows alternate algorithms to be used.	120s (1050s)

11	Charged Particle Tracking Kalman filter. Tracking chisq probability distributions. Execution speed.	120s (1170s)
12	Calorimetry FCAL reconstruction.	120s (1290s)
13	Calorimetry BCAL code (KLOE and IU). Describe dark hits and SiPMs.	120s (1410s)
14	PID Describe PID FOM. Show particle probability distributions.	120s (1530s)
15	Calibration DB MySQL backed. Shell tool and fully developed API for multiple languages. Tested with existing constants (from ASCII files) but not in production use yet.	120s (1650s)
16	Conditions DB and Translation DB Conditions will be recorded into EPICS DB. Program will periodically "sweep" relevant values into Calibration DB for offline use. Translation DB not yet designed, but will be MySQL based.	120s (1770s)
17	Tools for Amplitude Analsysis AMPTOOLS developed at IU for doing Amplitude Analysis on GPU's (or CPU if GPU is not available). CMU PWA toolset with ruby interface.	120s (1890s)
18	DST, mini-DST UConn design for simulation DST. Requirements for first stage reconstruction DST. Requirements for mini-DST used for Amplitude Analysis	120s (2010s)
19	Documentation Growing set of HOWTO documents on wiki. JANA manual. Doxygen generated documentation.	120s (2130s)
20	Event Viewer hdview2. Track inspector, drawing options, ...	120s (2250s)
21	Event Viewer ded and collaboration with Hall-B. Development plans with summer student	120s (2370s)
22	Repository Show general structure. Describe access controls. Tagged version system.	120s (2490s)
23	BMS Automated system will little to no package-level customization. Designed to impose certain policies (library names based on directory names; force delete of certain types of obsolete code). In use for 7 years.	120s (2610s)
24	Areas of greatest concern Tight spots and weaknesses as seen by us.	120s (2730s)

Total time: 45.5 min