Analysis Progress

for the d_2^n analysis meeting

Diana Parno

Carnegie Mellon University

January 7, 2011

1. BigBite Trigger Logic
2. Particle Identification Cuts
3. Summary
4. What's Next?

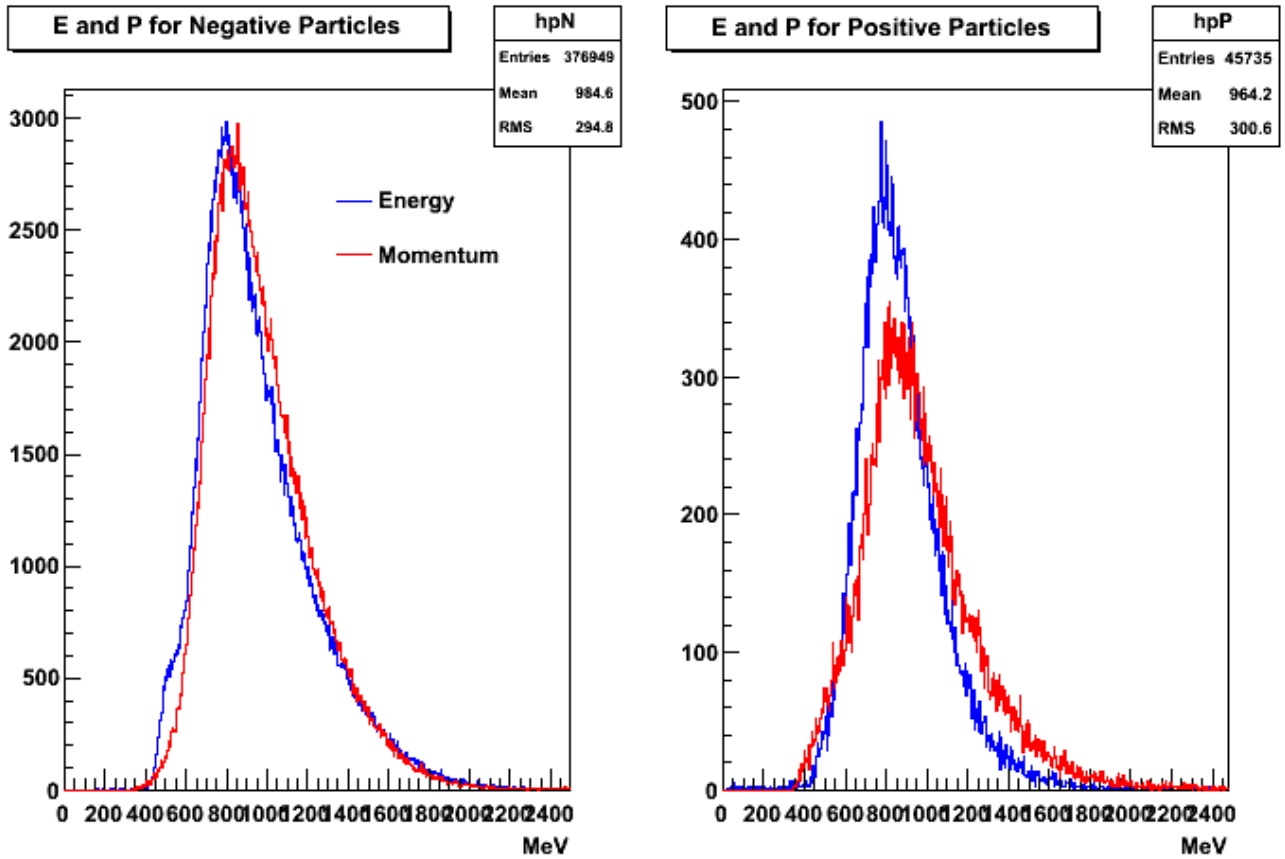
BigBite Trigger Logic

- I've updated the BigBite trigger logic diagrams to incorporate handwritten annotations
- New PDFs and Adobe Illustrator originals are on the wiki page with previous versions:

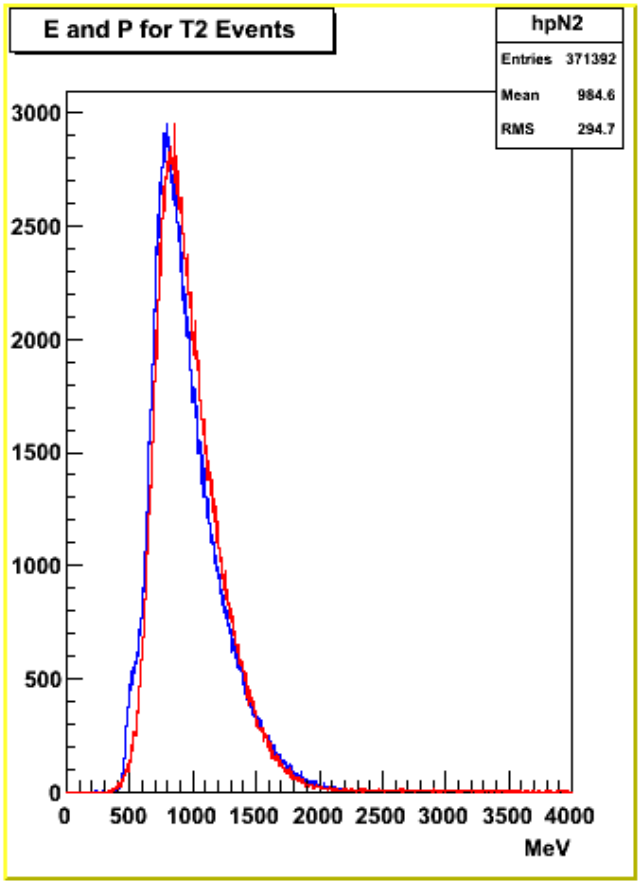
https://hallaweb.jlab.org/wiki/index.php/DAQ_Diagrams_for_E06-014

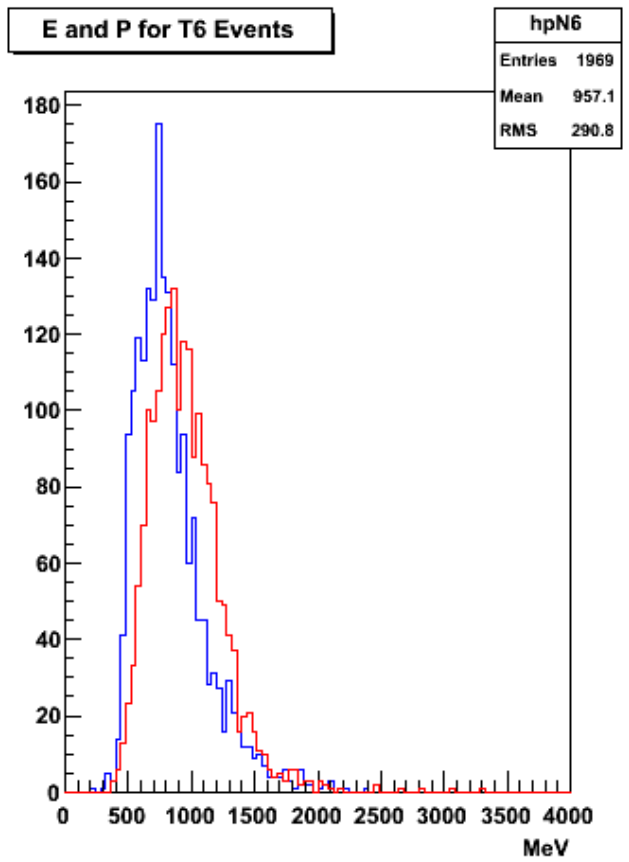
E and p (i): Charge

- $E \approx p$ for electrons and positrons
- Can we see greater discrepancies in E and p if we look at samples biased toward pions?



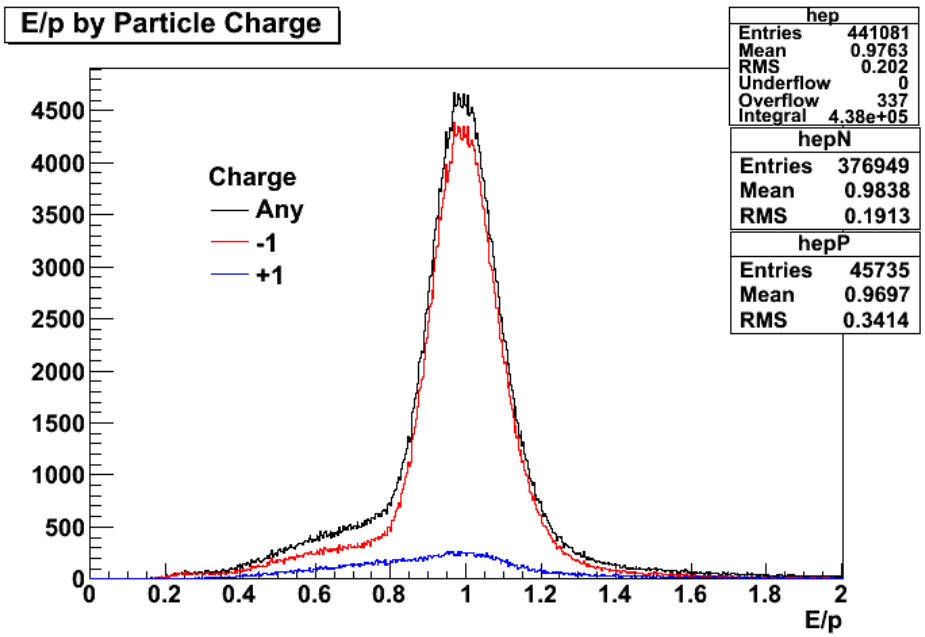
E and p (ii): Trigger Type

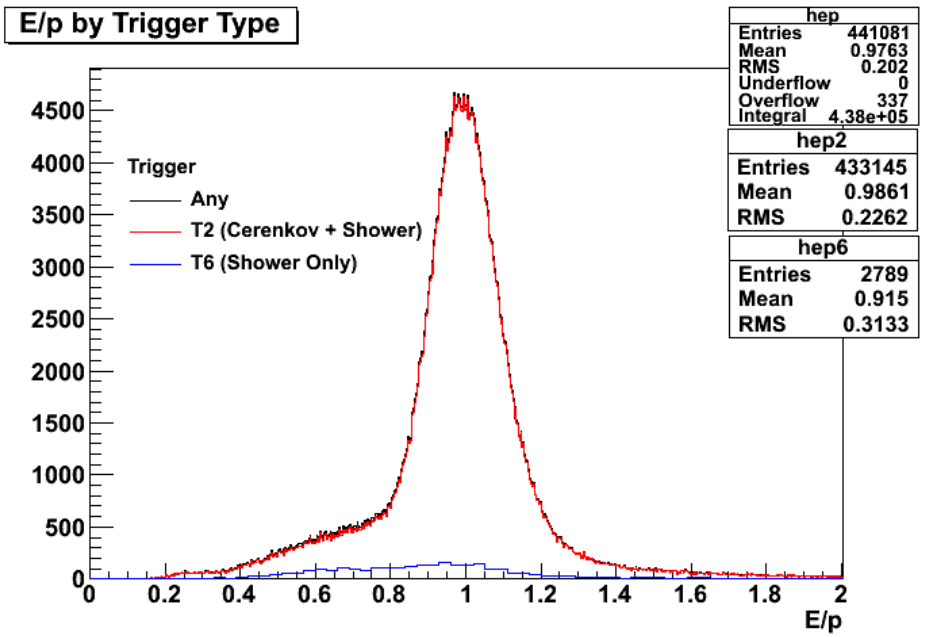




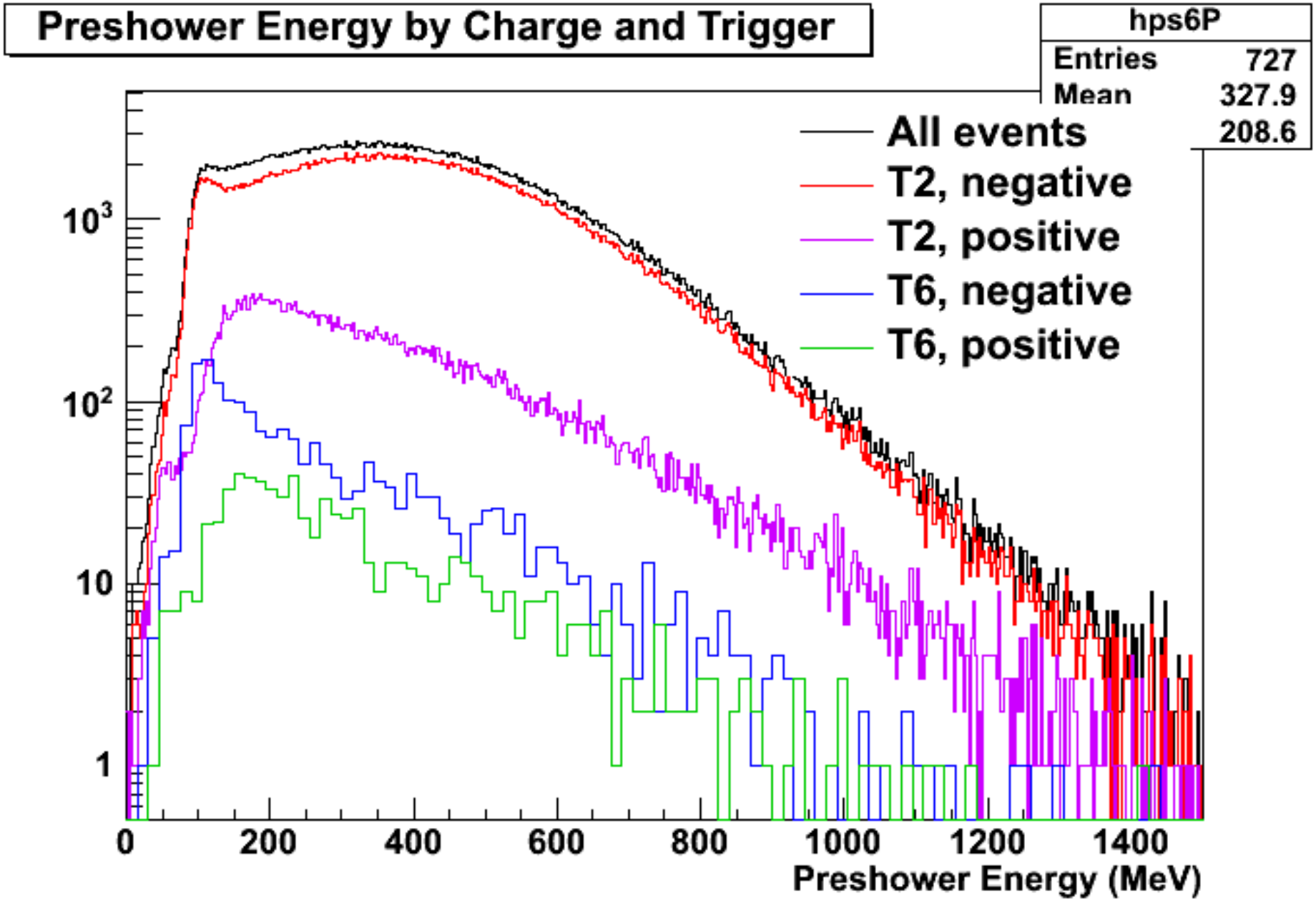
E/p

- What if we look at E/p?



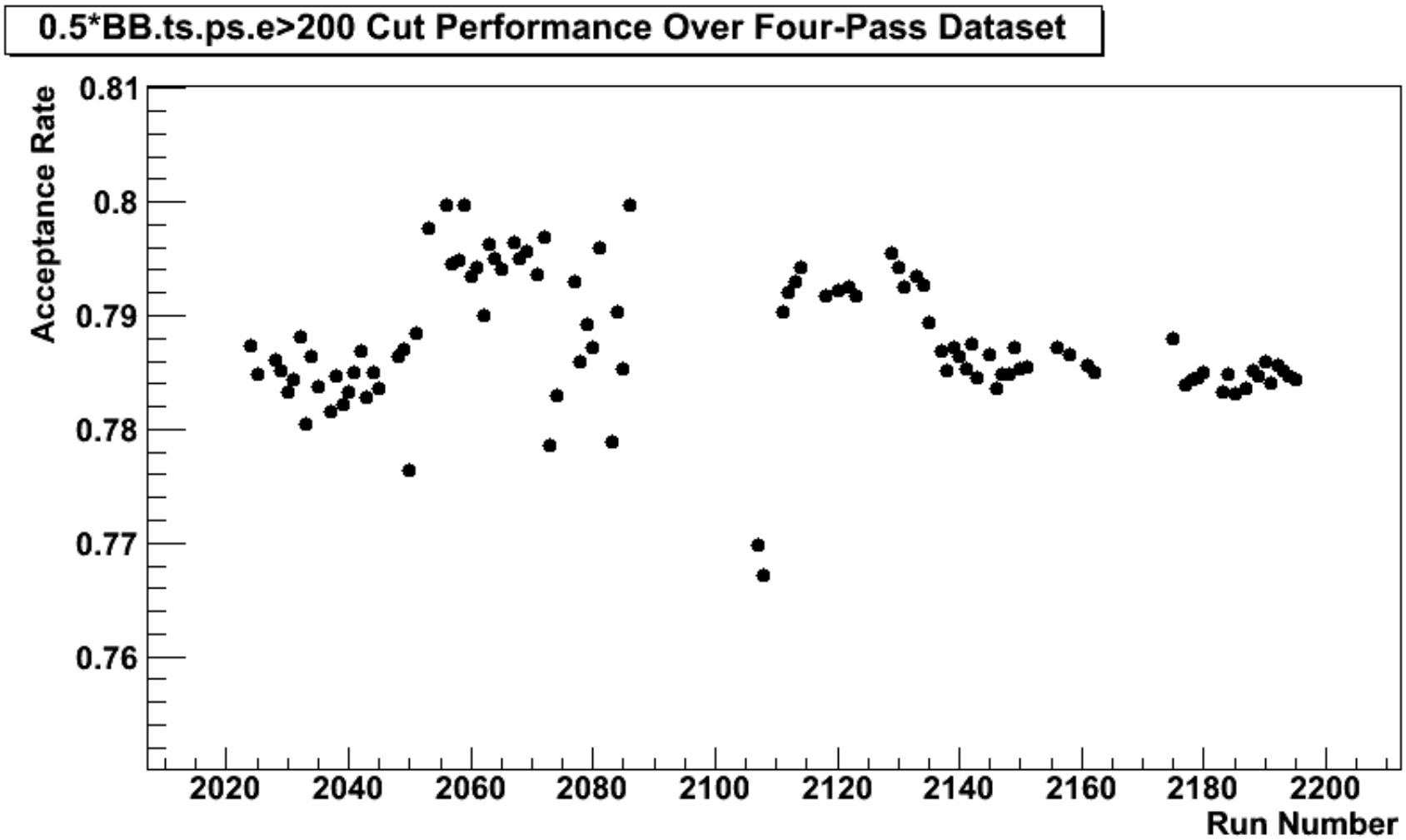


Preshower energy (i)



Preshower energy (ii)

- How does a cut at 200 MeV in preshower behave over dataset?
- I omitted Run 2163 (61.5%) to show structure better



Summary

- New BB trigger logic diagrams
- Agreement between E and p behaves as expected when broken down by charge, trigger type
- Preshower cut stable within 4 percentage points over 4-pass running
- My dissertation hit the 100-page mark Wednesday night

What's Next?

- Asymmetries
  - Explore PID cuts in BigBite (bring in Cerenkov...)
  - Study consistency of all cuts over time
  - Confirm times of HWP switches
- BigBite Optics
  - Explain width of `BB.tr.tg_ph` distribution in positive optics
- Dissertation