September 7, 2001

Final Final Analysis

These are the hopefully final comparisons for ${}^1H(e,e'p)$ elastic and for ${}^2H(e,e'p)$ at $p_r = 0$. I used the following cuts for the data (and vertex_z<5.0cm for the Monte Carlo):

- e.rfn_cut>0.008 (also used for MCEEP)
- h.rfn_cut>0.008 (also used for MCEEP)
- abs(e.reactz-h.reactz)<0.02
- abs(e.reactz)<0.05
- abs(h.reactz)<0.05

The data also had some cuts to clean up the chamber spectra:

- for each of 8 wire planes: one cluster
- for each of 8 wire planes: 3≤multiplicity≤7
- for each of 8 wire planes: -0.4<angle_diff<0.5
- for each of 8 wire planes: 0.4<slope<1.0 (except for u2 planes where 0.5<slope<0.9)
- for each spectrometer: one track
- for each spectrometer: abs(th_tra)<0.15

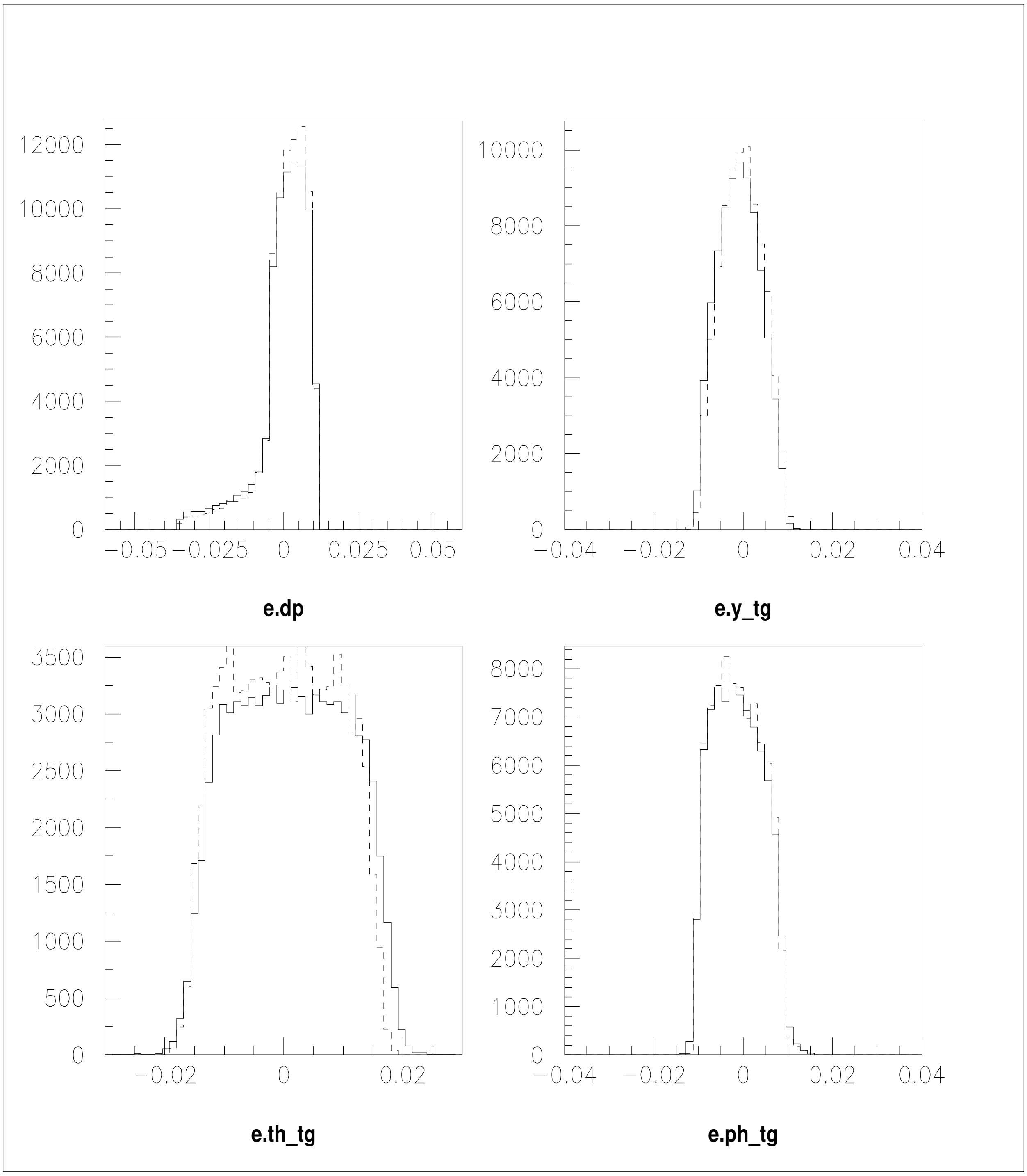
Other analysis control flags:

- set/vdc/tdc_cut 2
- set/vdc/tx_cor 1

For the elastic case, the deadtime factor was 1.332 and, given the above cuts, the "chamber inefficiency factor" was 1.333. No normalization has been applied, so these results are just dead-reckoning.

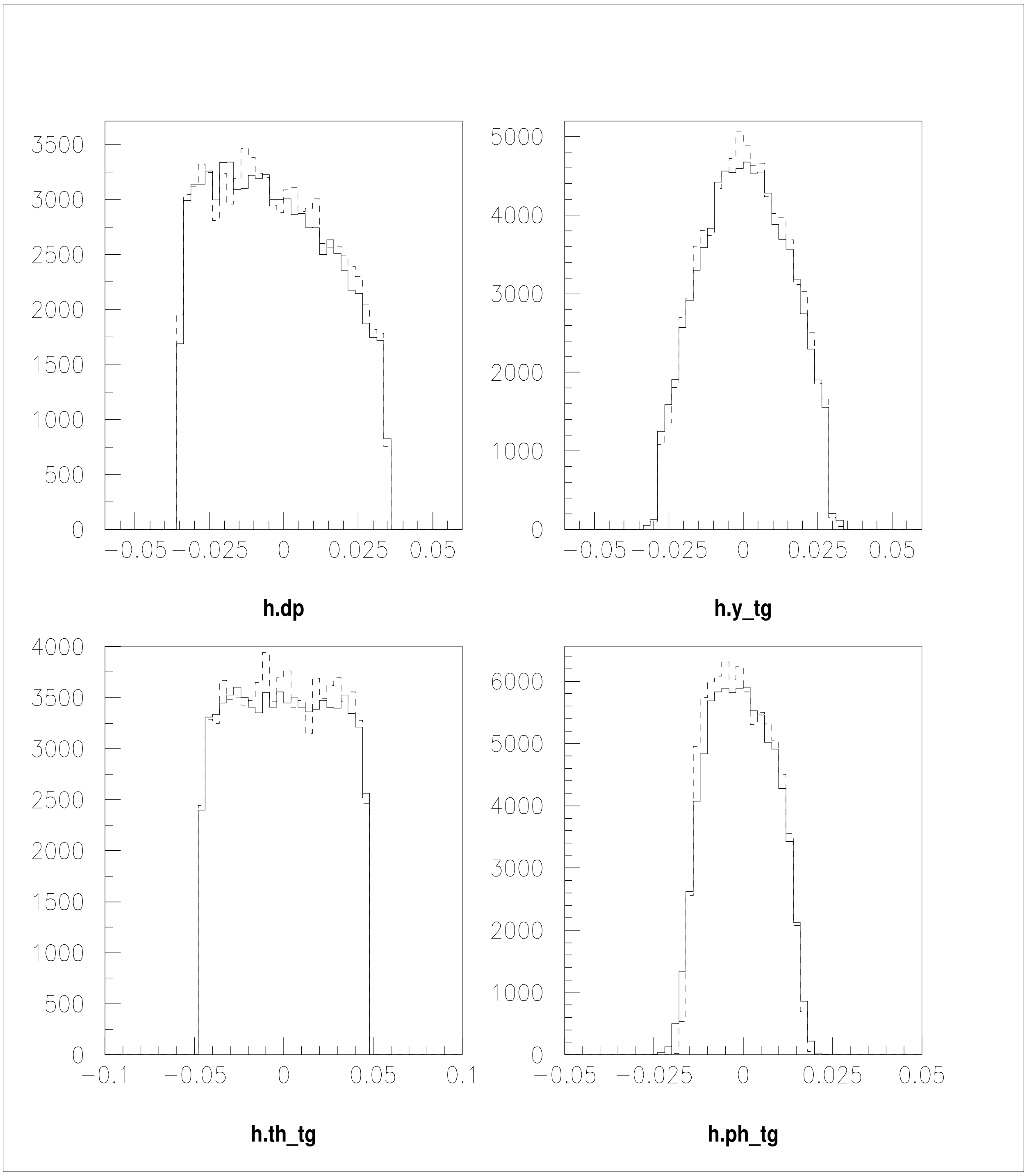
For the deuterium case, the data are only for run 2605 and the data have been scaled arbitrarily to get agreement with MCEEP. MCEEP was run for the PWBA Jeschonnek case with AV18 wf and fully relativistic analysis.

Electron Arm Target Coordinates, ${}^1H(e,e'p)$
Solid: data, Dashed: MCEEP



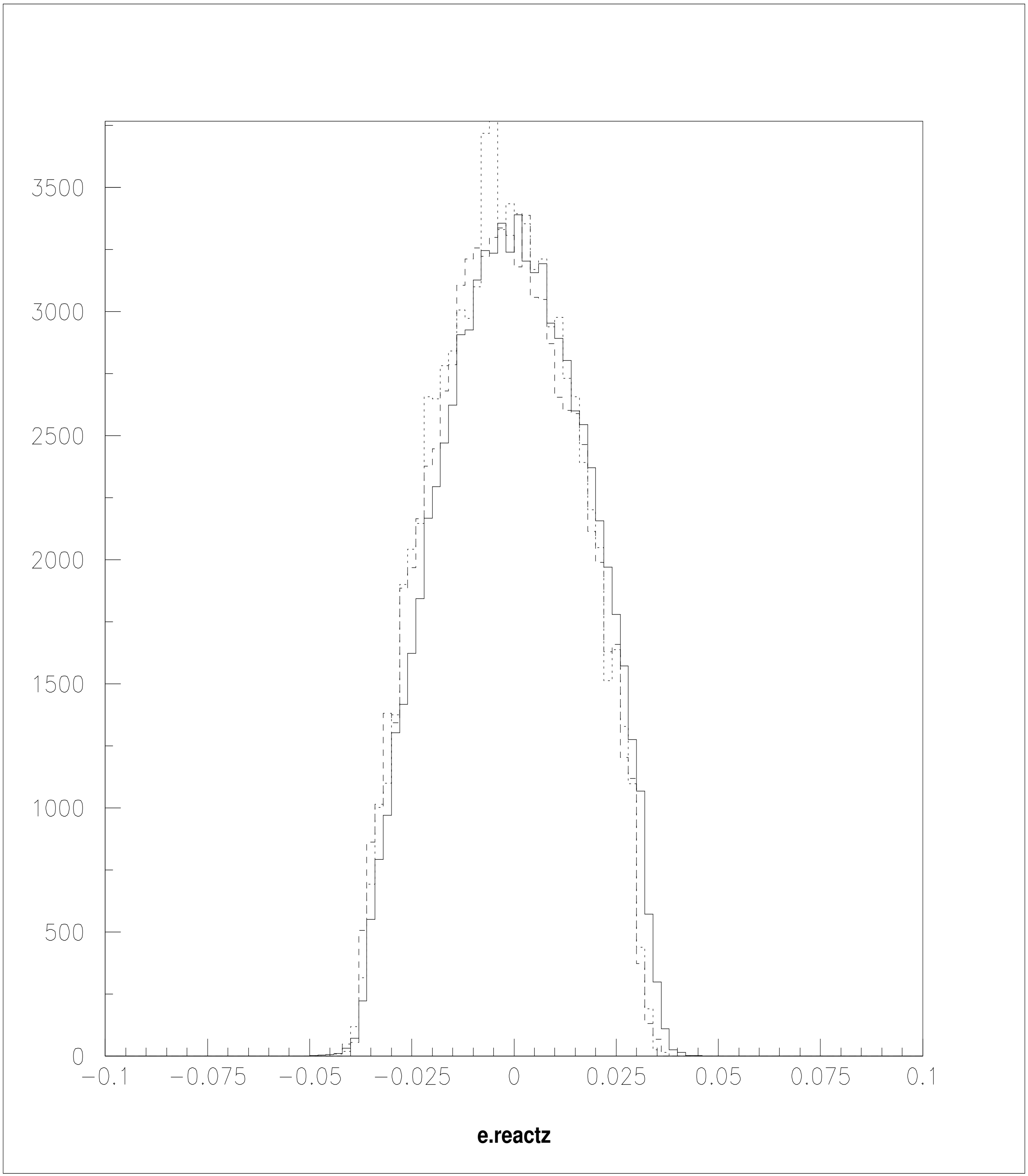
Top (left to right): δ, y_t
Bottom (left to right): $\tan(\theta_t)$, $\tan(\phi_t)$

Hadron Arm Target Coordinates, $^1H(e,e'p)$
Solid: data, Dashed: MCEEP



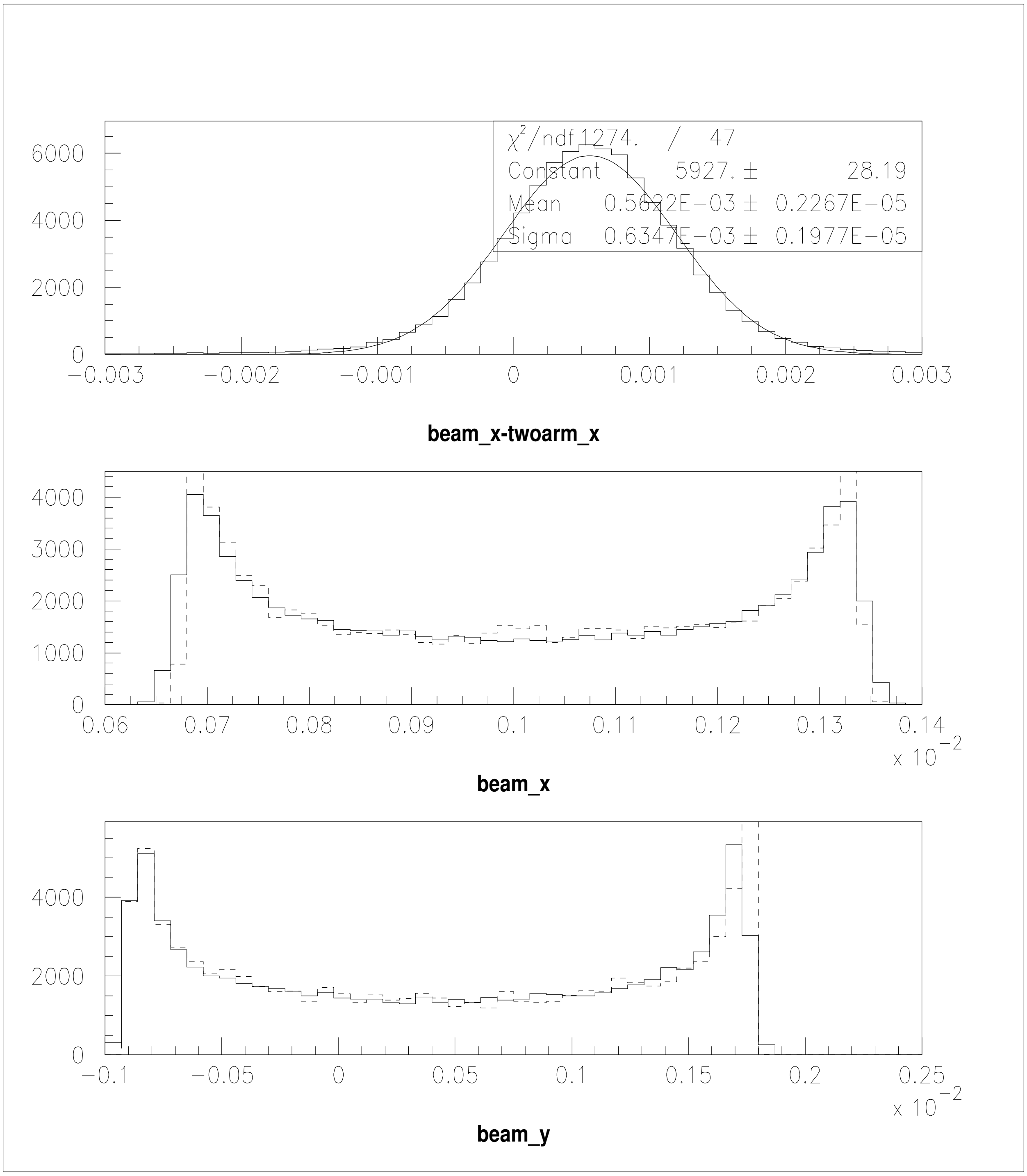
Top (left to right): δ, y_t
Bottom (left to right): $\tan(\theta_t)$, $\tan(\phi_t)$

Vertex along beam, ${}^1H(e, e'p)$
Solid: data (e), Dashed: data (p), Dotted: MCEEP



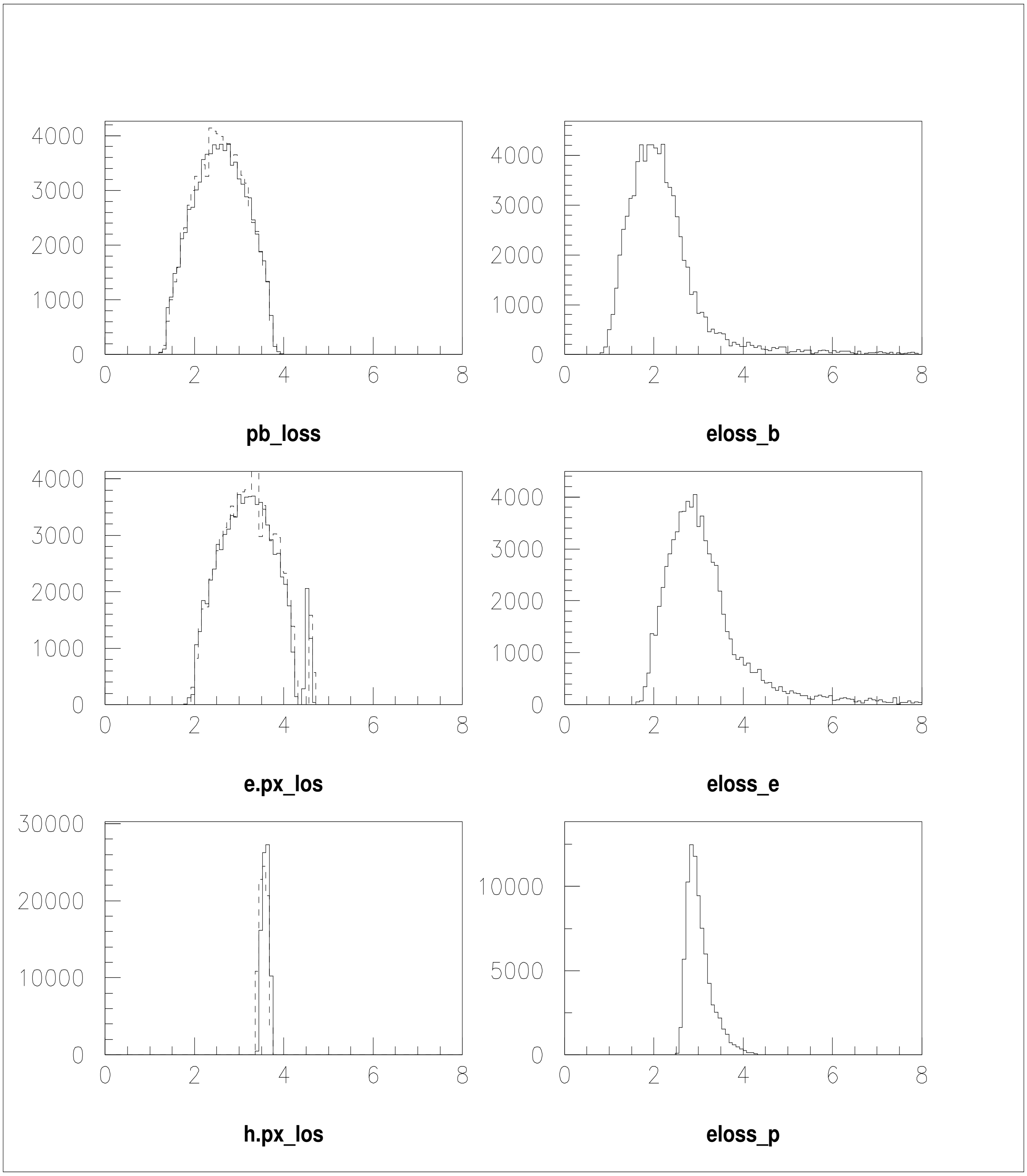
Determined from electron or proton traceback plus beam x position.

Beam x and y position, ${}^1H(e,e'p)$
Solid: data, Dashed: MCEEP



Top: beam_x−twoarm_x
Center: beam_x
Bottom: beam_y

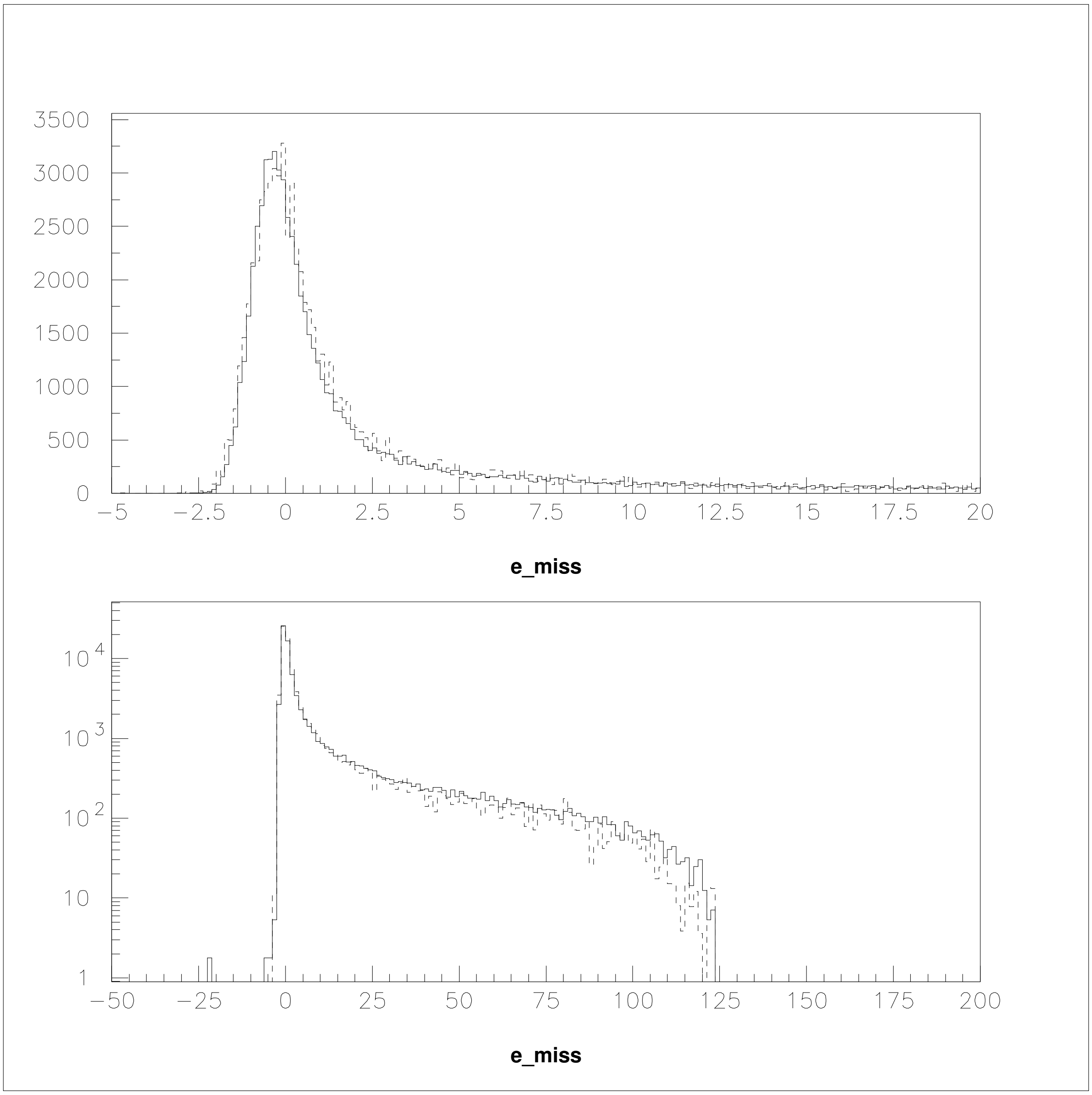
Energy/Momentum Loss, $^1H(e, e'p)$



Left panels (top to bottom): mean momentum loss for e, e' and p
Solid: data, Dashed: MCEEP

Right panels (top to bottom): total energy loss for e, e' and p (MCEEP)

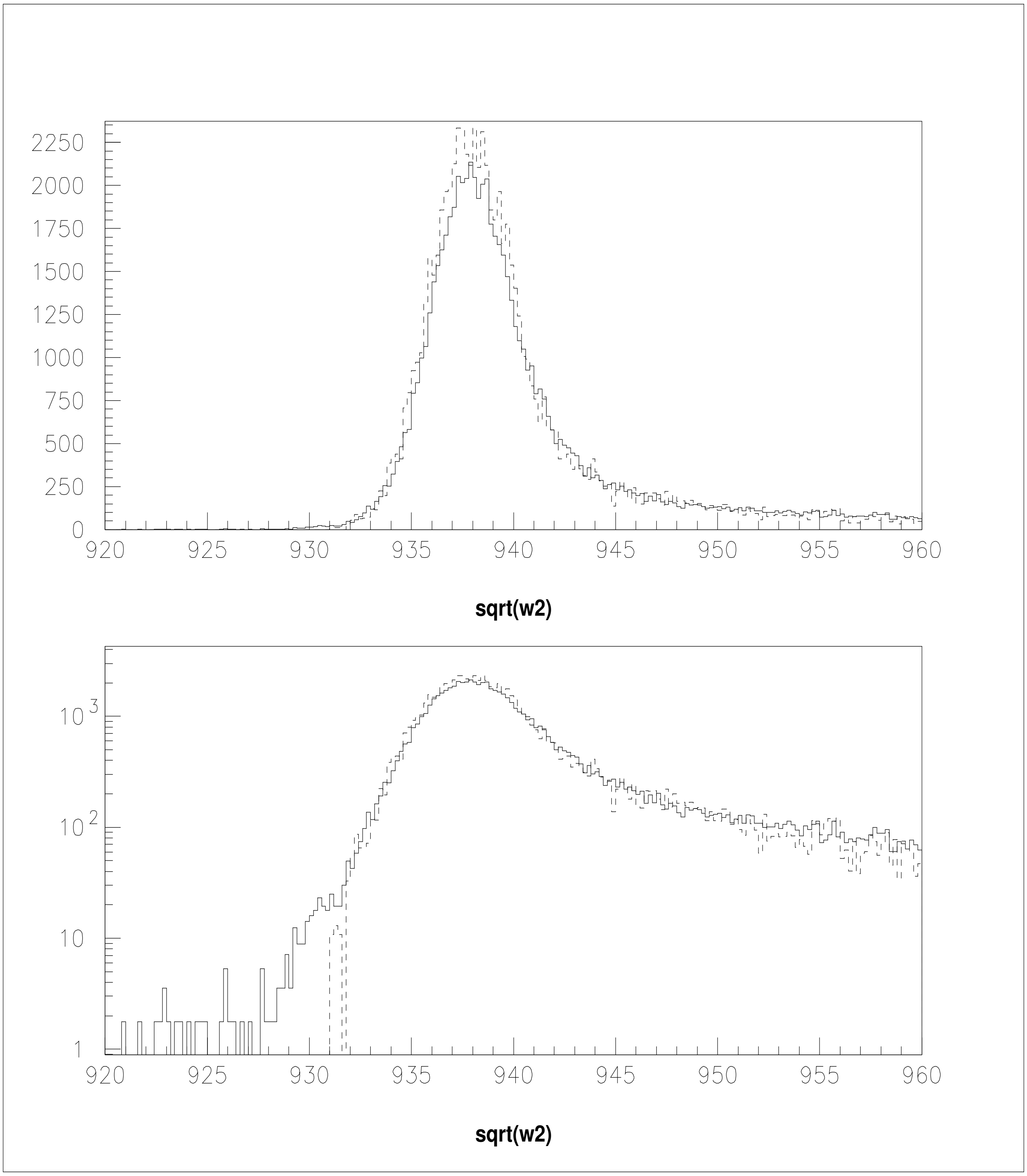
Emiss, $^{1}H(e, e'p)$
Solid: data, Dashed: MCEEP



Top: ϵ_m for ESPACE/MCEEP

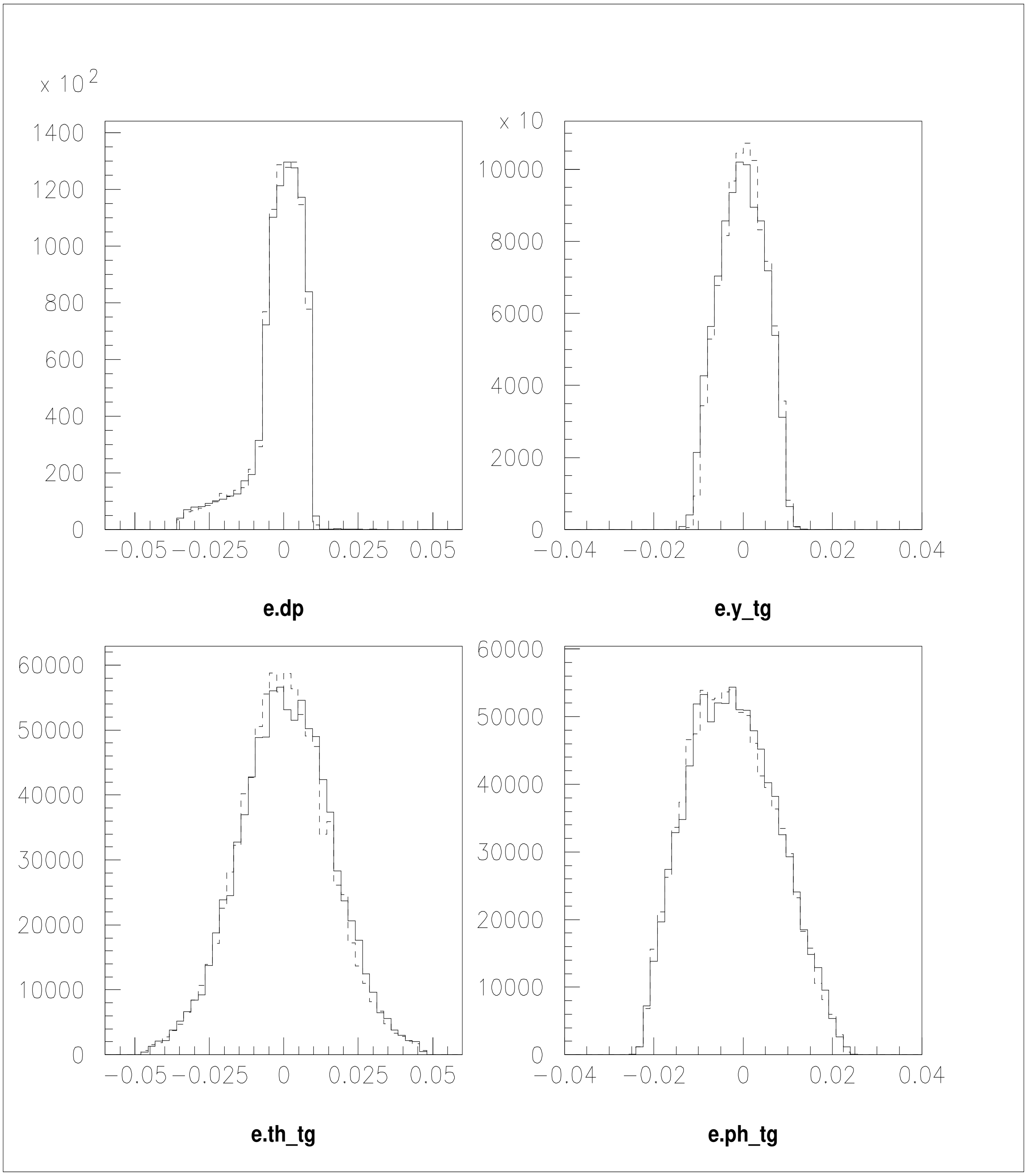
Bottom: ϵ_m on log scale

Electron Arm W $^1H(e, e'p)$
Solid: data, Dashed: MCEEP



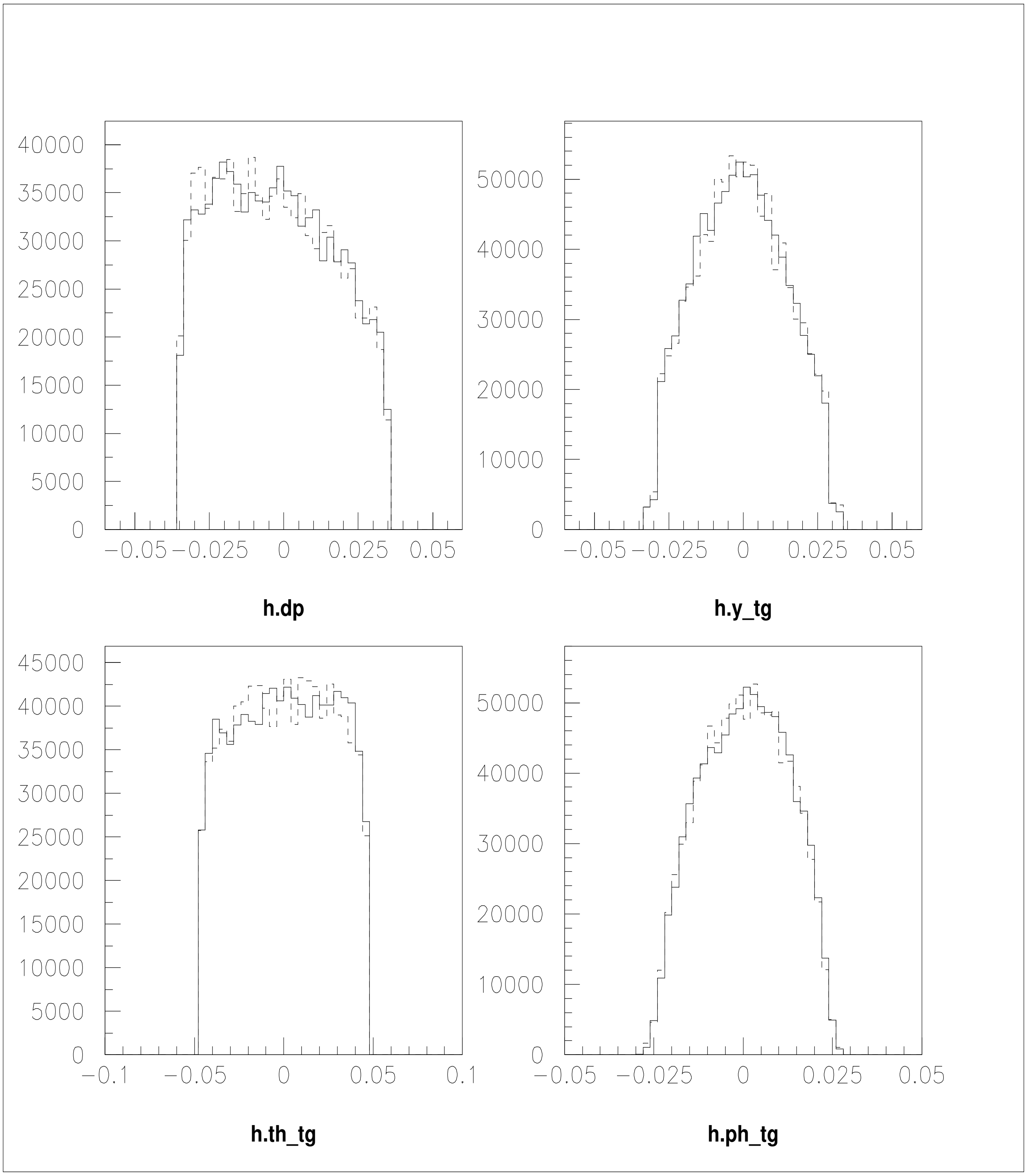
Top: W on linear scale
Bottom: W on log scale

EARM Targ. Coord. $^2H(e,e'p)$ $p_r = 0$
Solid: data, Dashed: MCEEP



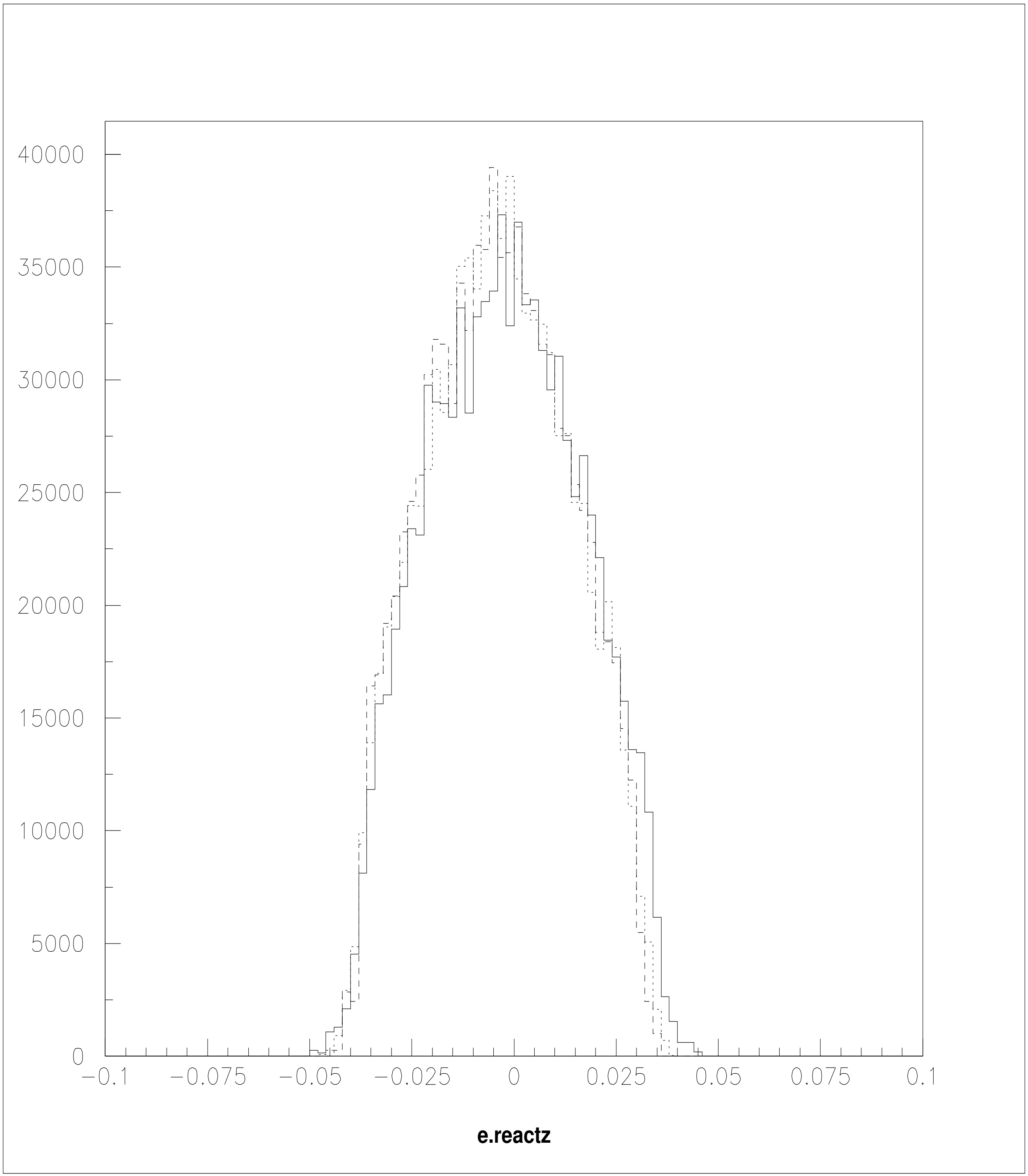
Top (left to right): δ, y_t
Bottom (left to right): $\tan(\theta_t)$, $\tan(\phi_t)$

HARM Targ. Coord. $^2H(e,e'p)$ $p_r = 0$
Solid: data, Dashed: MCEEP



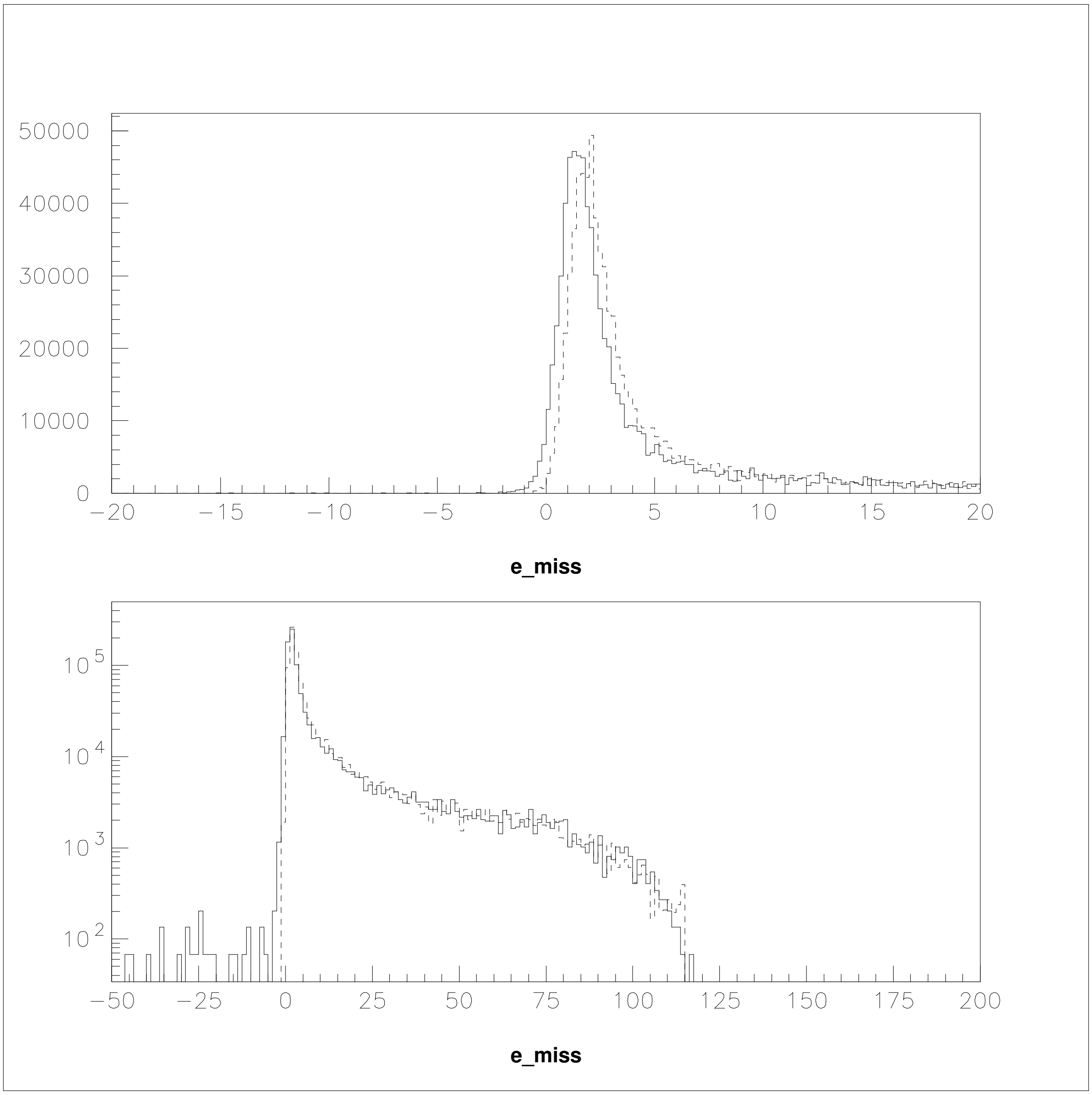
Top (left to right): δ, y_t
Bottom (left to right): $\tan(\theta_t)$, $\tan(\phi_t)$

Vertex along beam, $^{2}H(e,e'p)$ $p_r = 0$
Solid: data (e), Dashed: data (p), Dotted: MCEEP



Determined from electron or proton traceback plus beam x position.

Emiss, $^2H(e,e'p)$ $p_r = 0$
Solid: data, Dashed: MCEEP



Top: ϵ_m for ESPACE/MCEEP

Bottom: : ϵ_m on log scale