MCEEP with COSY Transport

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Hall A Analysis Workshop
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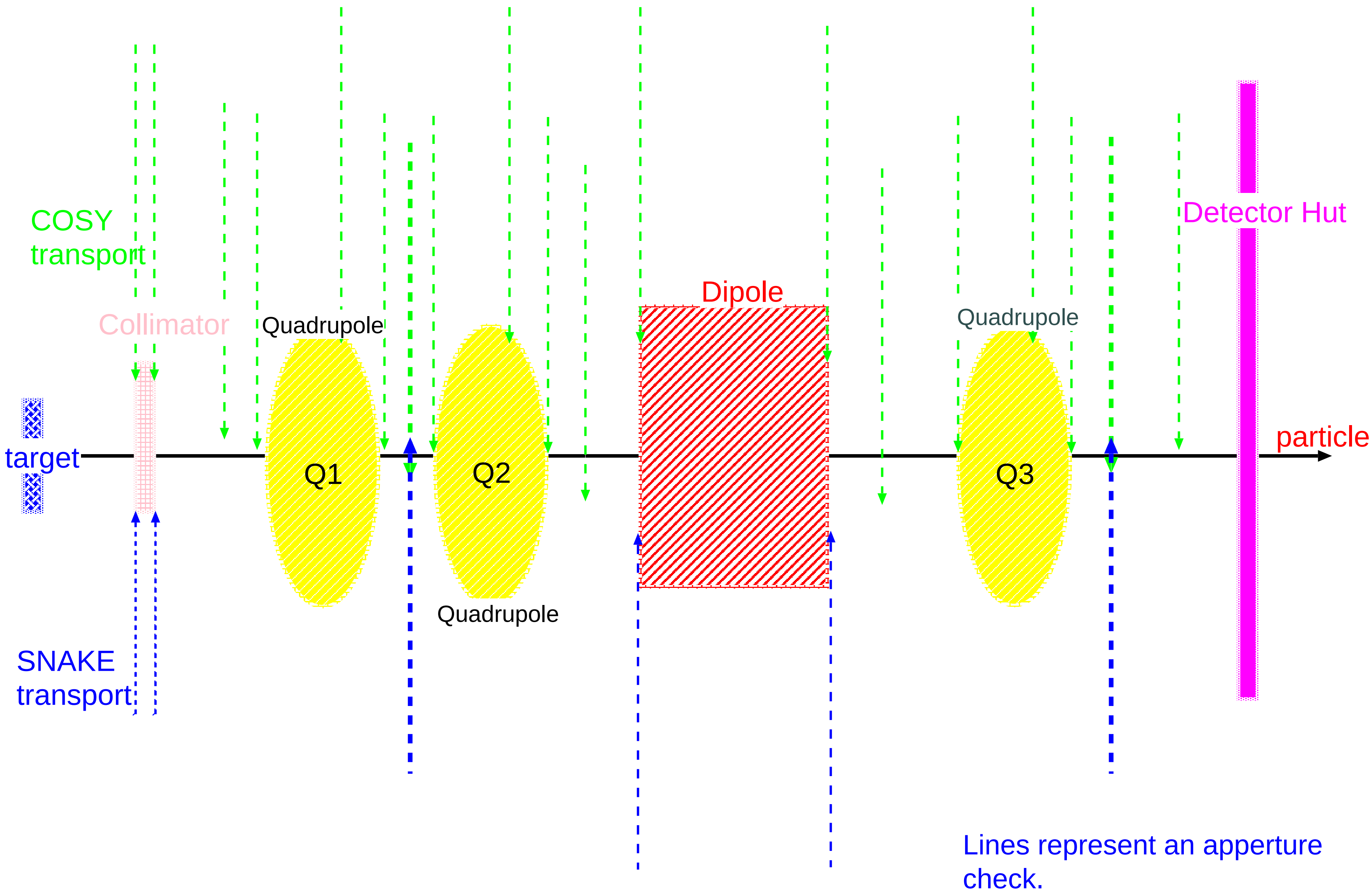
Task

- Take the spectrometer coding of SIMA and merge it with MCEEP

- SIMA is a Hall A version of the simulation program used in Hall C with HRS optics

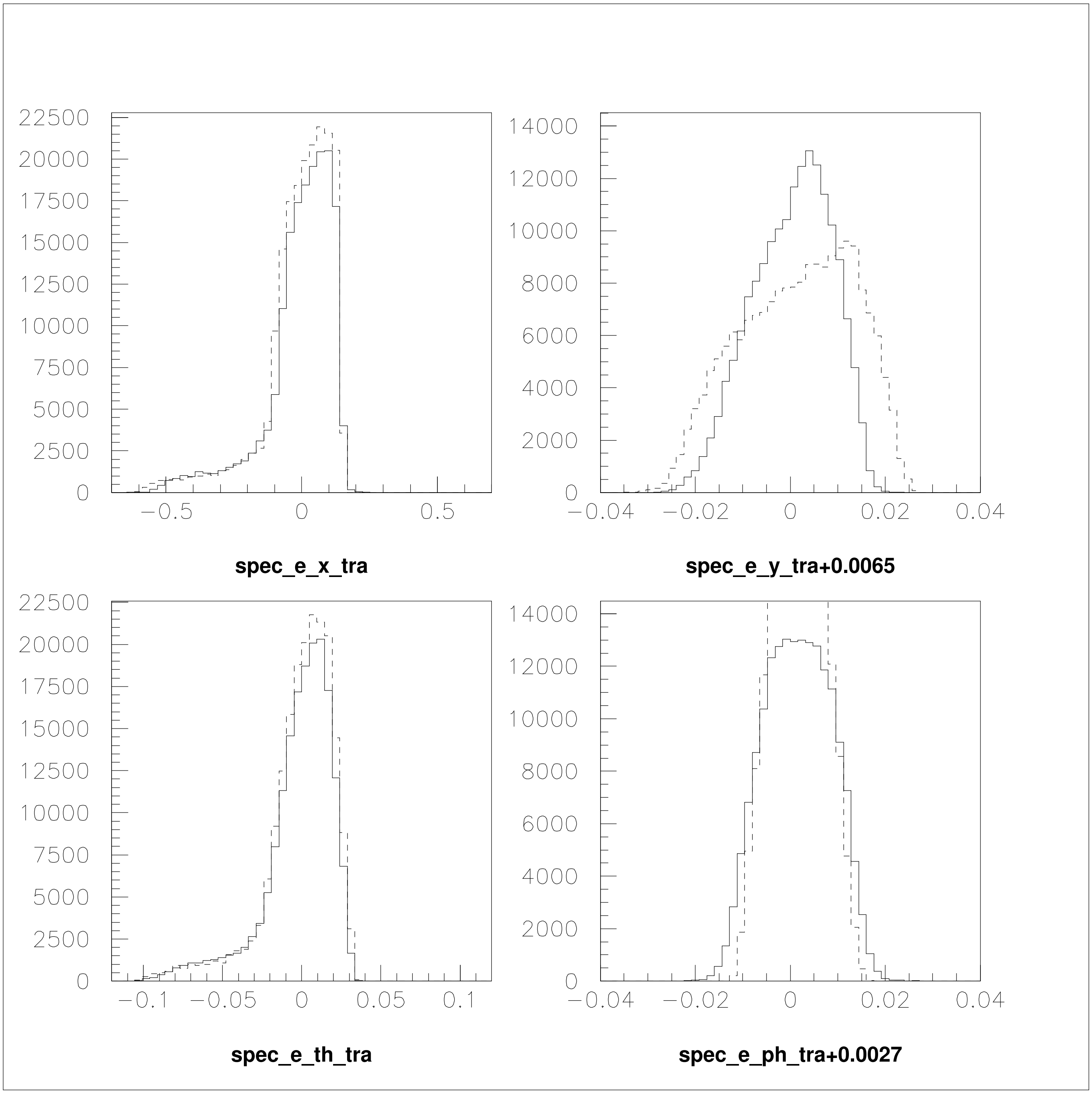

COSY
transport
Collimator
Quadrupole
Dipole
Quadrupole
Detector Hut
target
Q1
Q2
Q3
particle
Quadrupole
SNAKE
transport
Lines represent an apperture
check.

Comparison

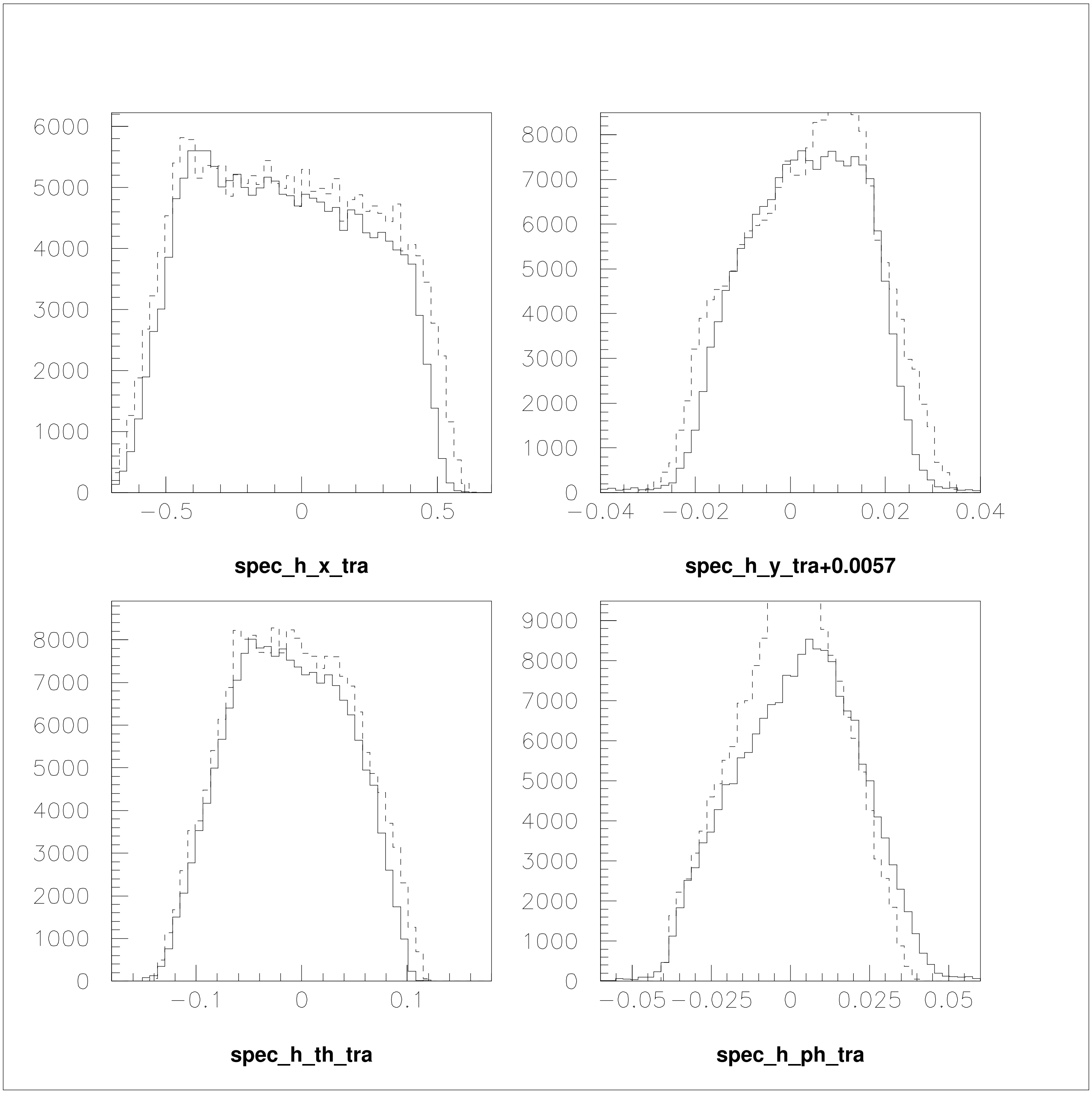
- Compared COSY and SNAKE transports to data

- 15 cm liquid hydroden target (e,e'p)reaction Q^2=0.67 (GeV/c)^2

MCEEP W/OLD SNAKE TRANSPORTS(dashed)
data (solid) - electron arm



MCEEP W/OLD SNAKE TRANSPORTS(dashed)
data (solid) - hadron arm



MCEEP W/NEW SNAKE TRANSPORTS(dashed)
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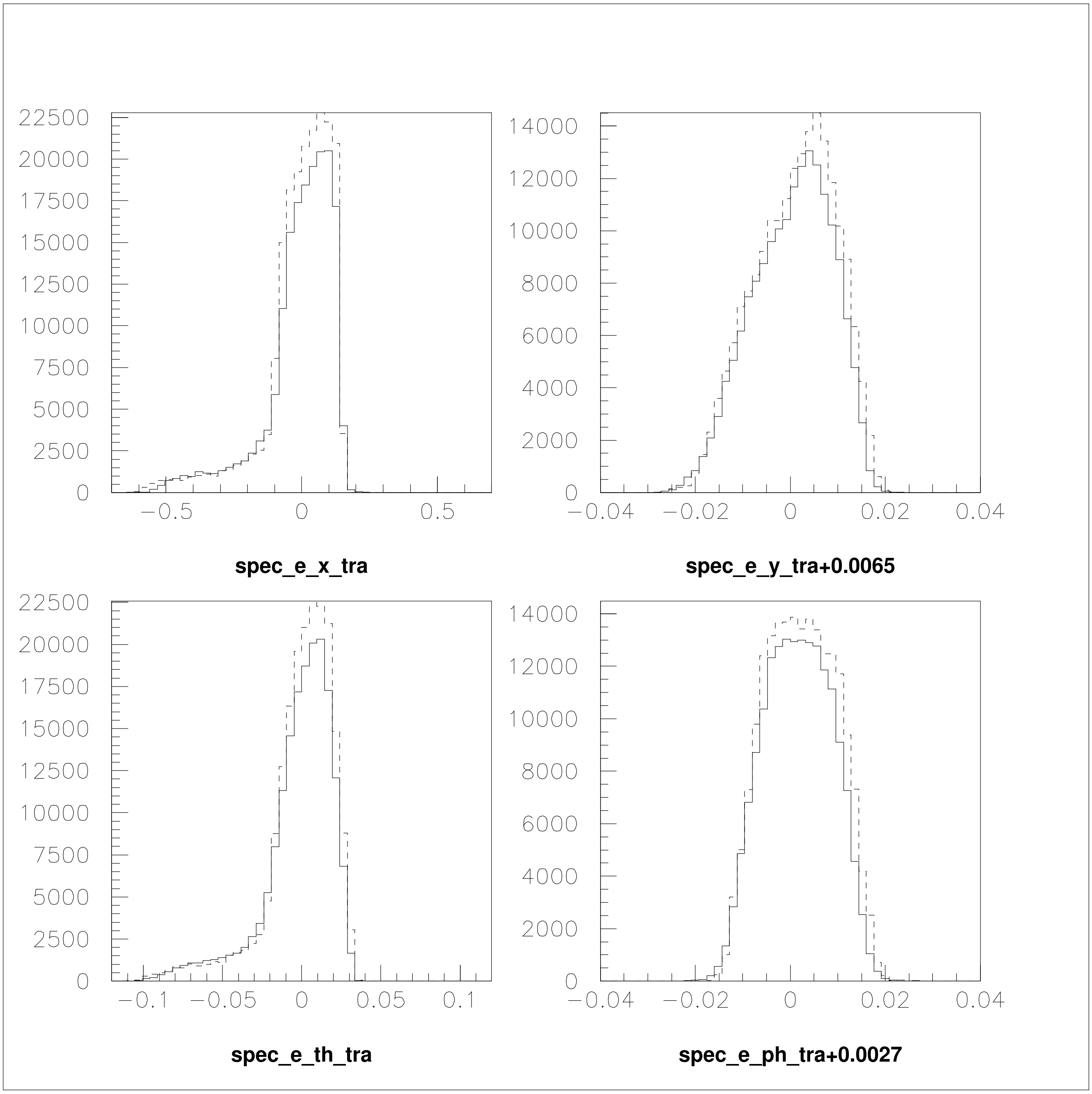

MCEEP W/NEW SNAKE TRANSPORTS(dashed)
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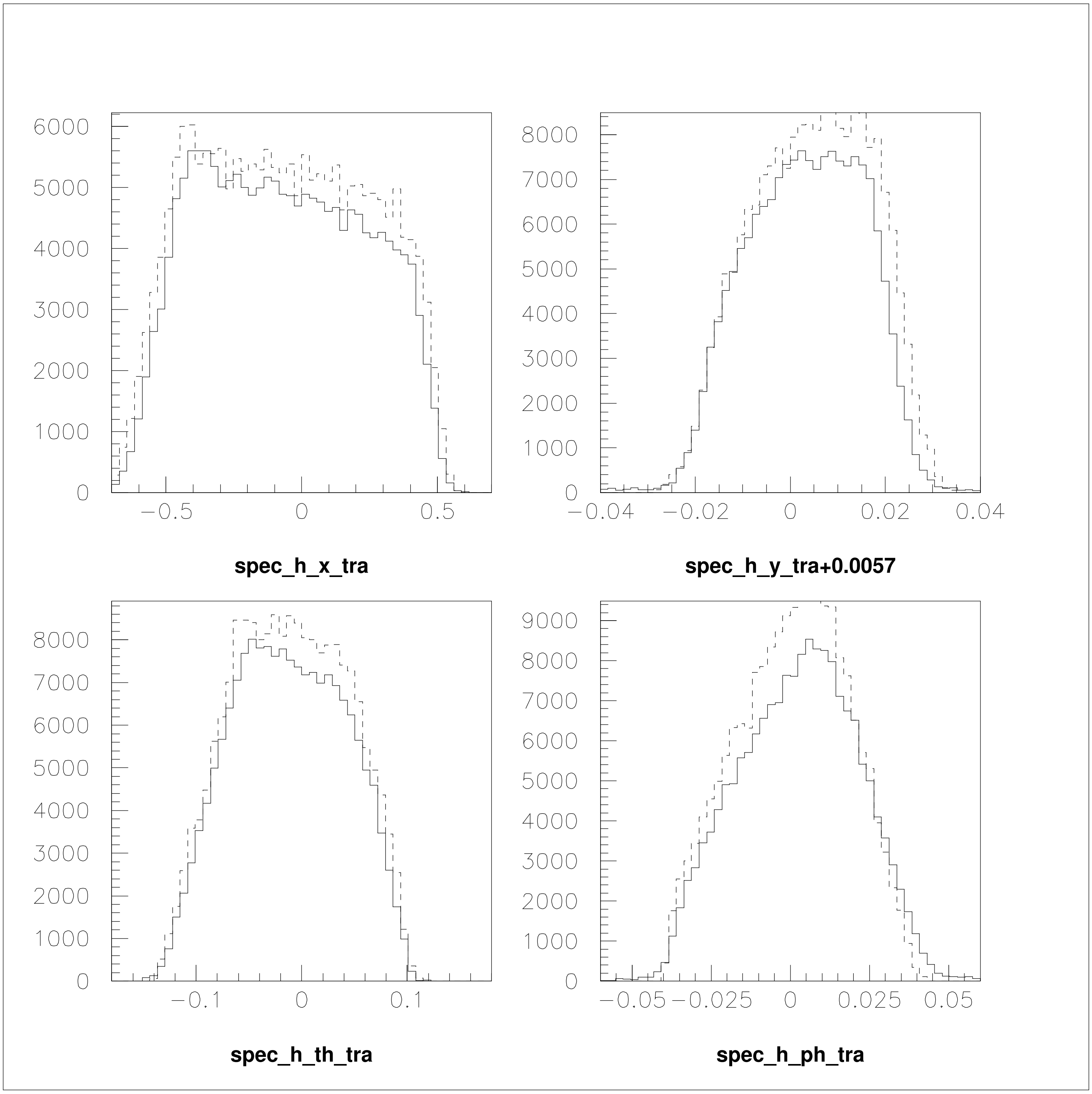
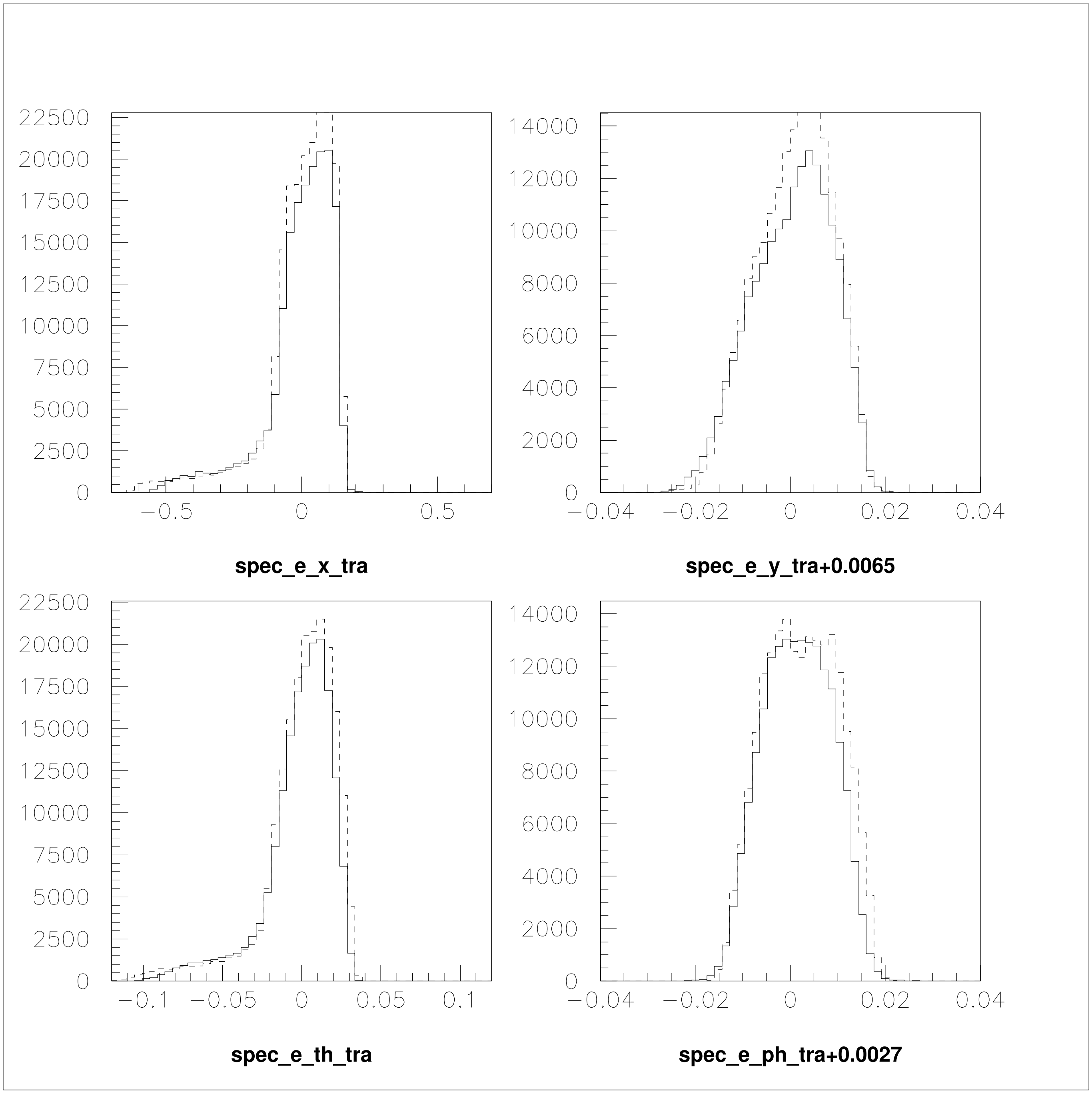
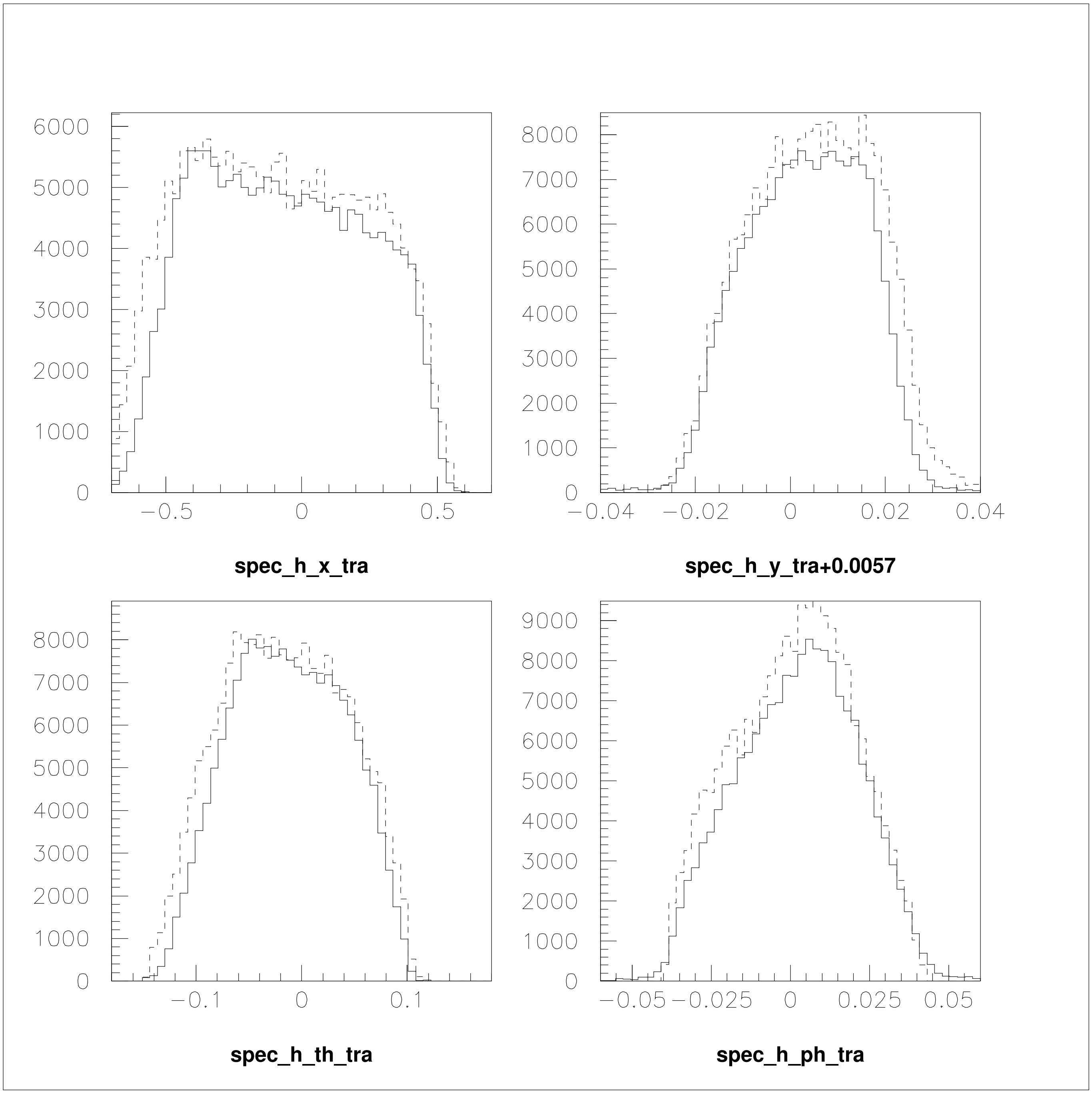


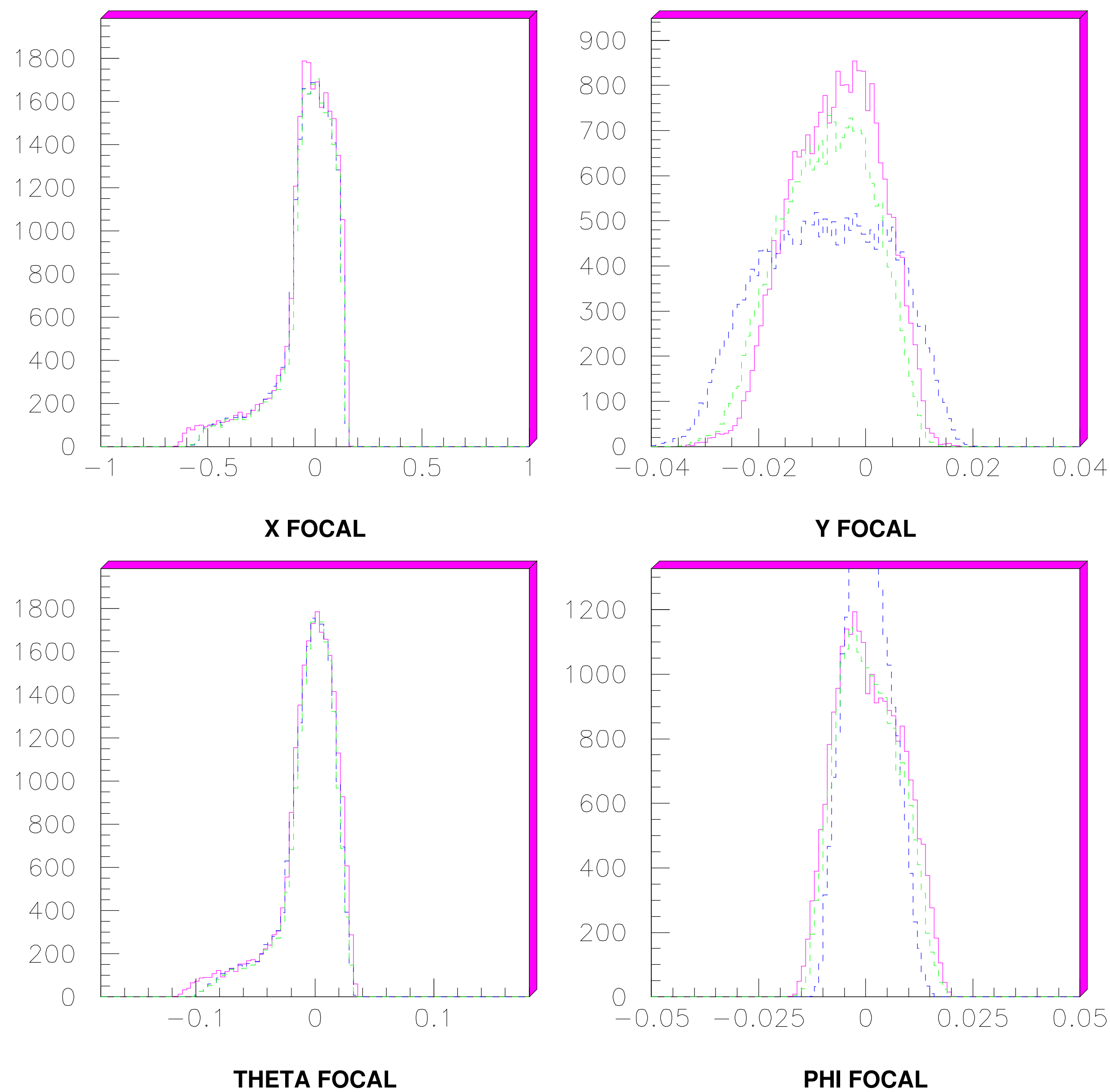
MCEEP With COSY TRANSPORTS(dashed) data (solid) - electron arm



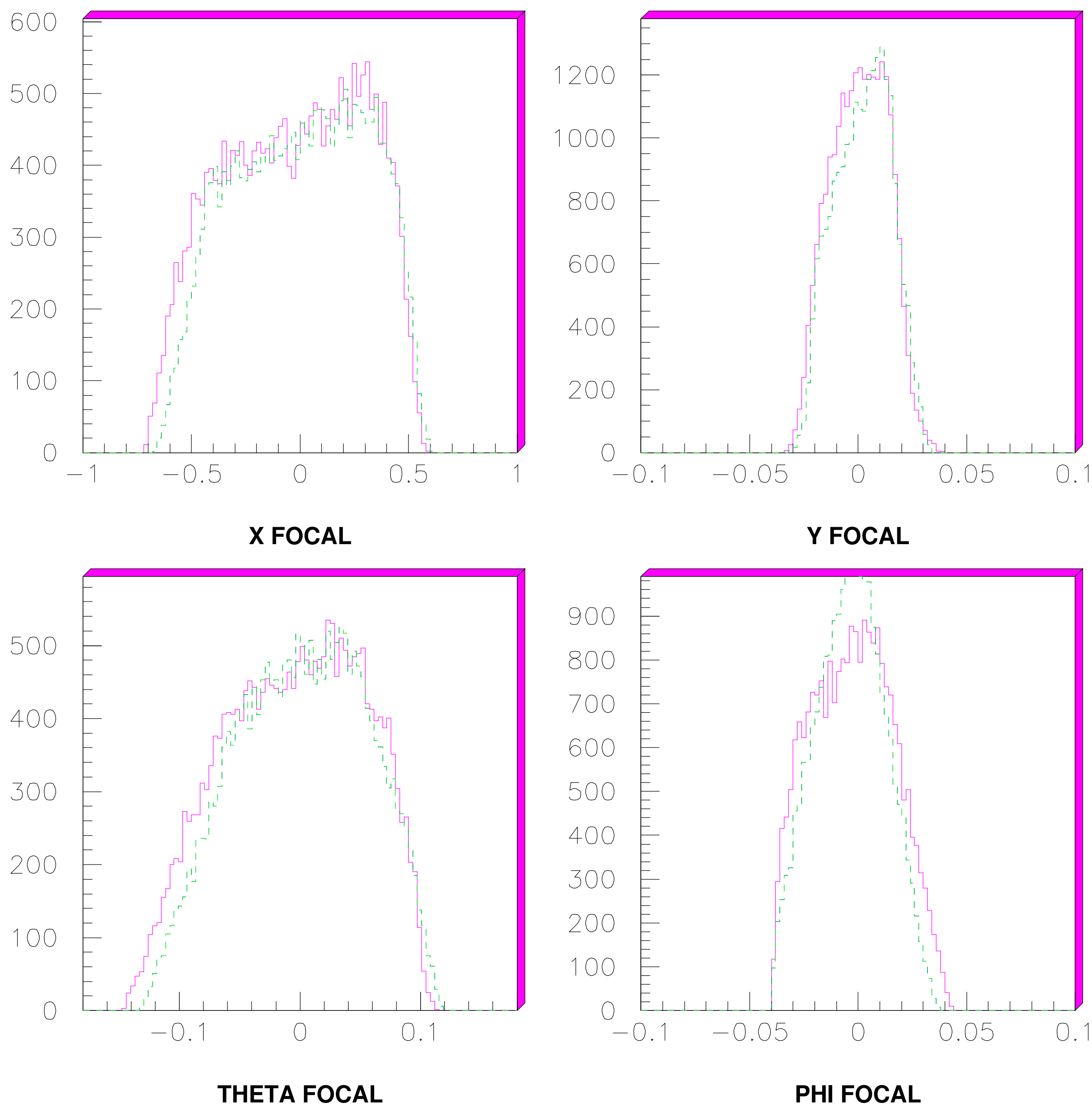
MCEEP With COSY TRANSPORTS(dashed) data (solid) - hadron arm



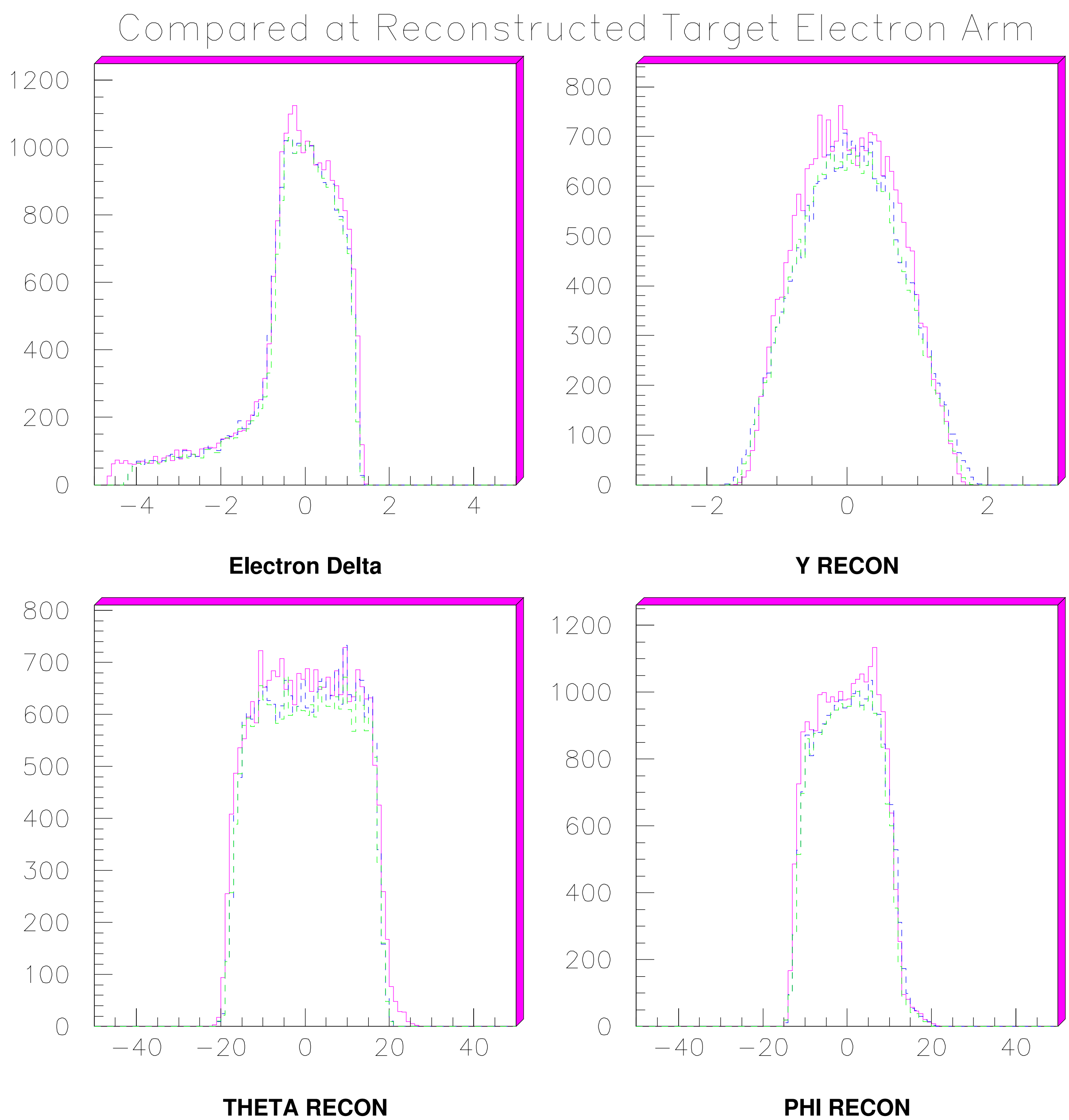
COSY(SOLID) AND SNAKE OLD AND NEW (DASH) TRANSPORTS - electron focal plane



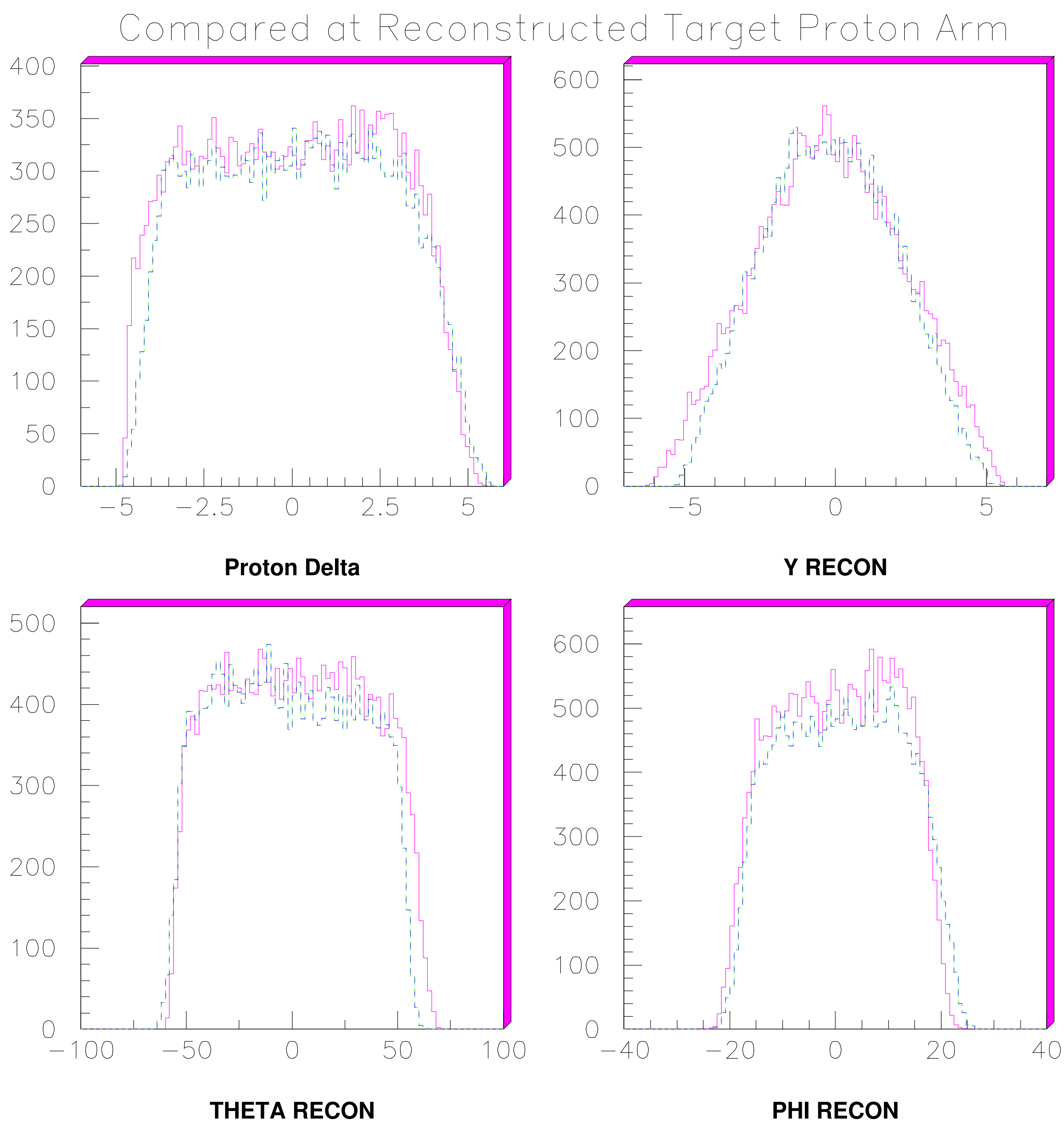
COSY(SOLID) AND SNAKE OLD AND NEW
(DASH) TRANSPORTS - proton focal plane



COSY(SOLID) AND SNAKE OLD AND NEW (DASH) - electron reconstruction



COSY(SOLID) AND SNAKE OLD AND NEW (DASH) - proton reconstruction



Near Future

- merge sim-cosy code with MCEEP v3.7
- give the code to Paul Ulmer for checks and distribution

Future

- decay checks can be included along the spectrometer
- possible refinement to the COSY forward matrix elements.

Conclusion

- COSY and New SNAKE provides resonable agreement

- Next version of MCEEP will allow both SNAKE and COSY transport.