

Run11 Availability / Operation Statistics

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This Presentation

- Availability
- MTBF (past runs + 250 GeV p[^] physics runs 9 & 11)
- Failure (all Run 11)
- Store to Store time / Setup (p[^] physics portion)

Reliability

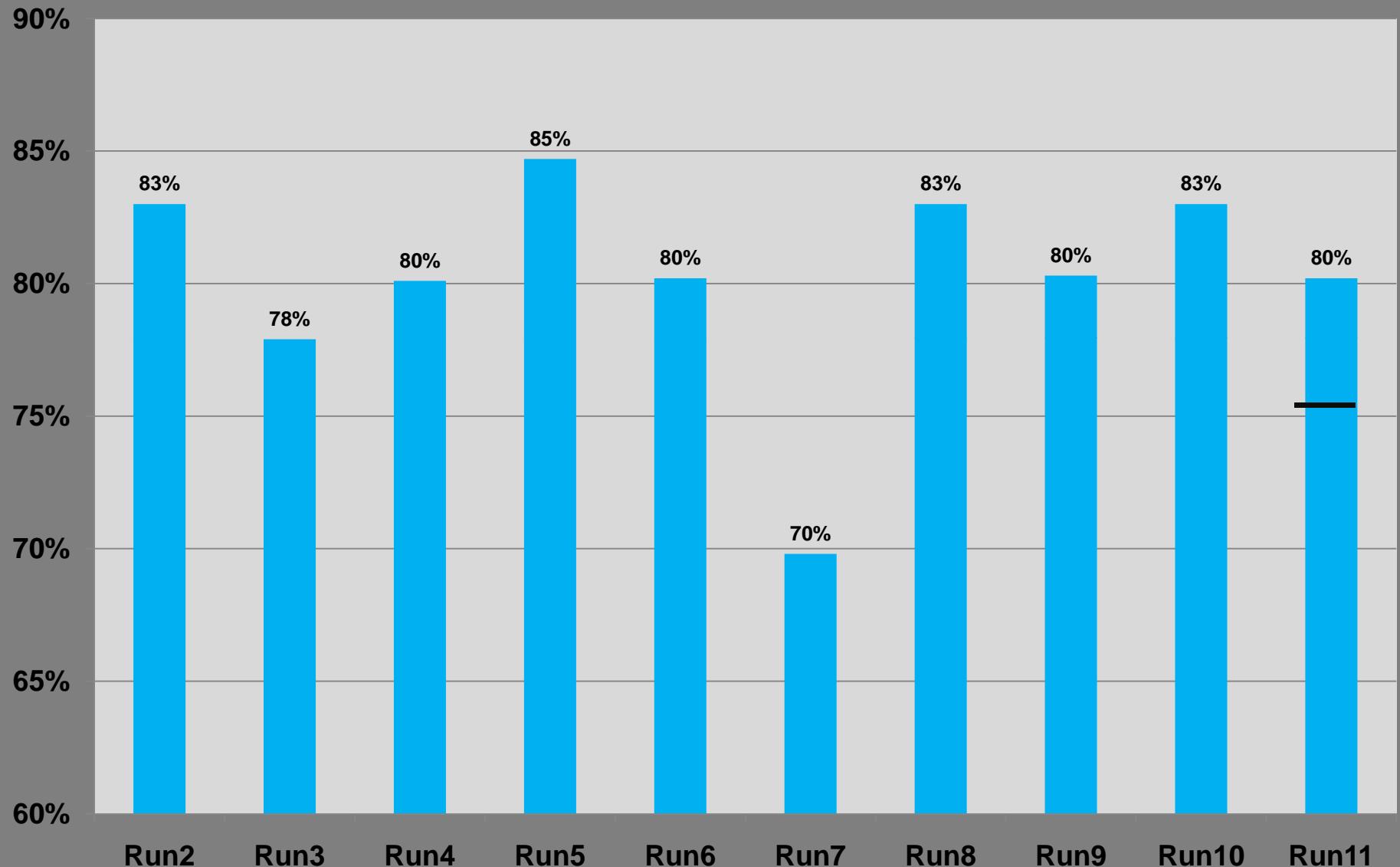


Availability

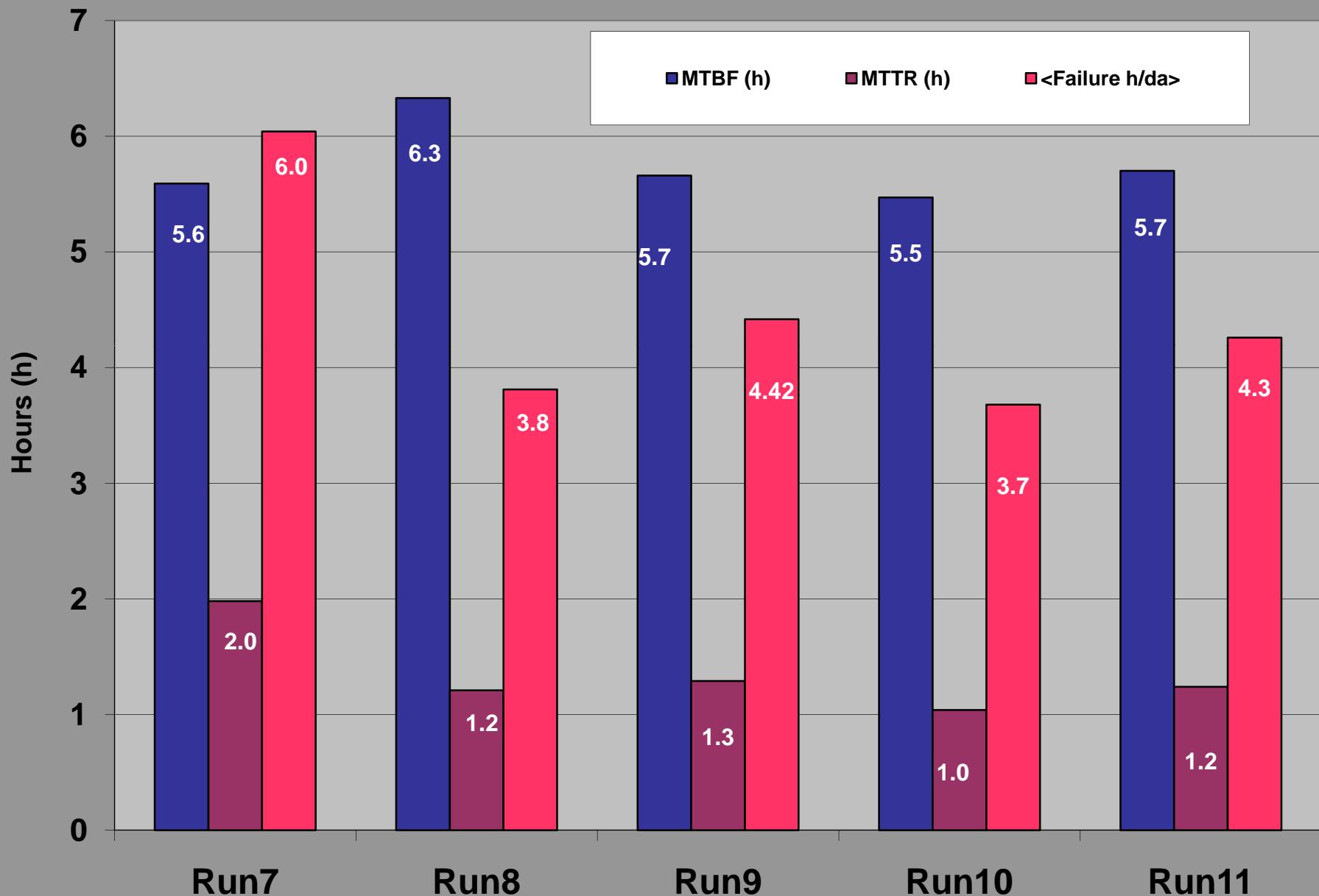
- Availability Components [J. N. Sandberg]

- Reliability of the Equipment
- Time to Diagnose Problems
- Time to Repair or Replace Equipment
 - *Diagnose + Repair – operator logs failure*
- Time to Recover after Repair
 - *Time to Recover – operator logs “setup”*

Availability by Run



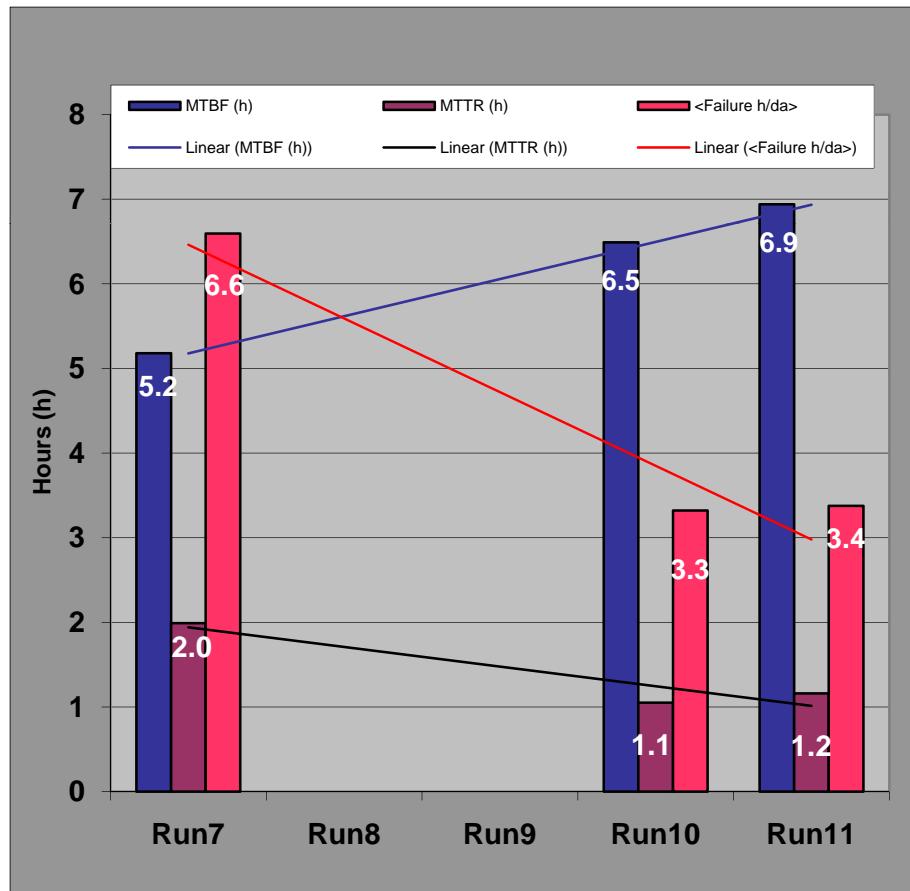
**Mean Time Between Failure, Mean Time To Repair,
Average Failure hours/day [ENTIRE RUN - start to end date]**



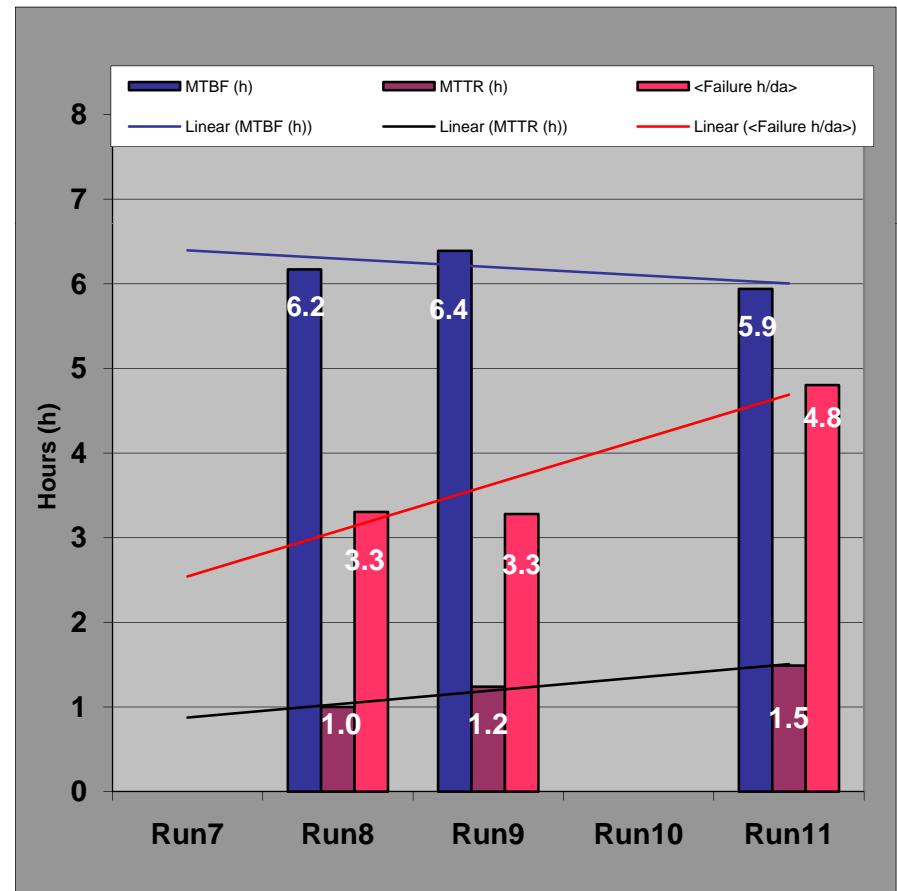
Run 11

MTBF, MTTR, Failure rate[h/da].

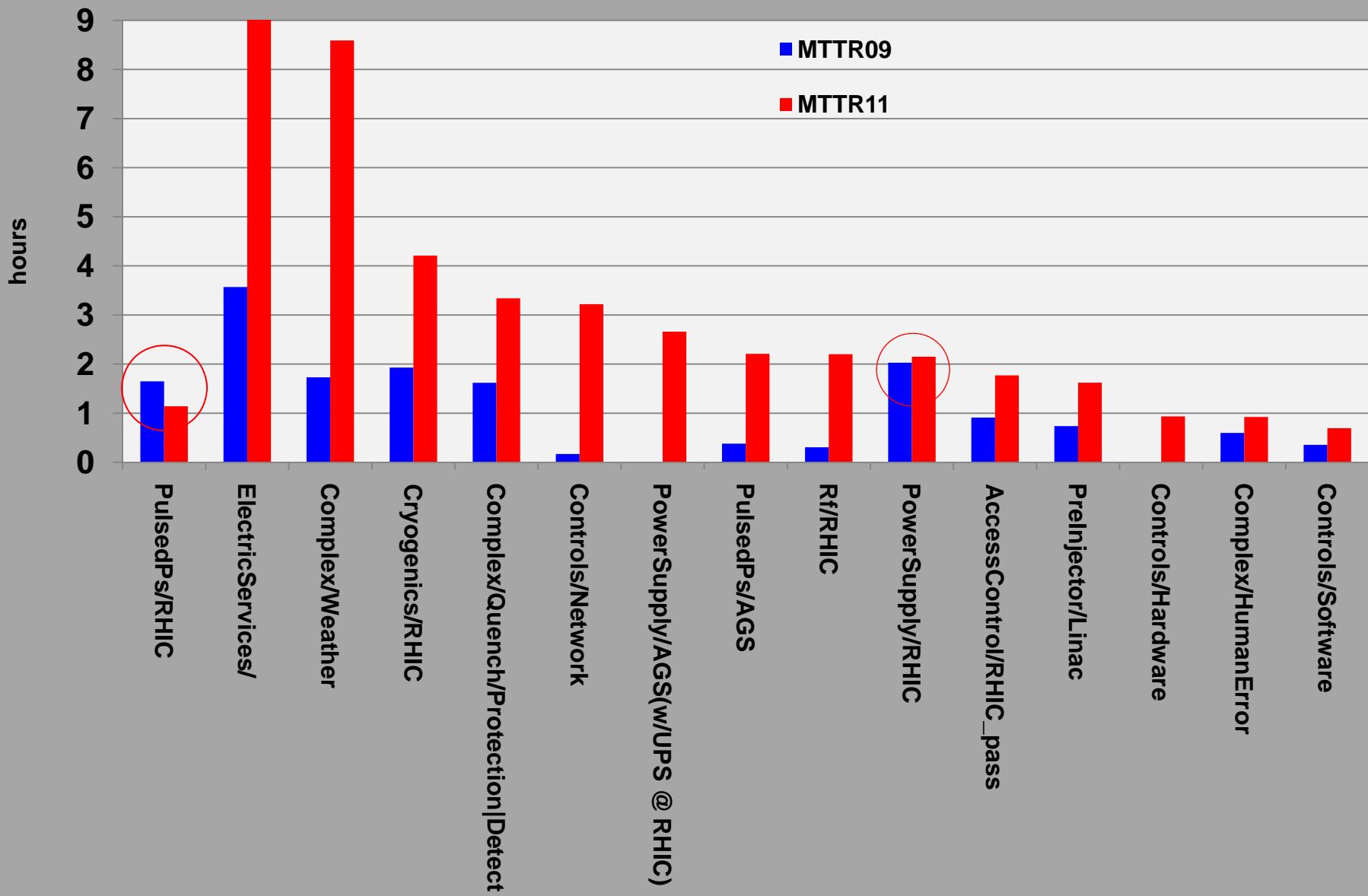
Au -- physics operation



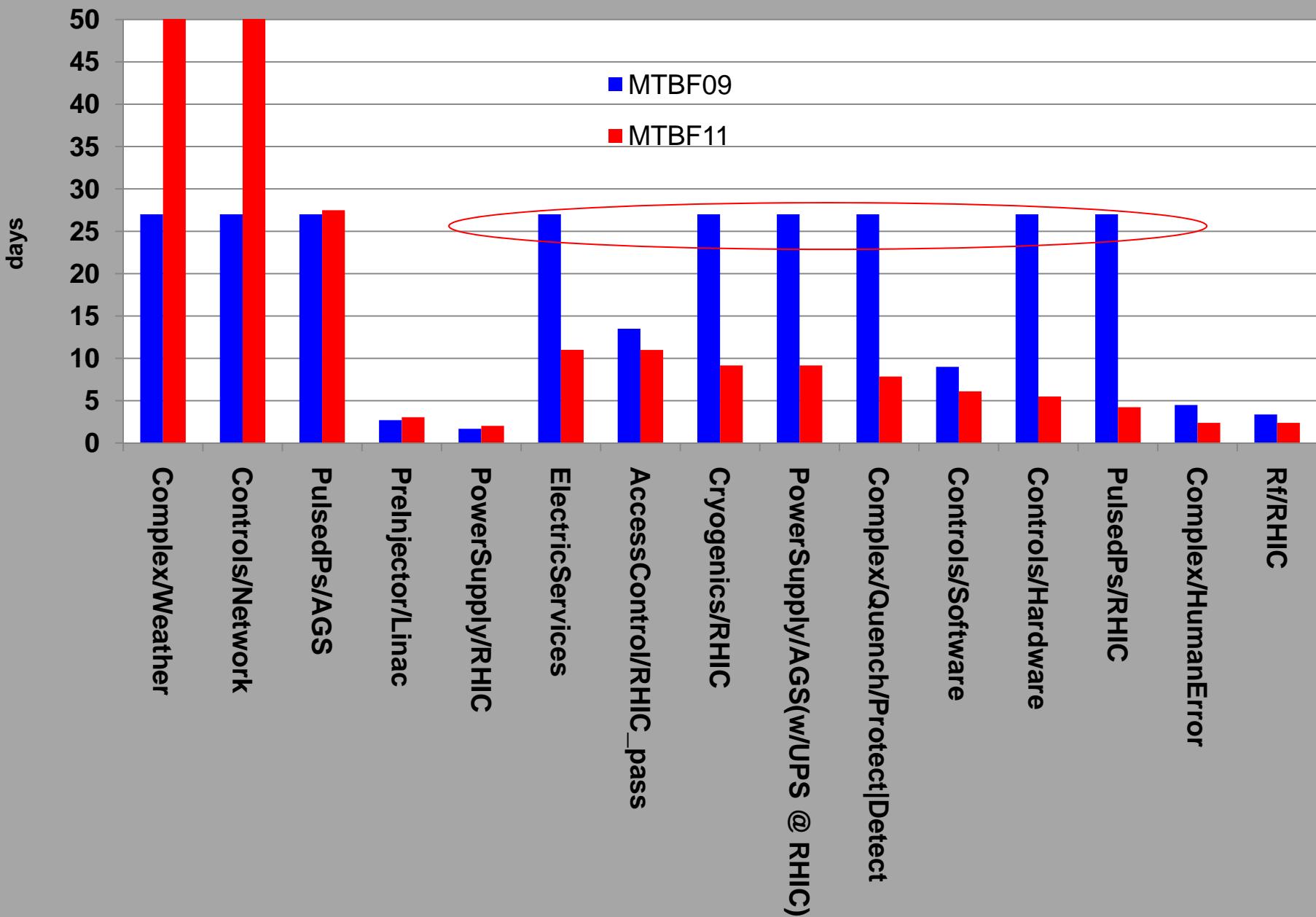
p^\wedge -- physics operation



Run 11 v Run9 MTTR

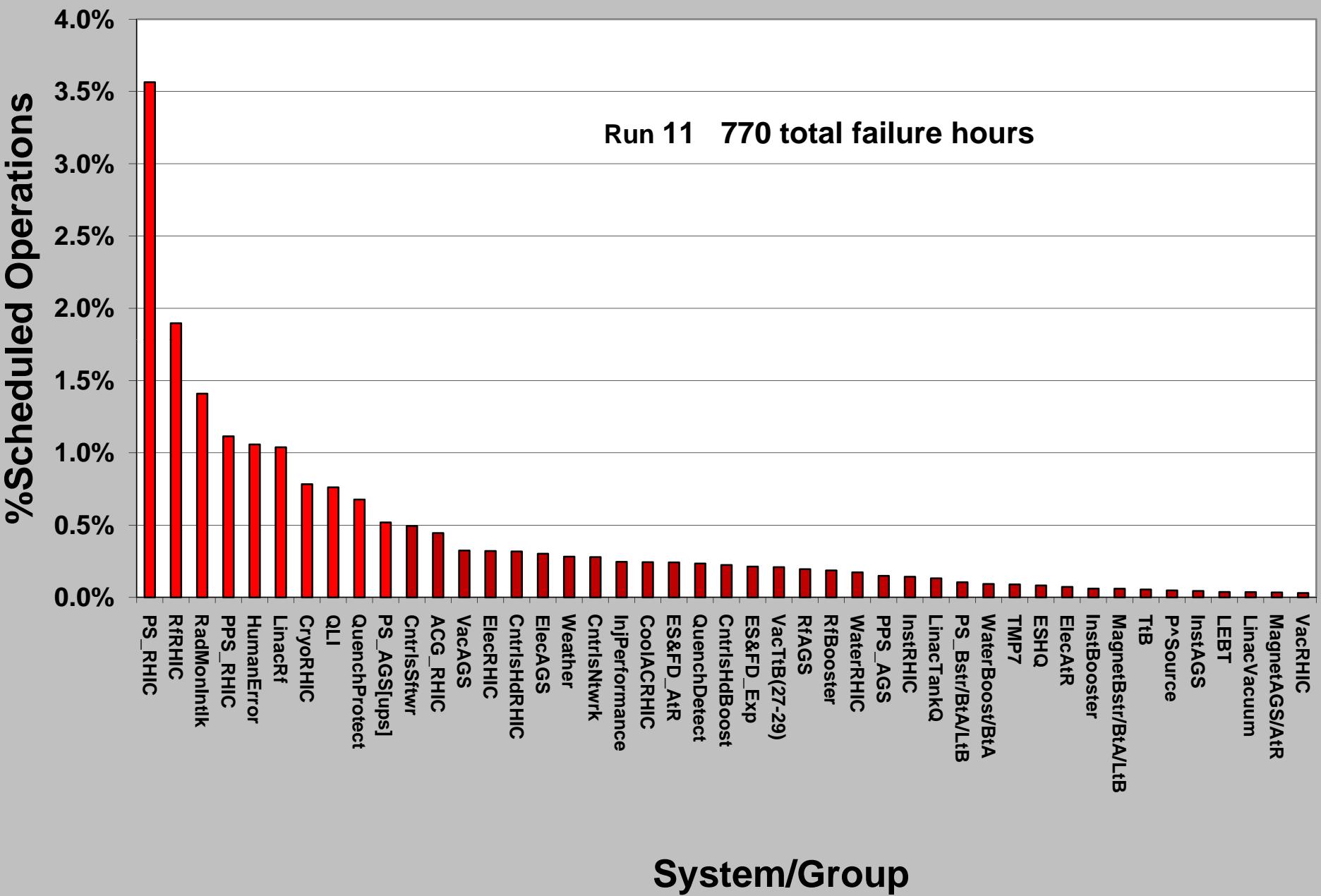


Run 11 v Run9 MTBF

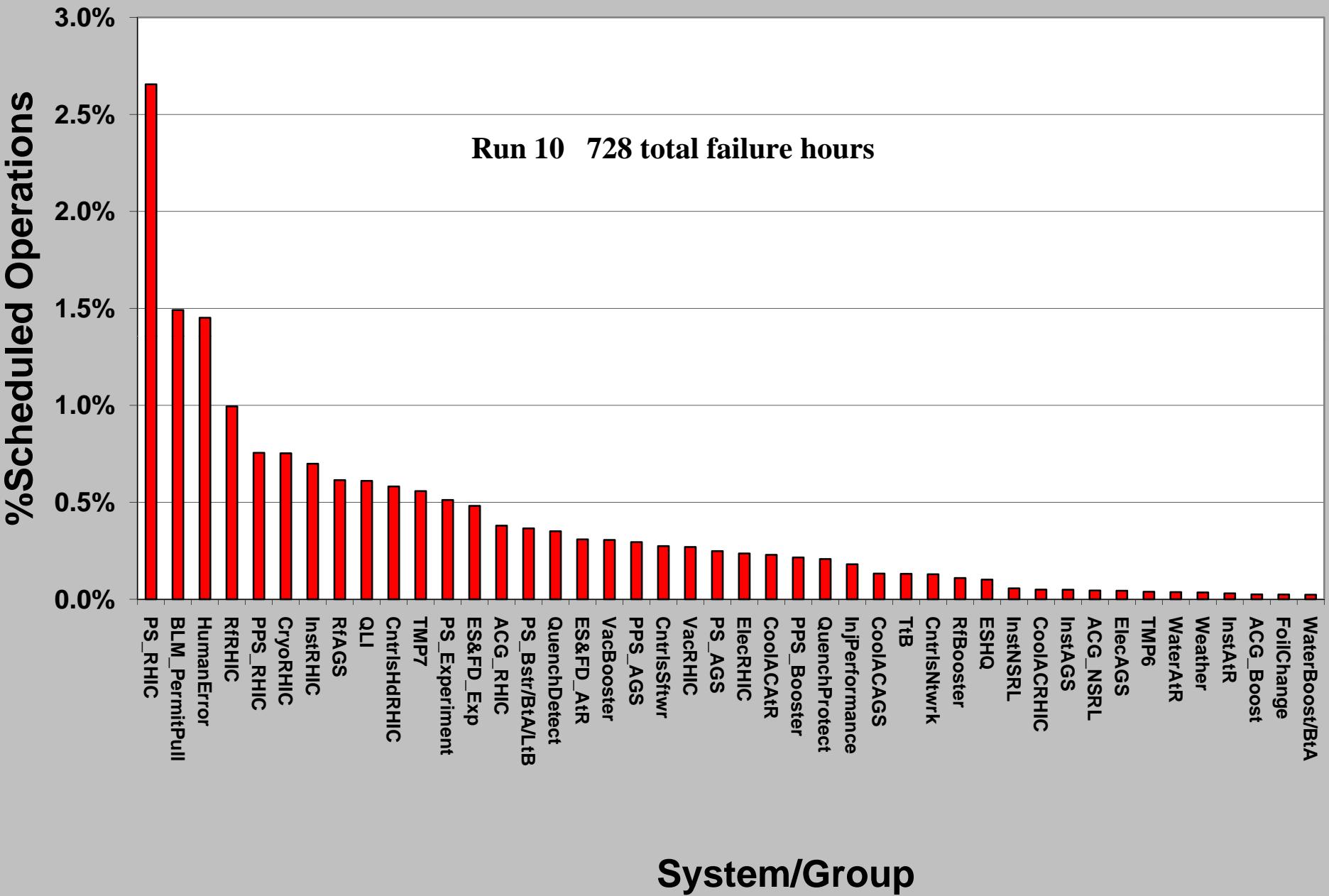


RHIC Run11 Failure Hours (> 1 hr.) by System/Group

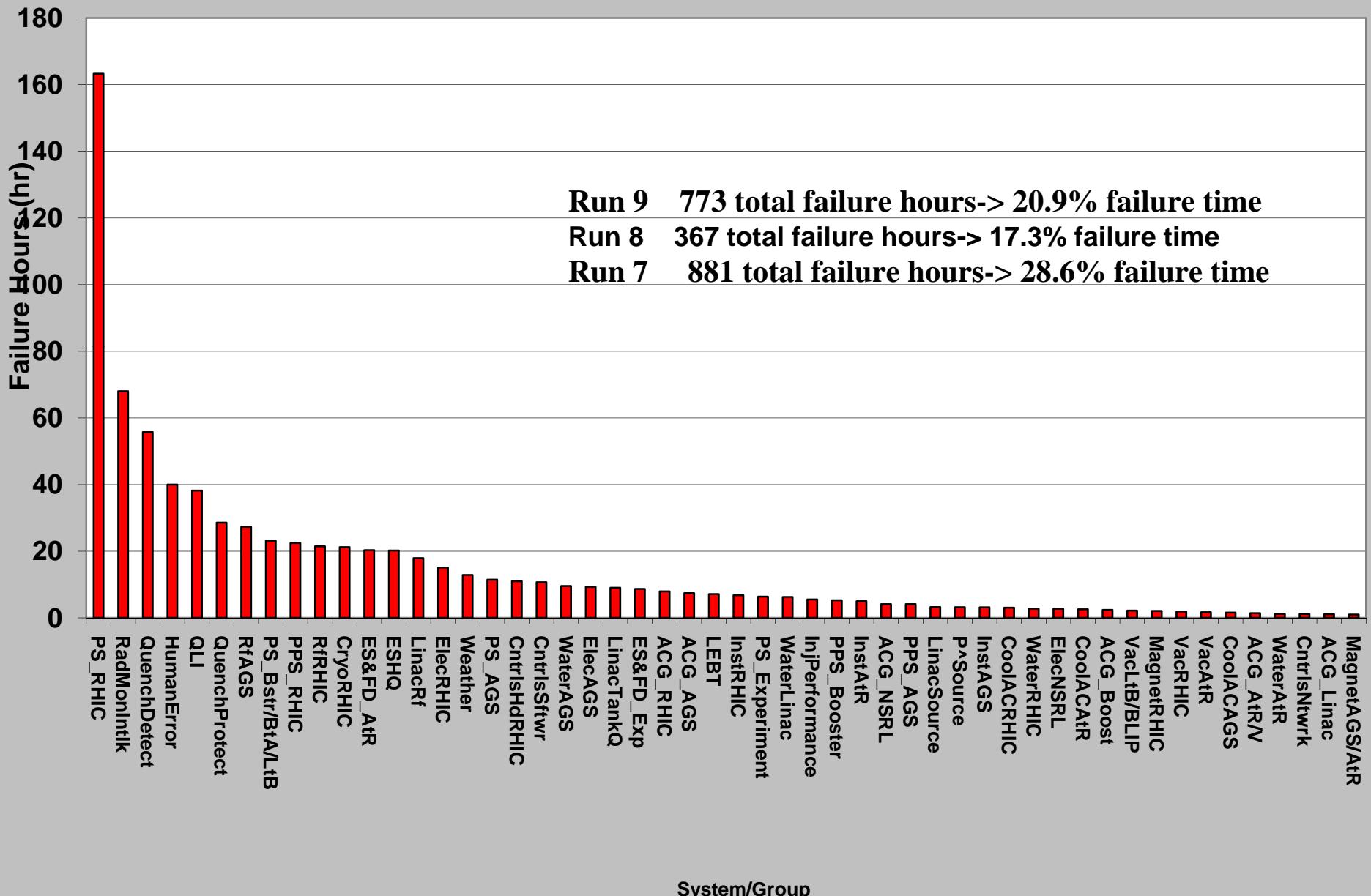
Run 11 770 total failure hours



RHIC Run10 AuAu Failure Hours (> 1 hr.) by System/Group

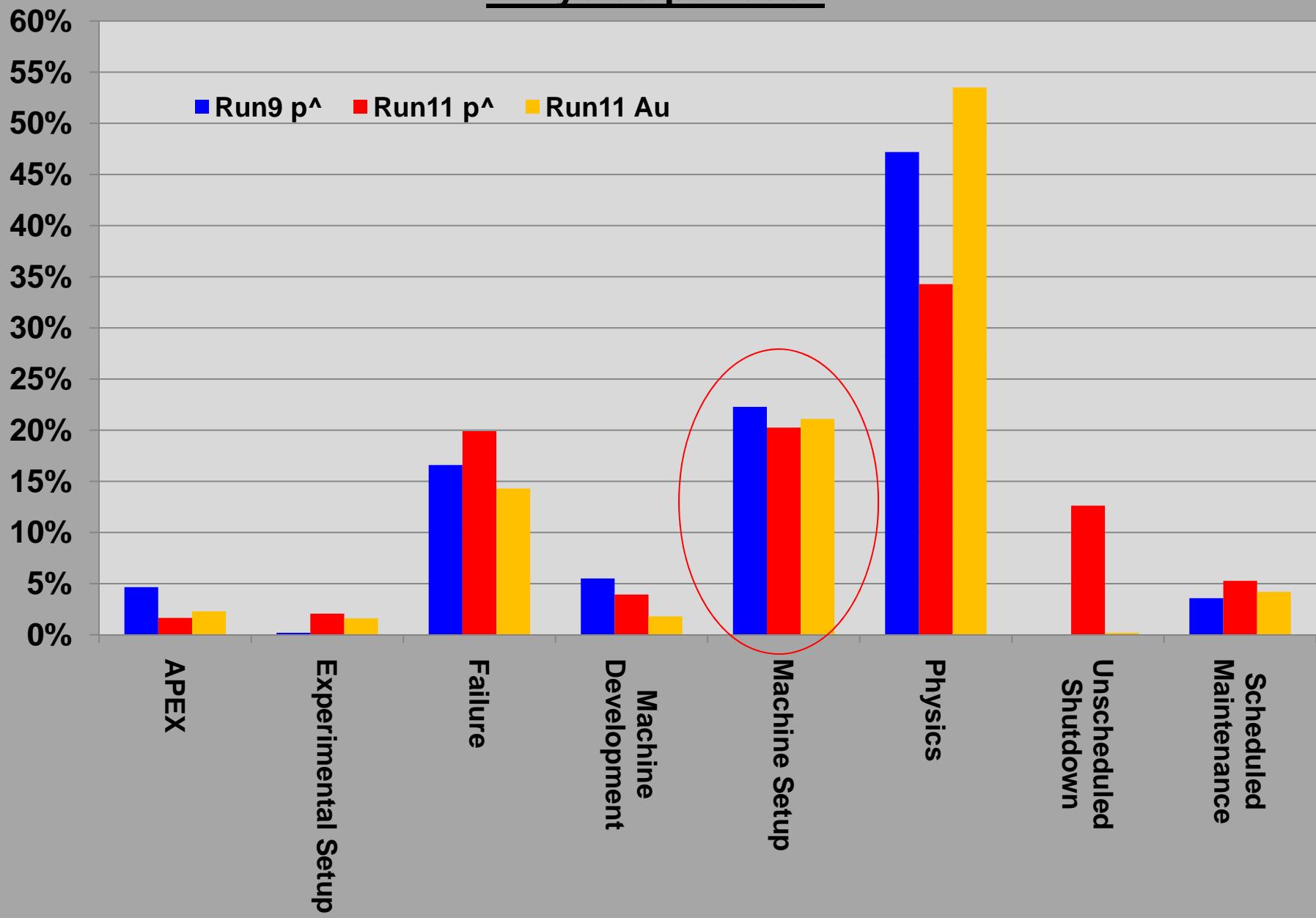


RHIC Run9 p⁺p⁺ Failure Hours (> 1 hr.) by System/Group

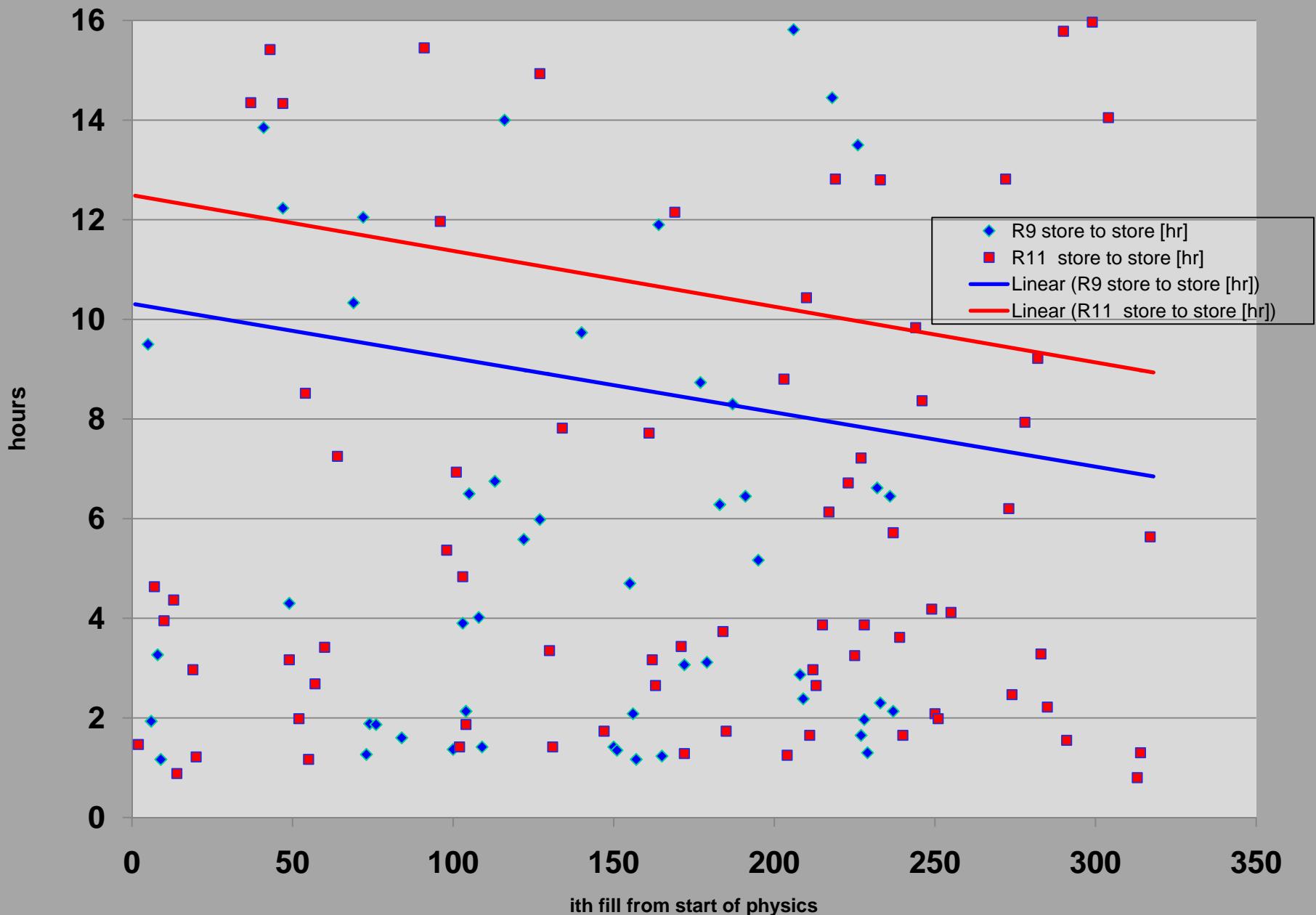


"State" Comparison Run9 v Run11

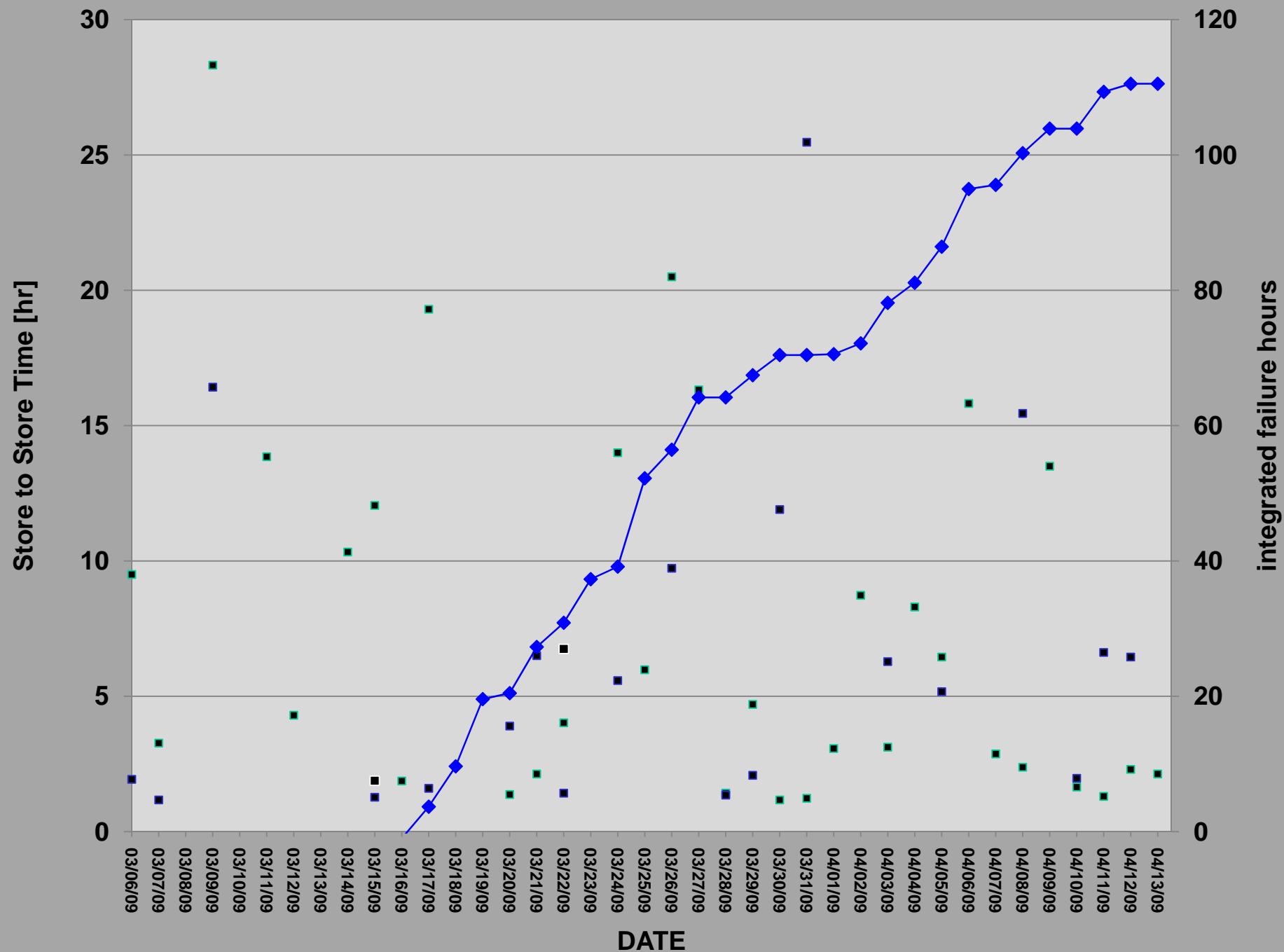
"Physics periods"



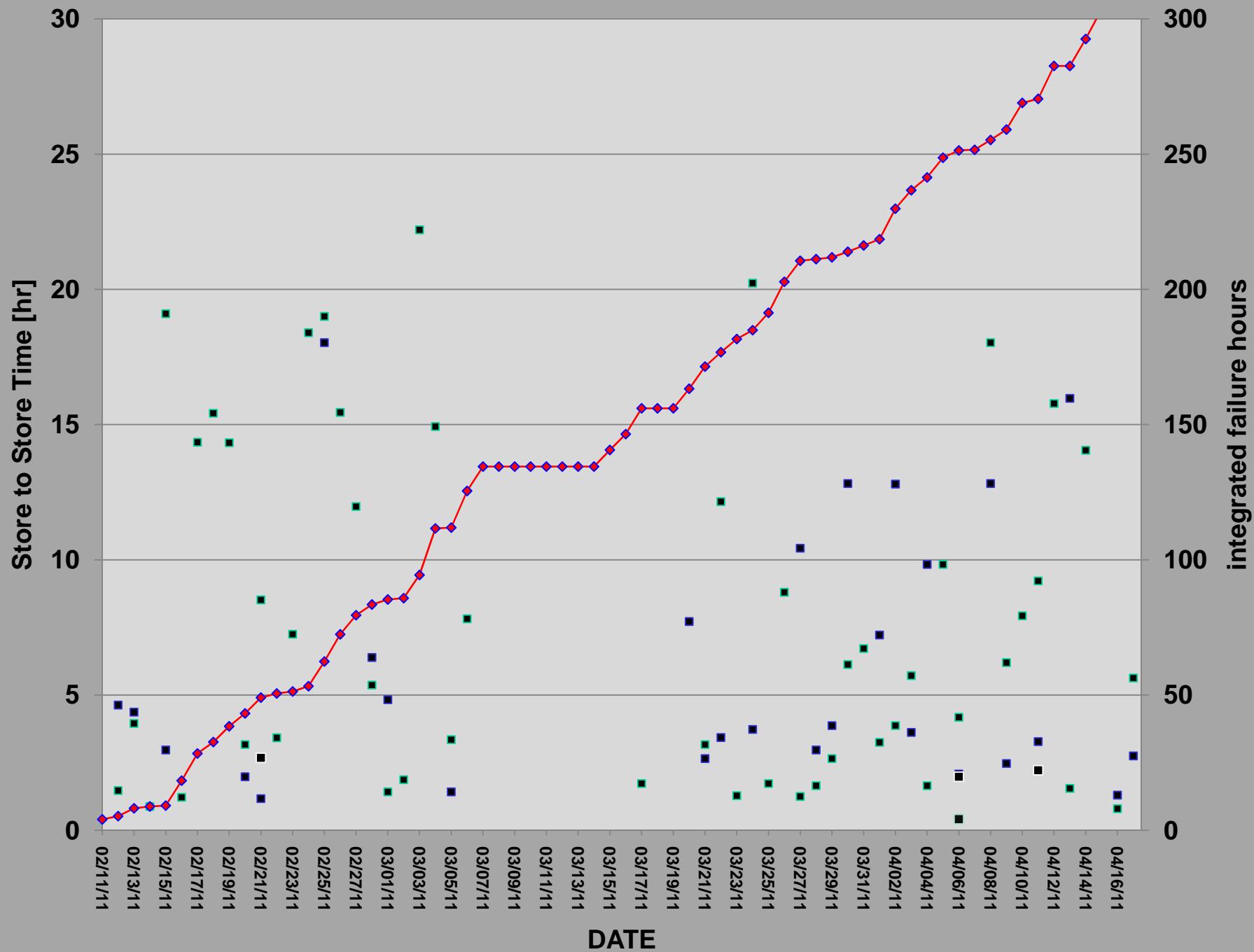
p^\wedge Store to Store time (Run9 v Run11-- all fill numbers)



R9 p[^] store to store [hr] by date



R11 p[^] store to store [hr] by date



SetUp – where the devil is

- Run 11 319 fills
[start to end of physics]
- Average time new fill to ENERGY (1st) acc-ramp -- 45 minutes
- New Fill to Acc-ramp duration > 1 hour for 26% of fills.
 - Appears dominated by Failures (50% of 83 fills analyzed)

Conclusions

- MTTR Run11 (250 GeV) p[^] worse vs. Run09 (250 GeV) p[^]
- Longest periods between fills – dominated by failure.
- Anecdotal – Human Element in Run9 p[^]
 - Au Operation – “Strong Run Coordinators” Brown/Marr kept reigns on MD and other activity
 - p[^] Operation – large number of interruptions allowed us to accept “just one more little interruption” – THERE ARE NO LITTLE INTERRUPTIONS