

WWW

Who I am, What I did, and What I'm doing recently
its NOT world wide web

PHENIX Spinfest at RIKEN

Jul 3, 2013

Chong Kim

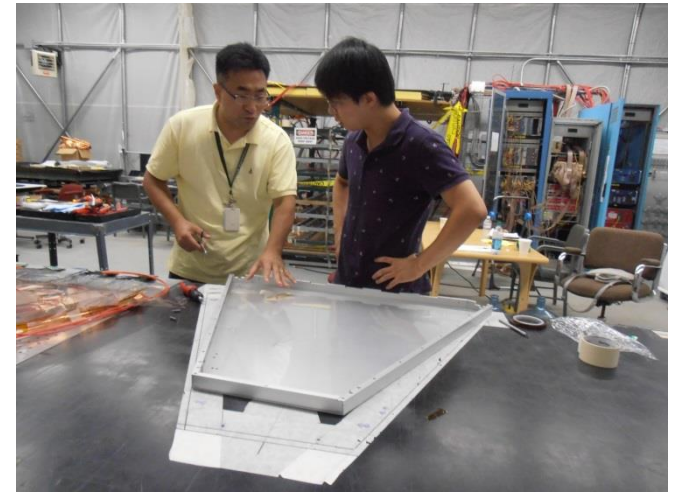
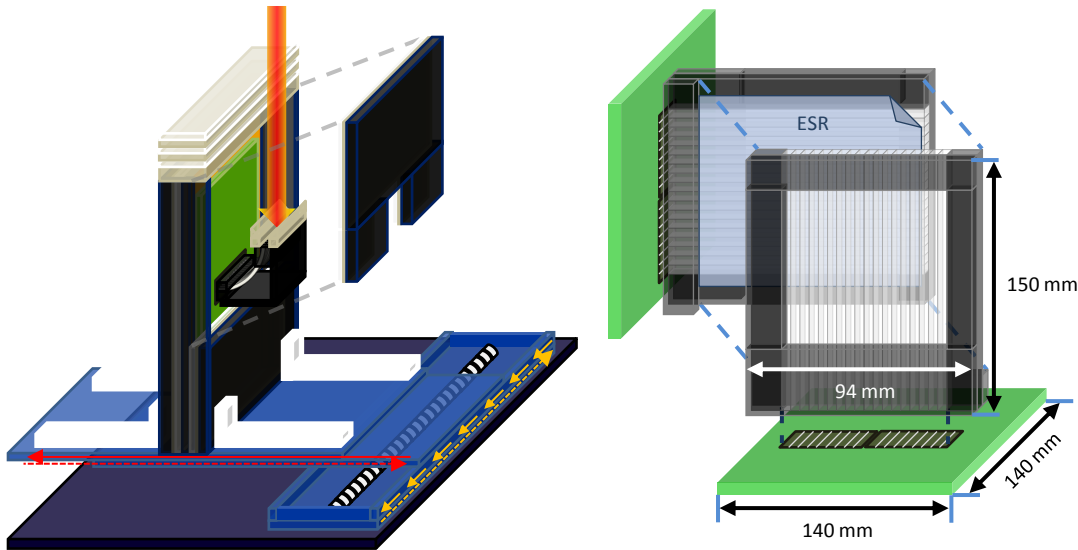
Korea University / RIKEN

Who I am

- Name: Chong Kim (金聰)
 - Meaning? clever, or have a sensitive ears (I don't know what my father thought, too)
- Nationality: S. Korea or Korea, Republic of
- Gender: Male
- Affiliation: Korea University / RIKEN
- What else? maybe you can ask me :-)
- Biggest concern in these days:
 - Spinfest and my research, of course
 - ~~Evading MMA (military manpower administration) official~~
 - World peace!

What I did

- Participated in prototype detectors' R&D during Master's degree
- Joined PHENIX in 2009
- Participated in assembly and QA of PHENIX RPCs

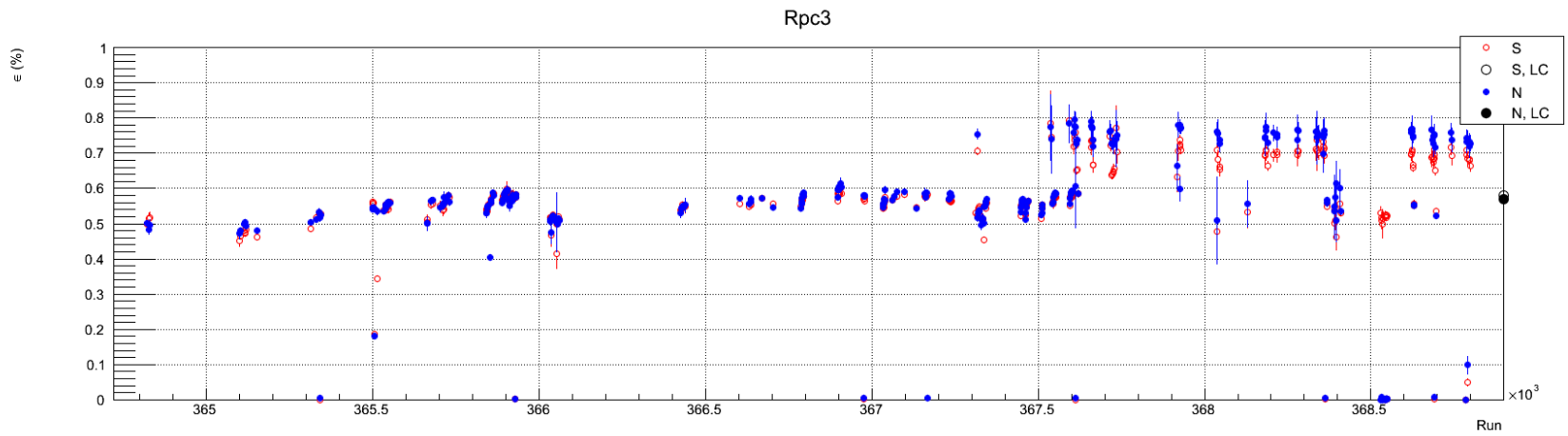
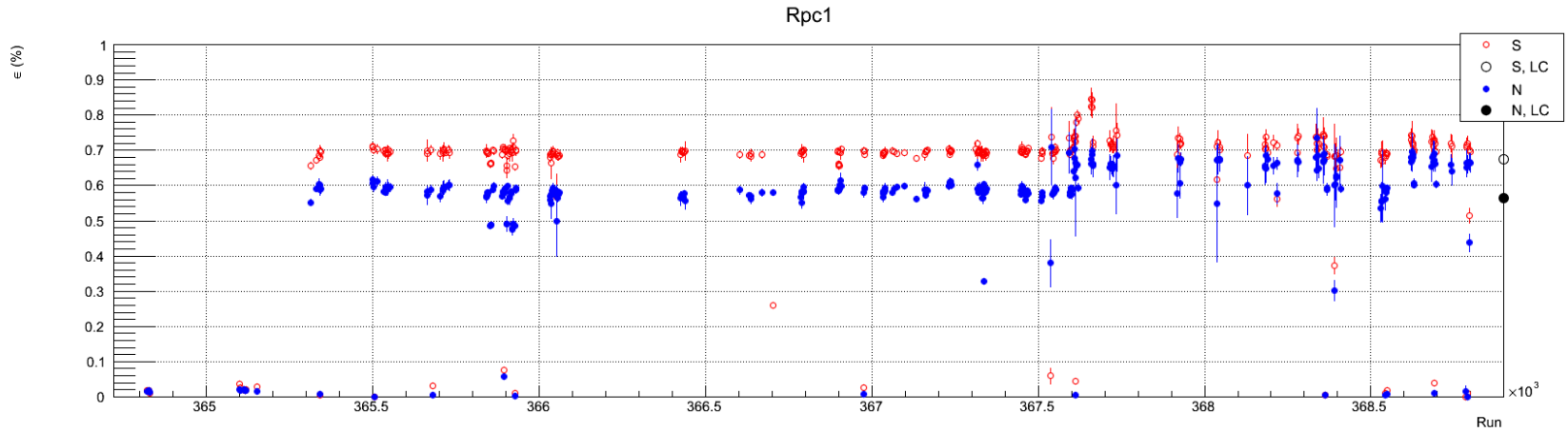


What I'm doing

- Research topic: Run 12 pp510 GeV $W \rightarrow \mu$ analysis, with Francesca, Mike B. Ralf, Richard H., and Sangwha
- In $W \rightarrow \mu$ analysis:
 - RPC efficiency
 - S/BG ratio by using unbinned maximum likelihood fit
 - Now I'm calculating W trigger efficiency from last week

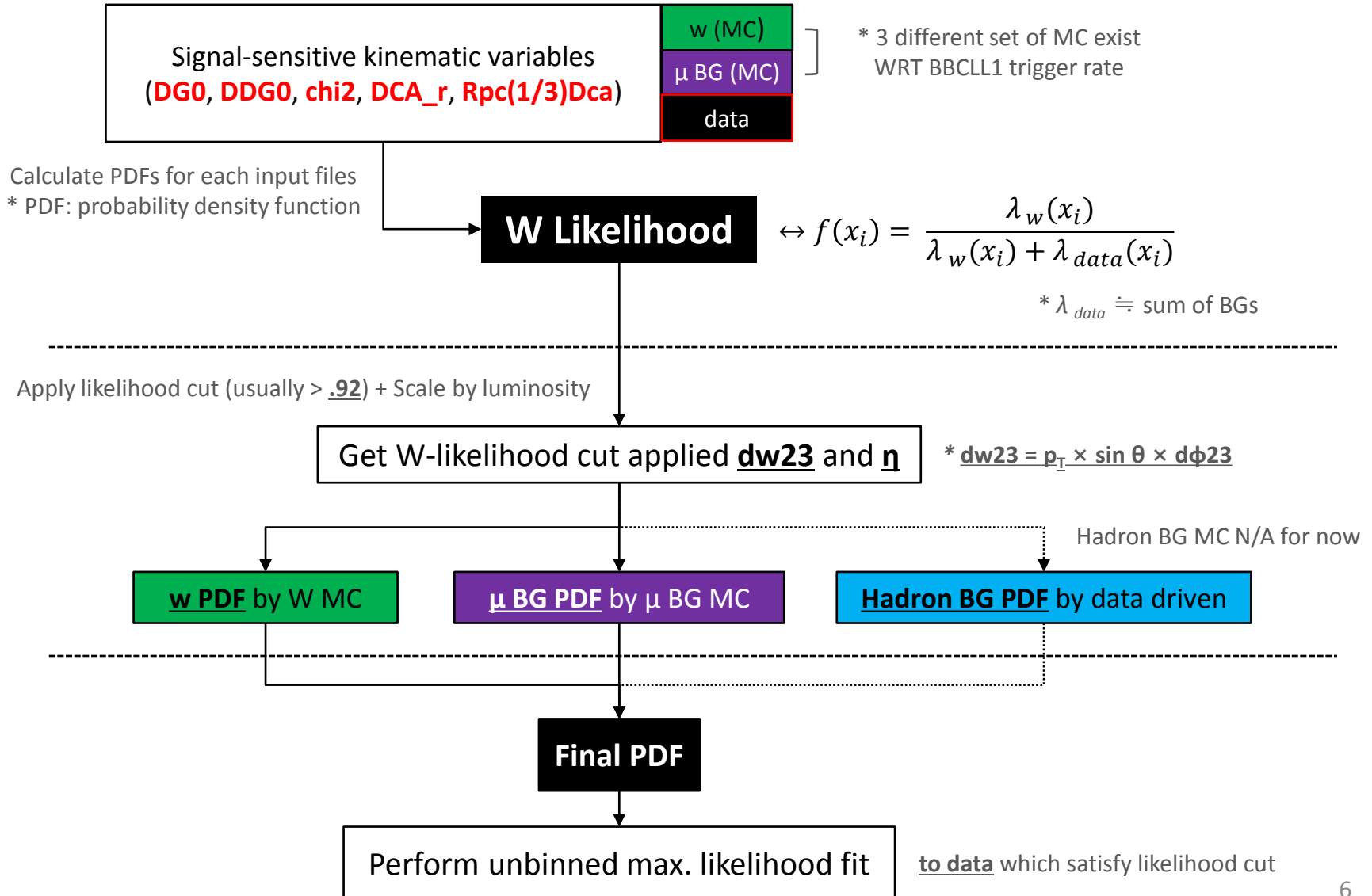
RPC efficiency

Data



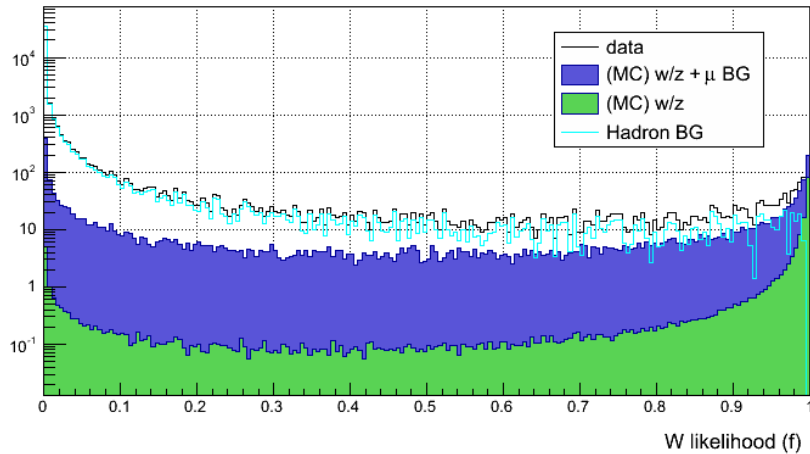
- RPC efficiency vs. Run
 - LC: luminosity corrected efficiency

S/BG ratio (calculation process)



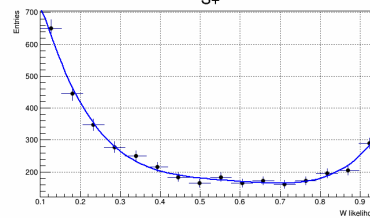
S/BG ratio

S-

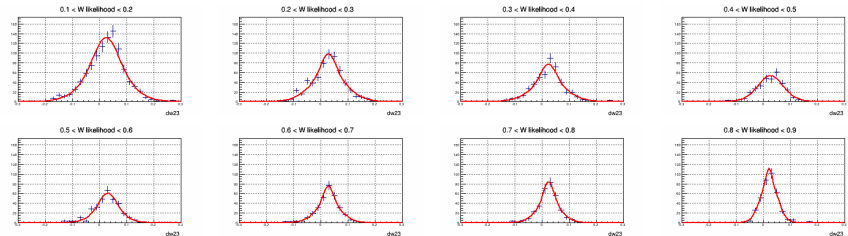
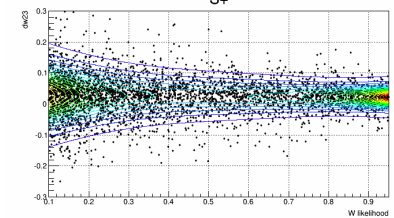


Example of W likelihood distribution

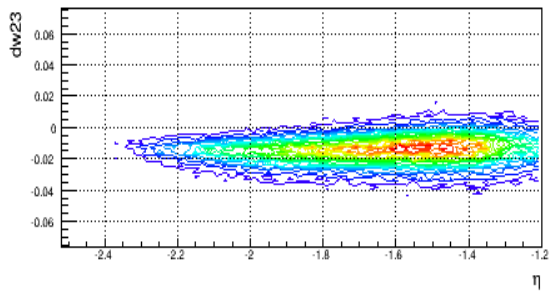
S+



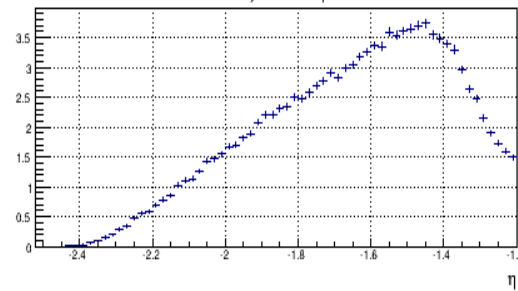
S+



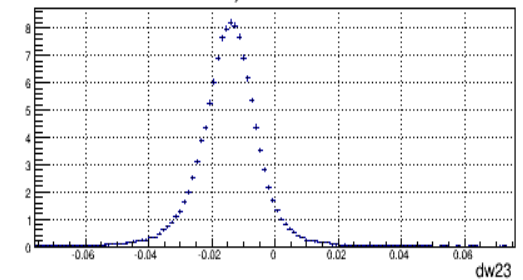
Example of Hadron BG extrapolation



Projection to η

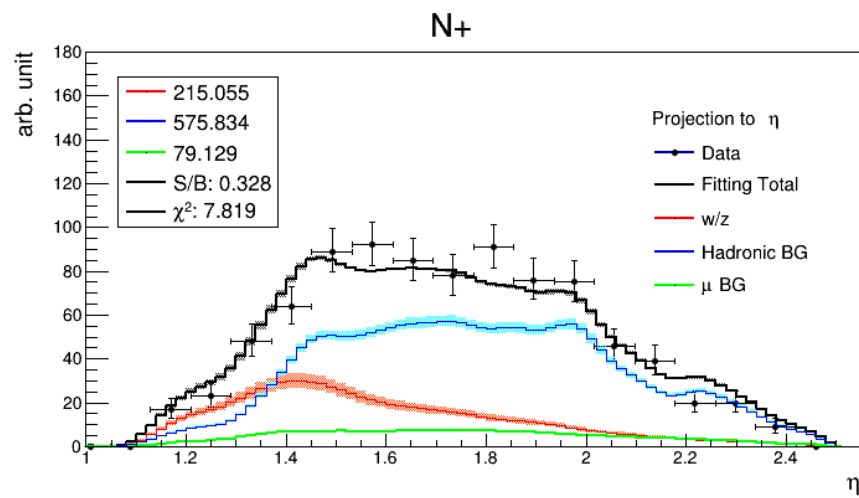
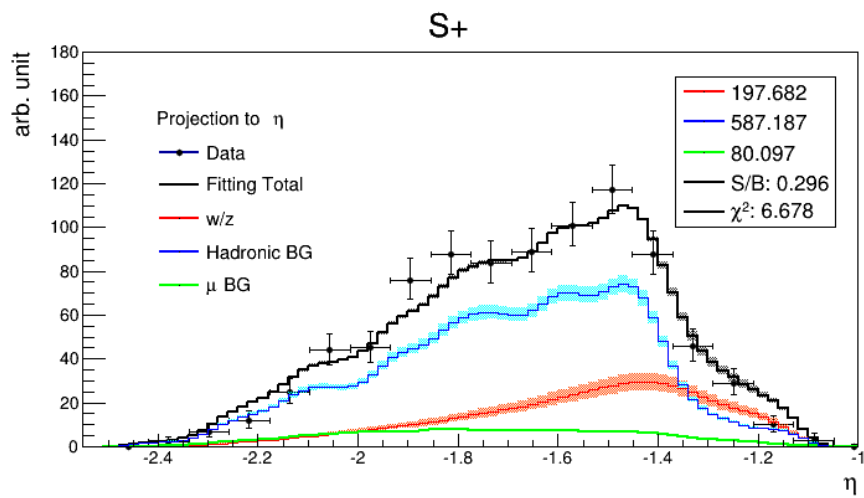
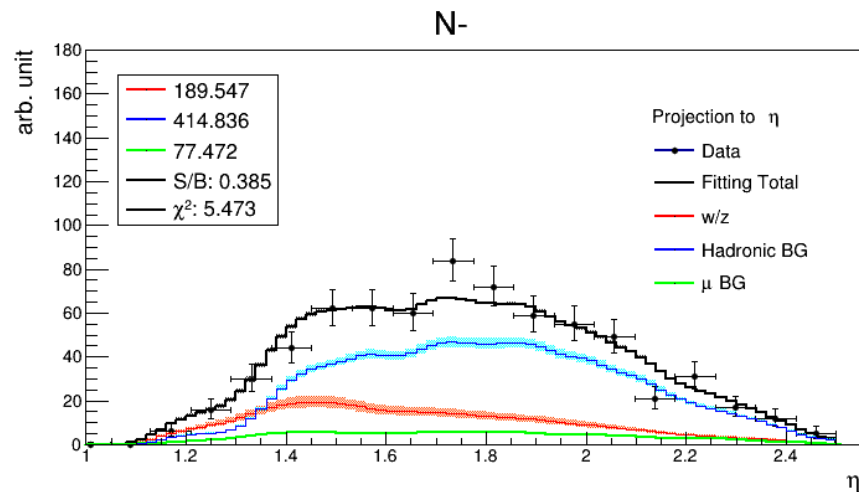
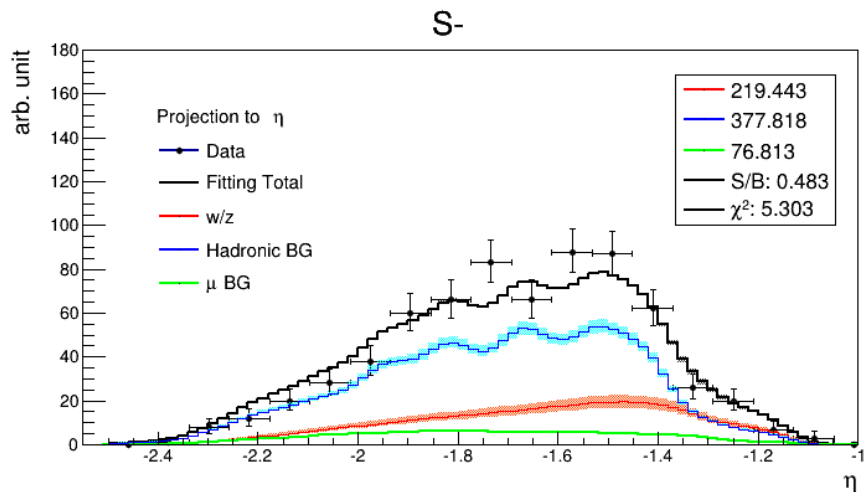


Projection to dw23



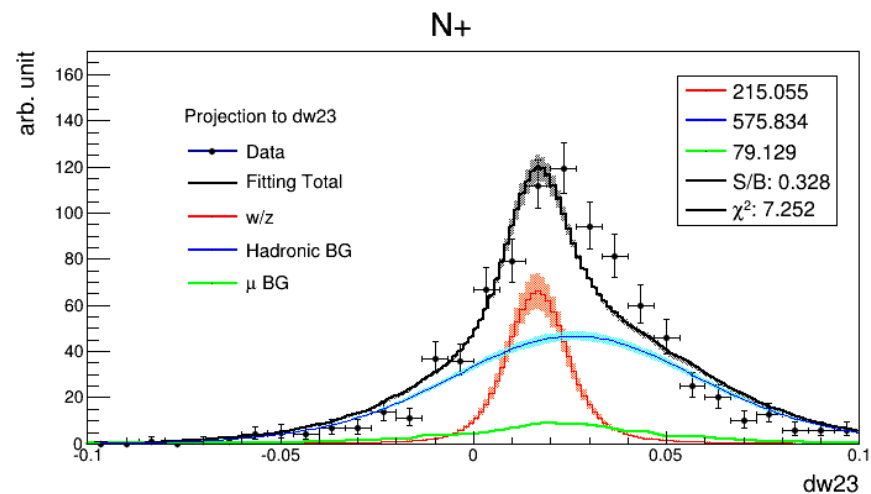
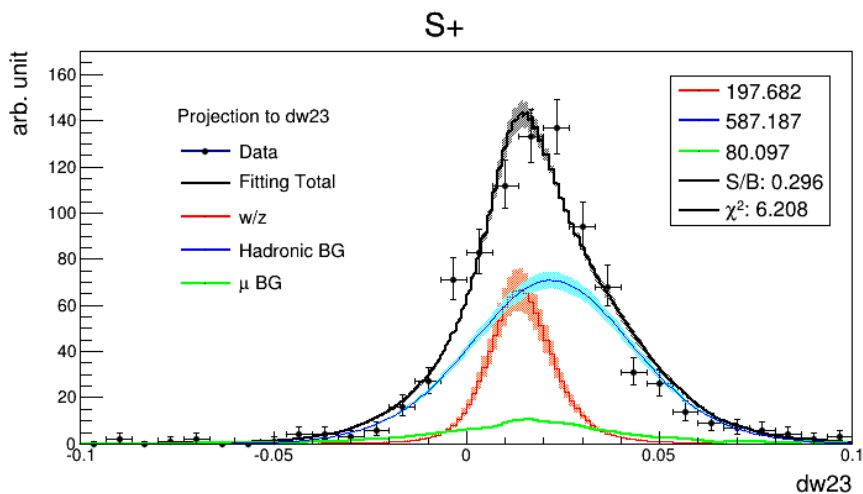
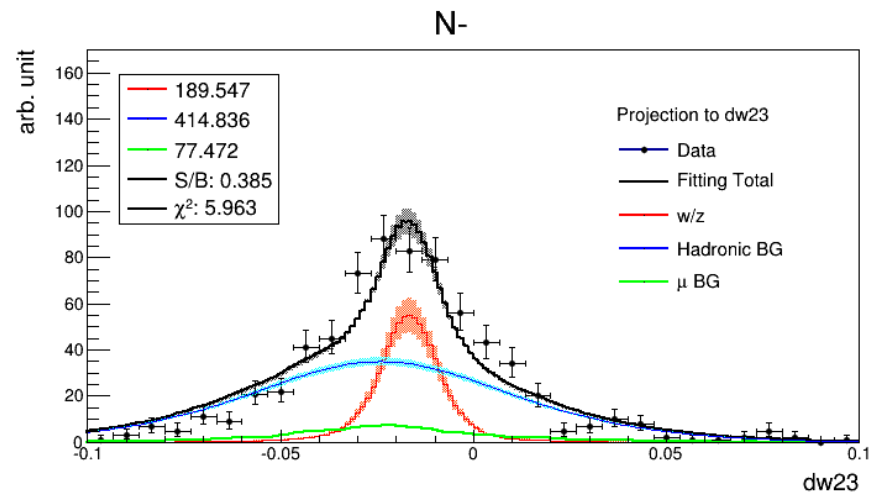
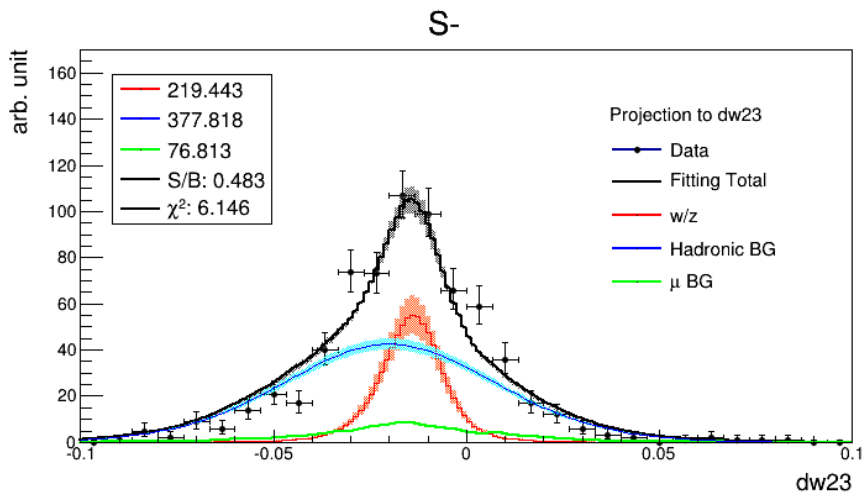
Example of dw23 and η distributions for W MC

S/BG ratio



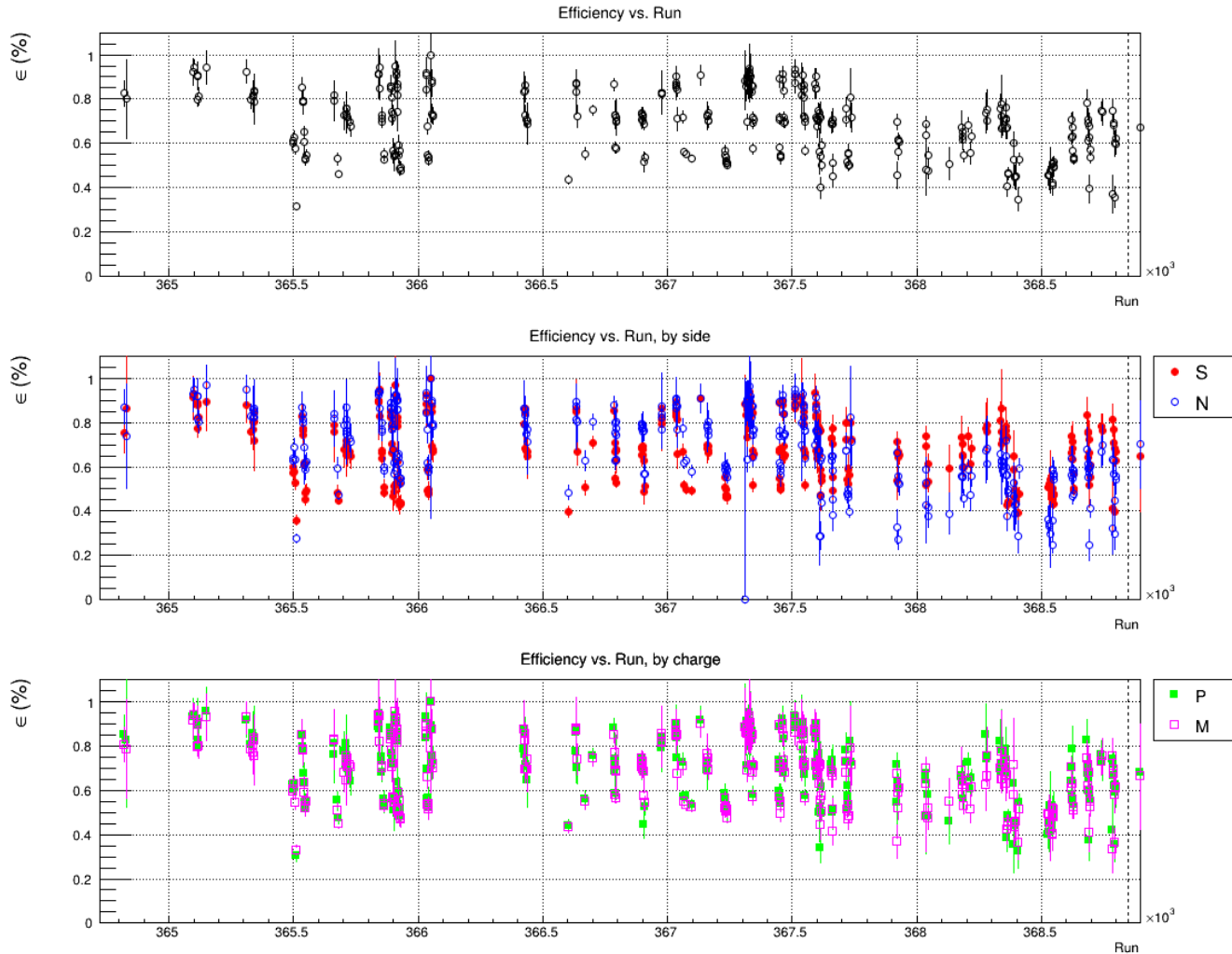
Example of Fit result: projection to the η side

S/BG ratio



Example of Fit result: projection to the dw23 side

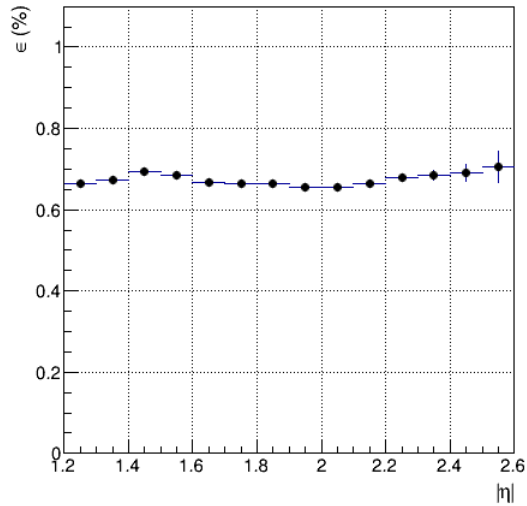
W trigger efficiency



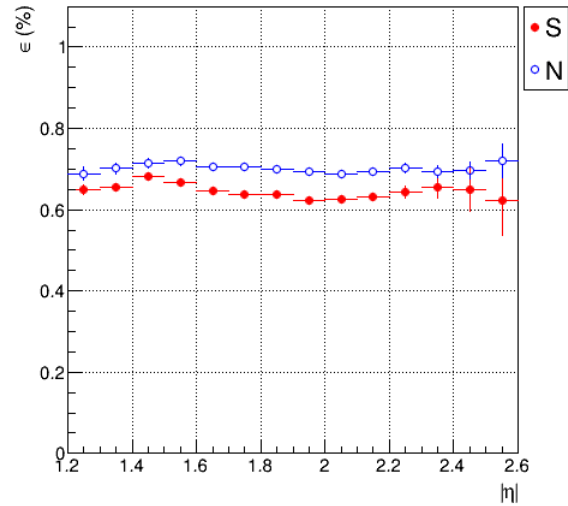
**Efficiency vs. Run for Run 12 W trigger, by using all central arm triggers
(still working on it...)**

W trigger efficiency

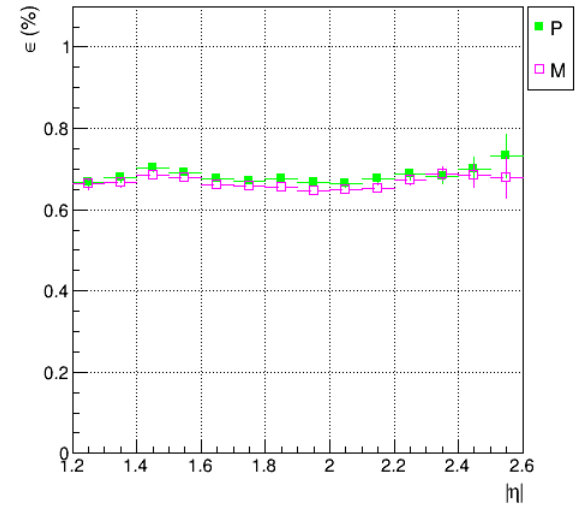
Efficiency vs. eta



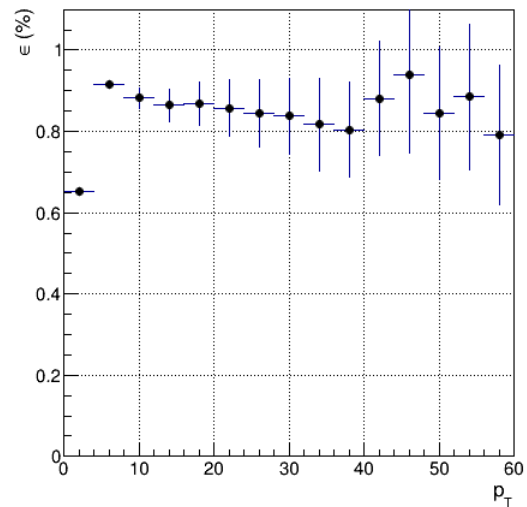
Efficiency vs. eta, by side



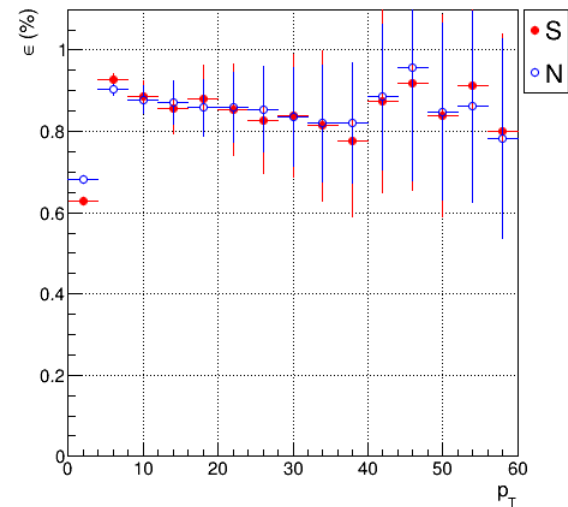
Efficiency vs. eta, by charge



Efficiency vs. p_T



Efficiency vs. p_T , by side



Efficiency vs. p_T , by charge

