

Validation of Plug “Extra” Material

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- PPR energy distribution measured for plug electrons is sensitive to EM showers initiated in passive material in front of plug
- Unaccounted-for passive material (cables etc.) in front of plug is modelled by two iron disks
- Compare PPR energy of plug leg of $Z \rightarrow ee$ between data and simulation to tune disk thickness
- Check that tuned disks are included in 5.3.0pre1

PPR Energy vs Detector η

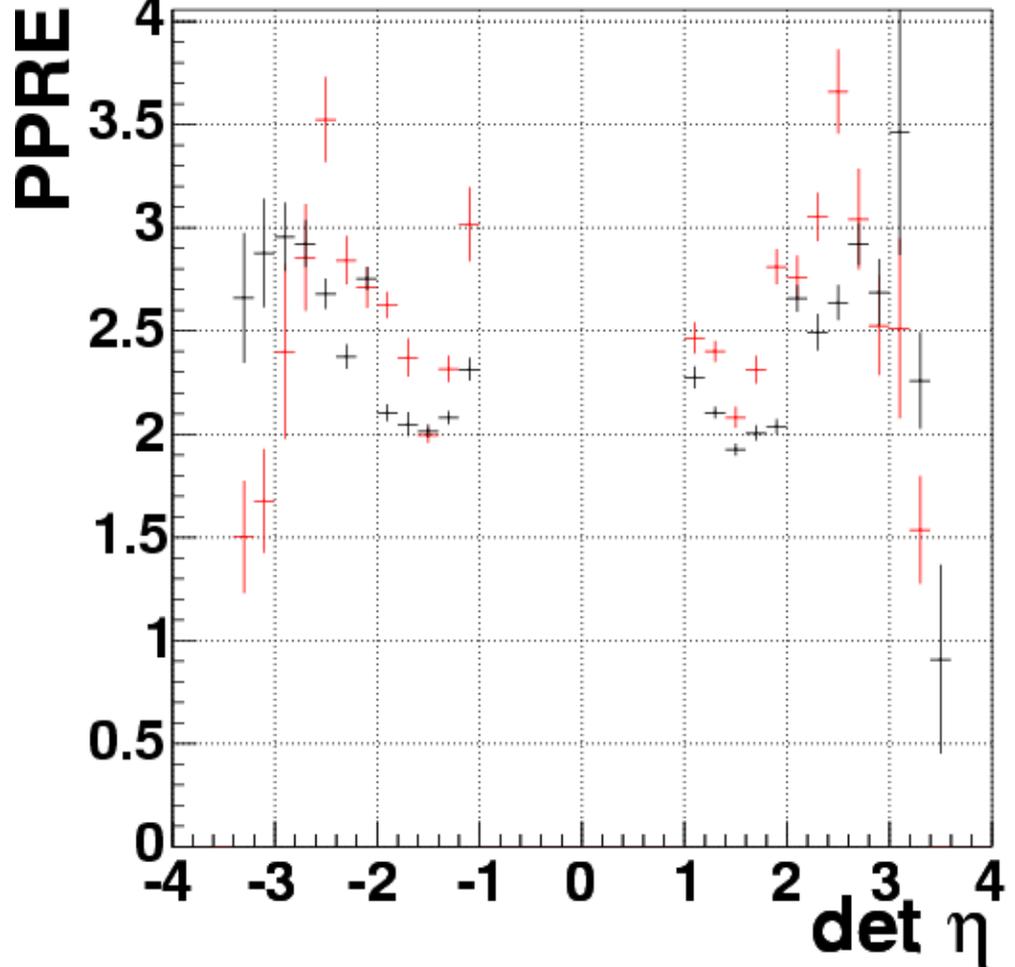
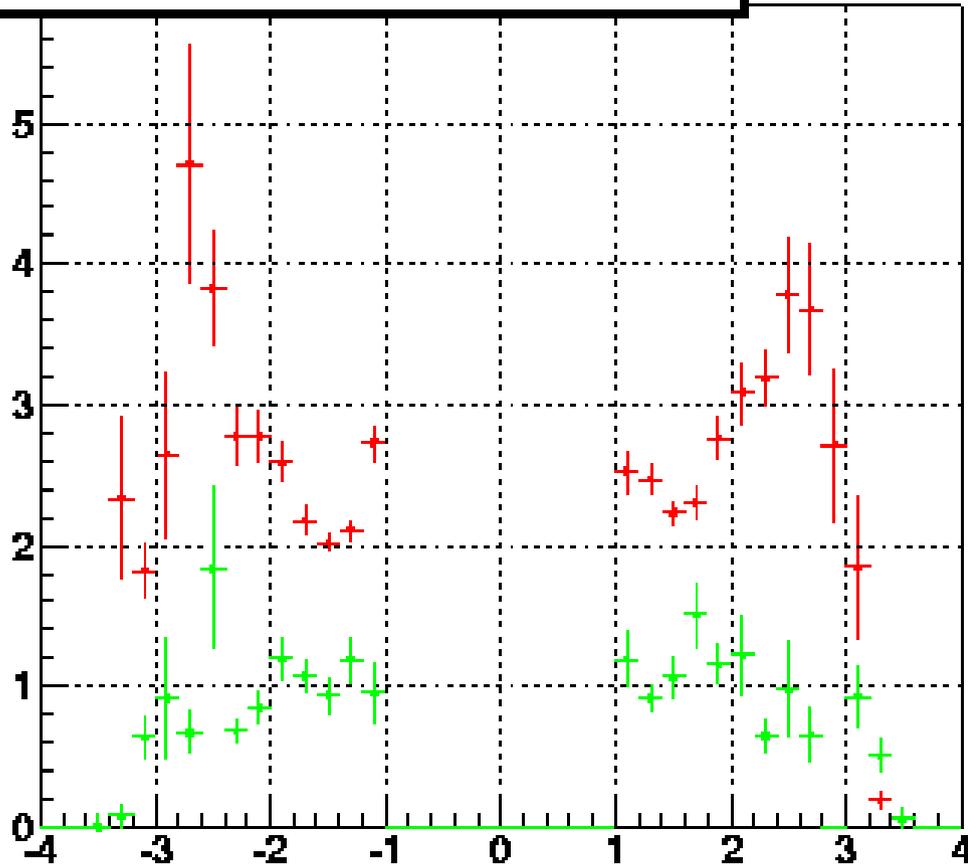
Red = data

green/black = simulation

4.9.1

5.3.0

PPR E : cluster det eta



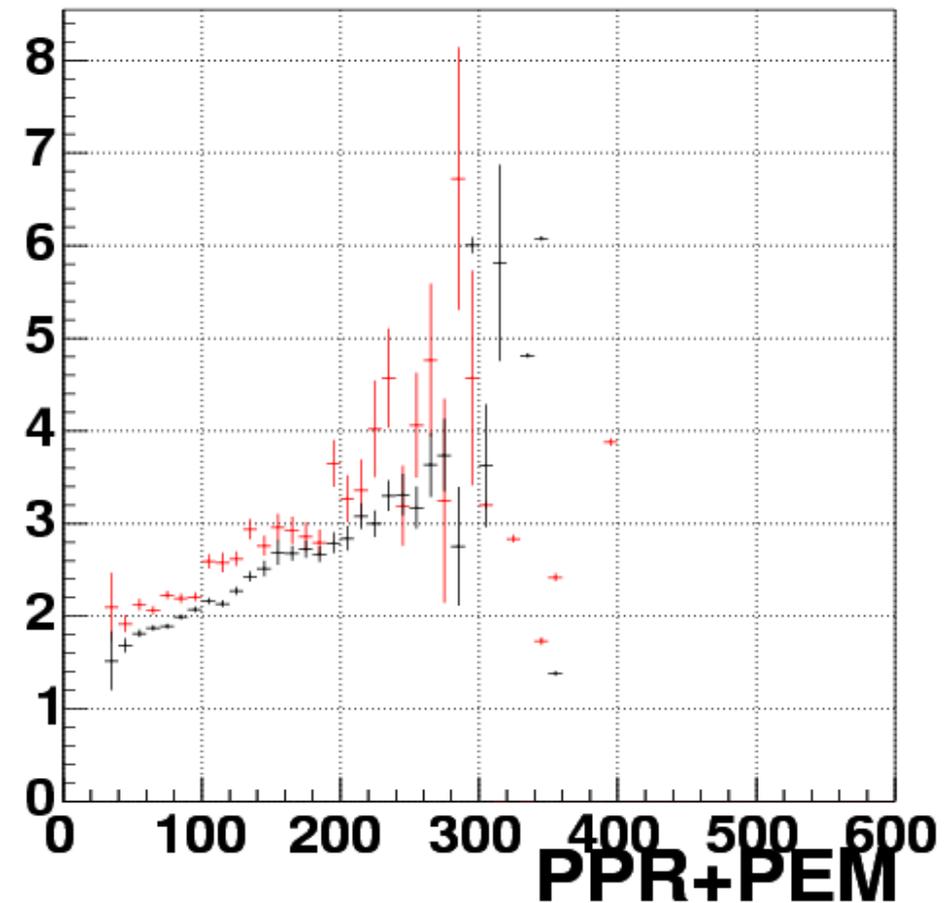
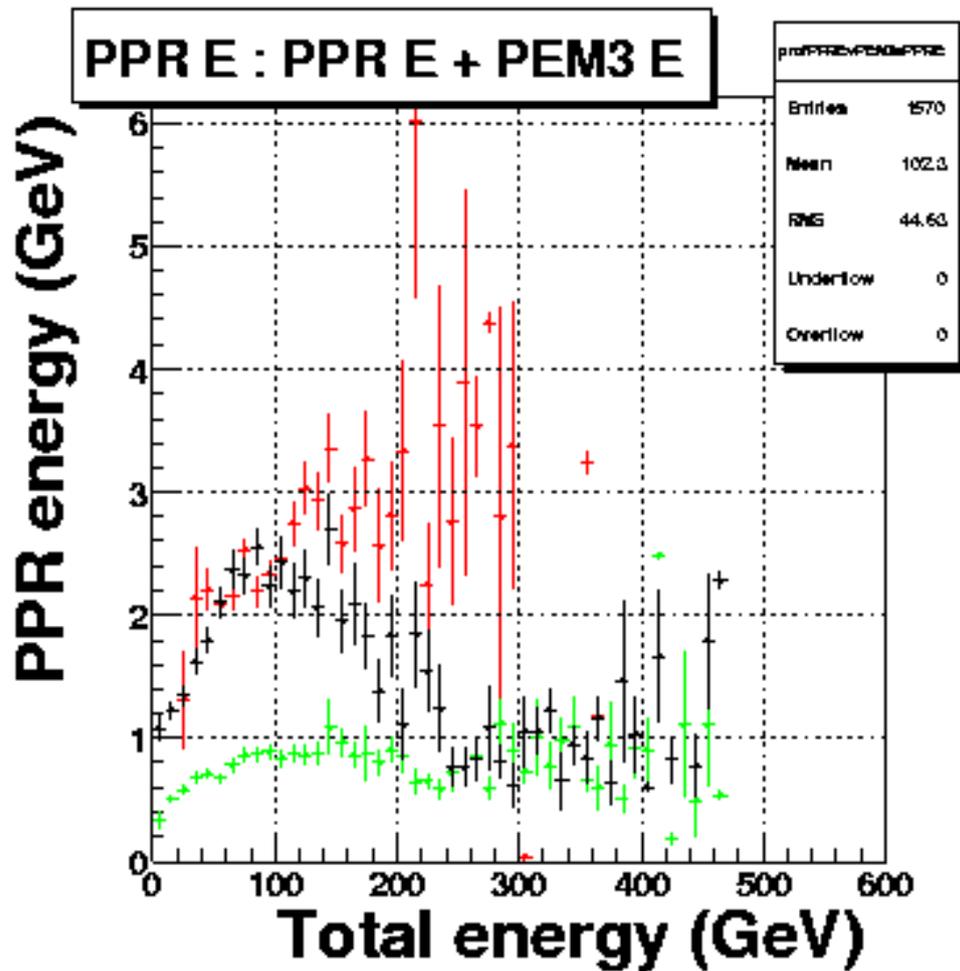
PPR Energy vs Cluster Energy

Red = data

green/black = simulation

4.9.1

5.3.0



PPR/PEM Energy Ratio vs Detector η

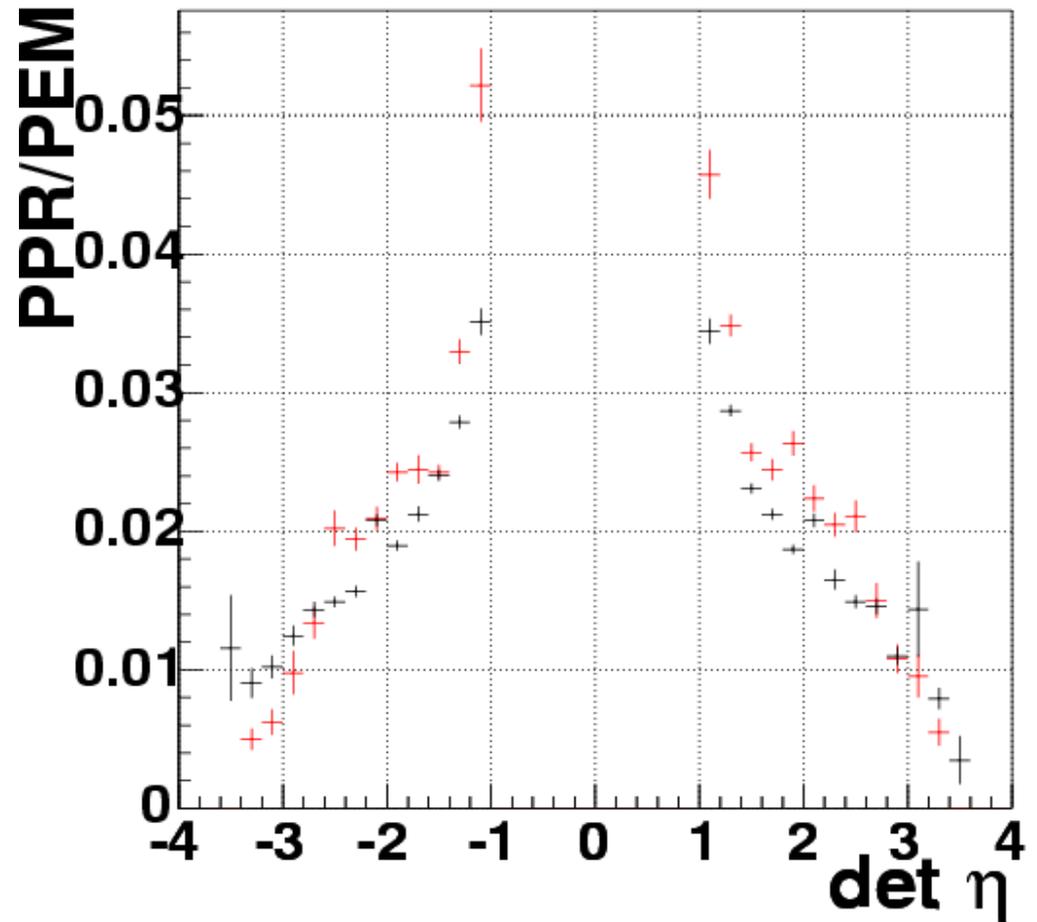
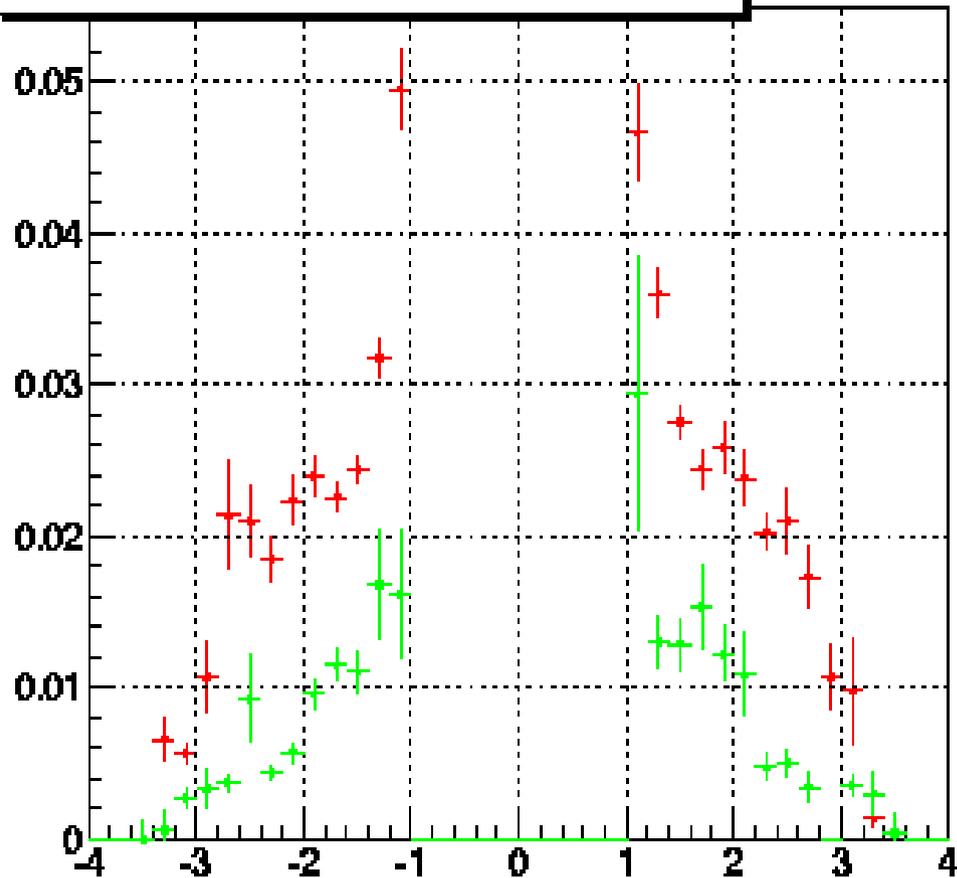
Red = data

green/black = simulation

4.9.1

5.3.0

PPR E/ PEM3 E: cluster det eta



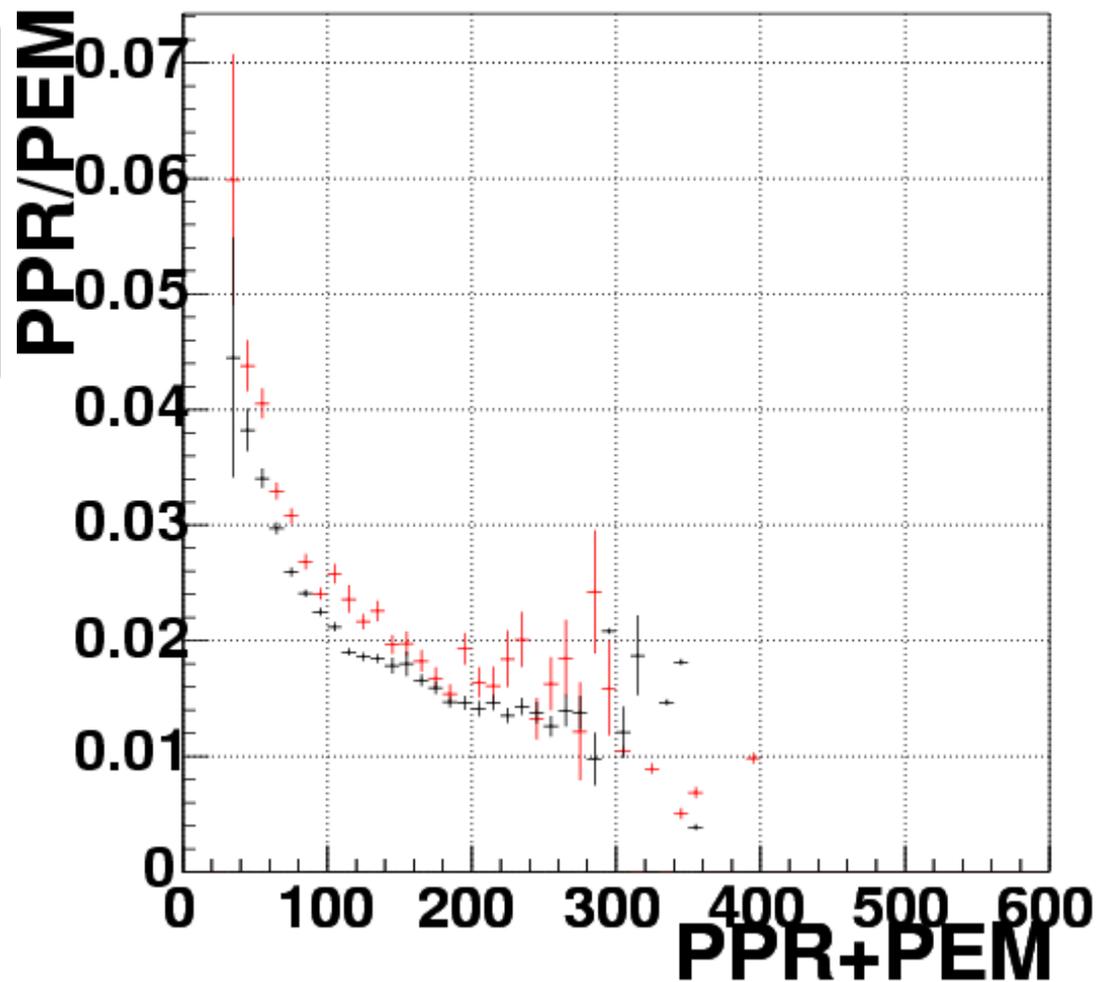
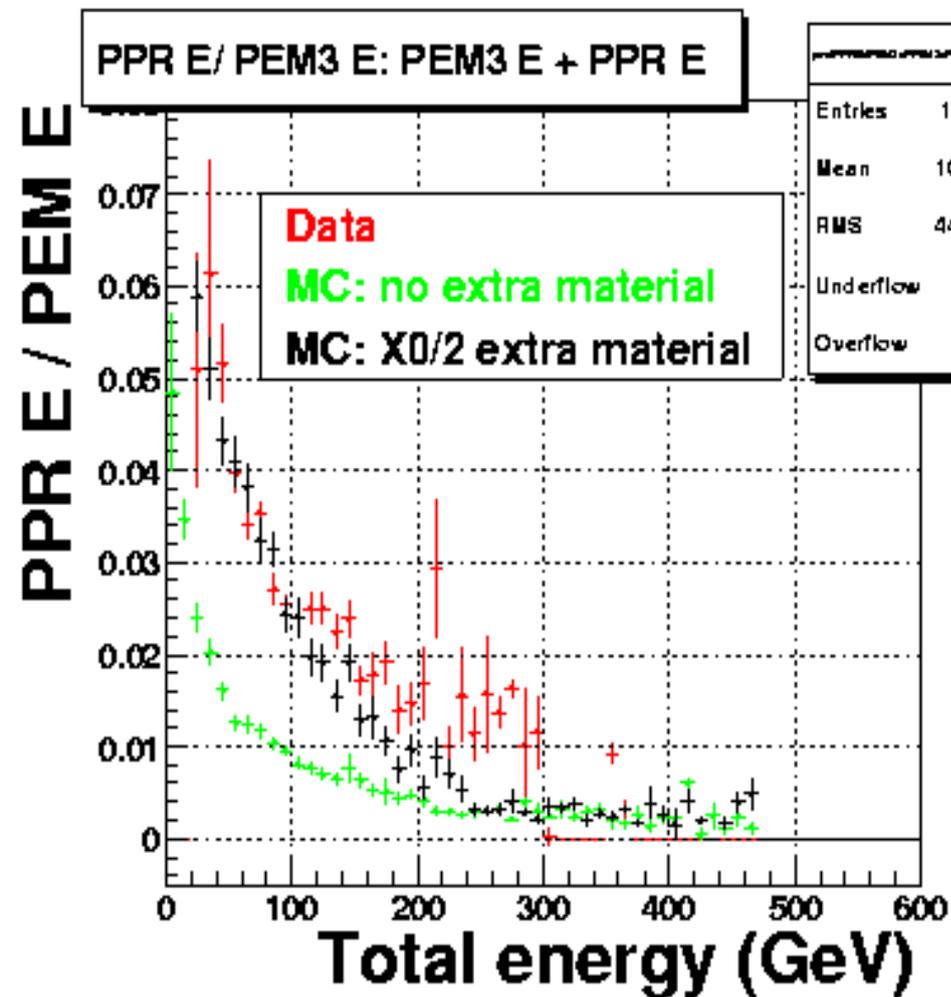
PPR/PEM Energy Ratio vs Cluster Energy

Red = data

green/black = simulation

4.9.1

5.3.0



Conclusion

- Disks in front of plug to model unaccounted-for passive material are included in 5.3.0pre1
- Simulation with disks is behaving as expected based on PPR energy distributions