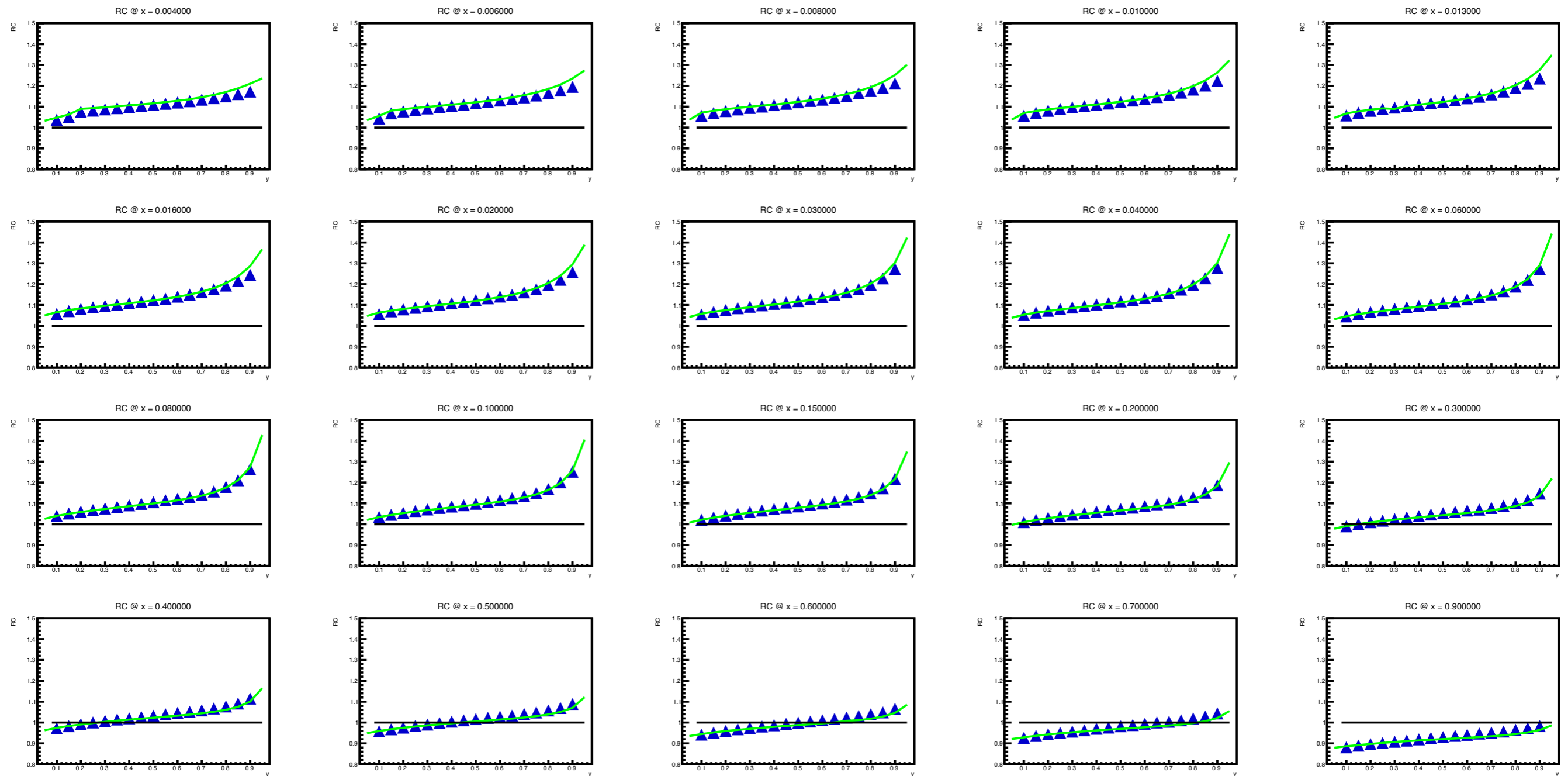


STATUS

On Django

STATE OF THE ART

- DJANGOH is giving reasonable results as for the inclusive RC when compared to TERAD



$RC(y) (= 1/\eta)$

 TERAD

 Djangoh + Stat. EB

STATE OF THE ART

- DJANGO is working well as an event generator for TGEANT (dev repo : <https://gitlab.cern.ch/compass-tgeant/TGEANT/tree/development/djangoh>)
- Reconstruction of TGEANTxDJANGO events with CORAL can be done under some DEBUG flags in CORAL (apparently problem inherent to TGEANT and not DJANGO)

IN THE FOLLOWING RESULTS

- Kinematic range for multiplicities :
 - $0.004 < x < 0.4$, x in $\{.004,.01,.02,.03,.04,.06,.1,.14,.18,.4\}$
 - $0.1 < y < 0.7$, y in $\{.1,.15,.2,.3,.5,..\}$
 - $0.2 < z < 0.85$, z $\{.20,.25,.30,.35,.40,.45,.50,.55,.60,.65,.70,.75,.85\}$
 - $3 < p_h < 40$ GeV

SEMI-INCLUSIVE RC

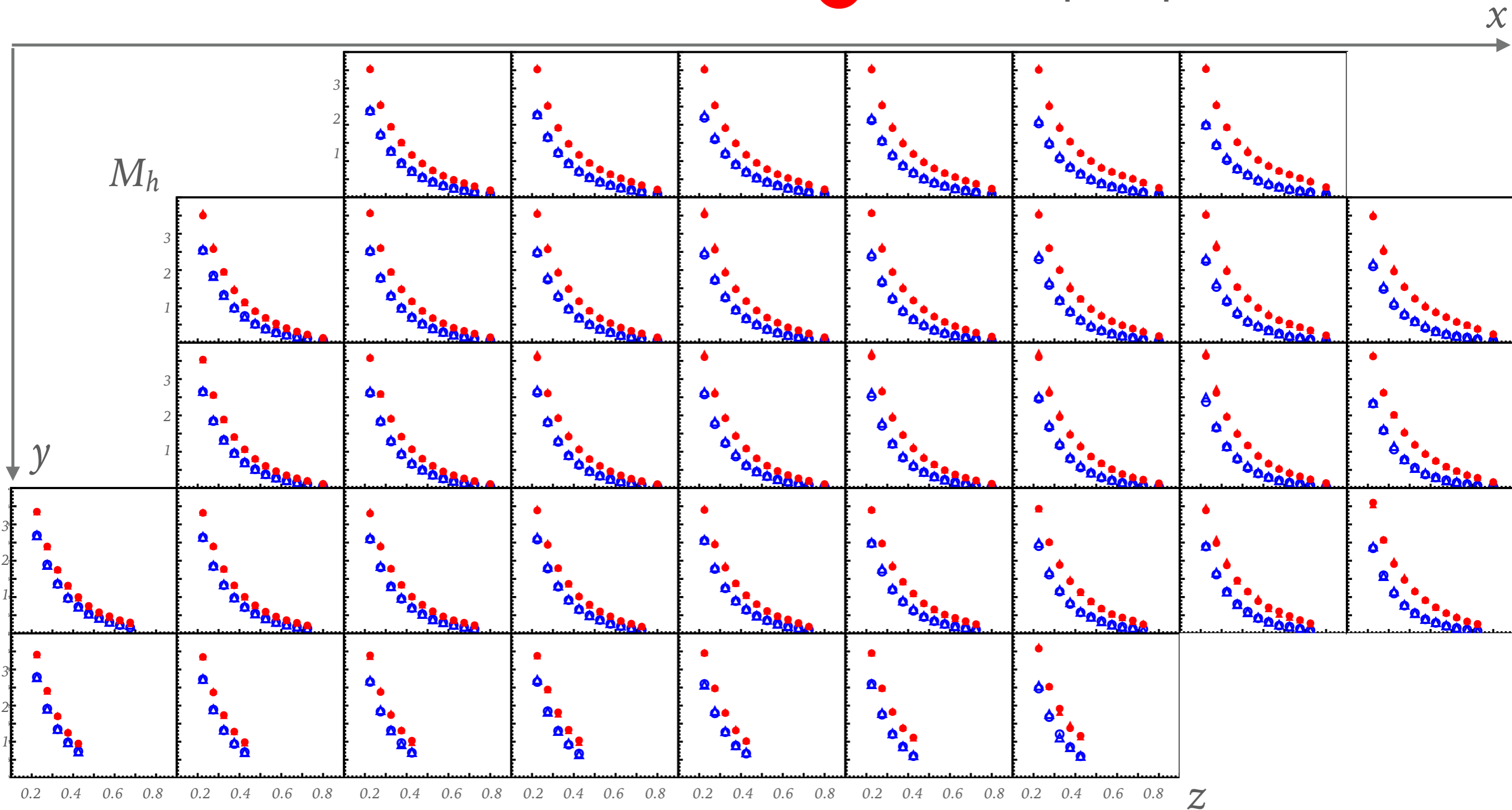
➤ Effect of RC on multiplicities (x,y,z)



Born, negative hadrons



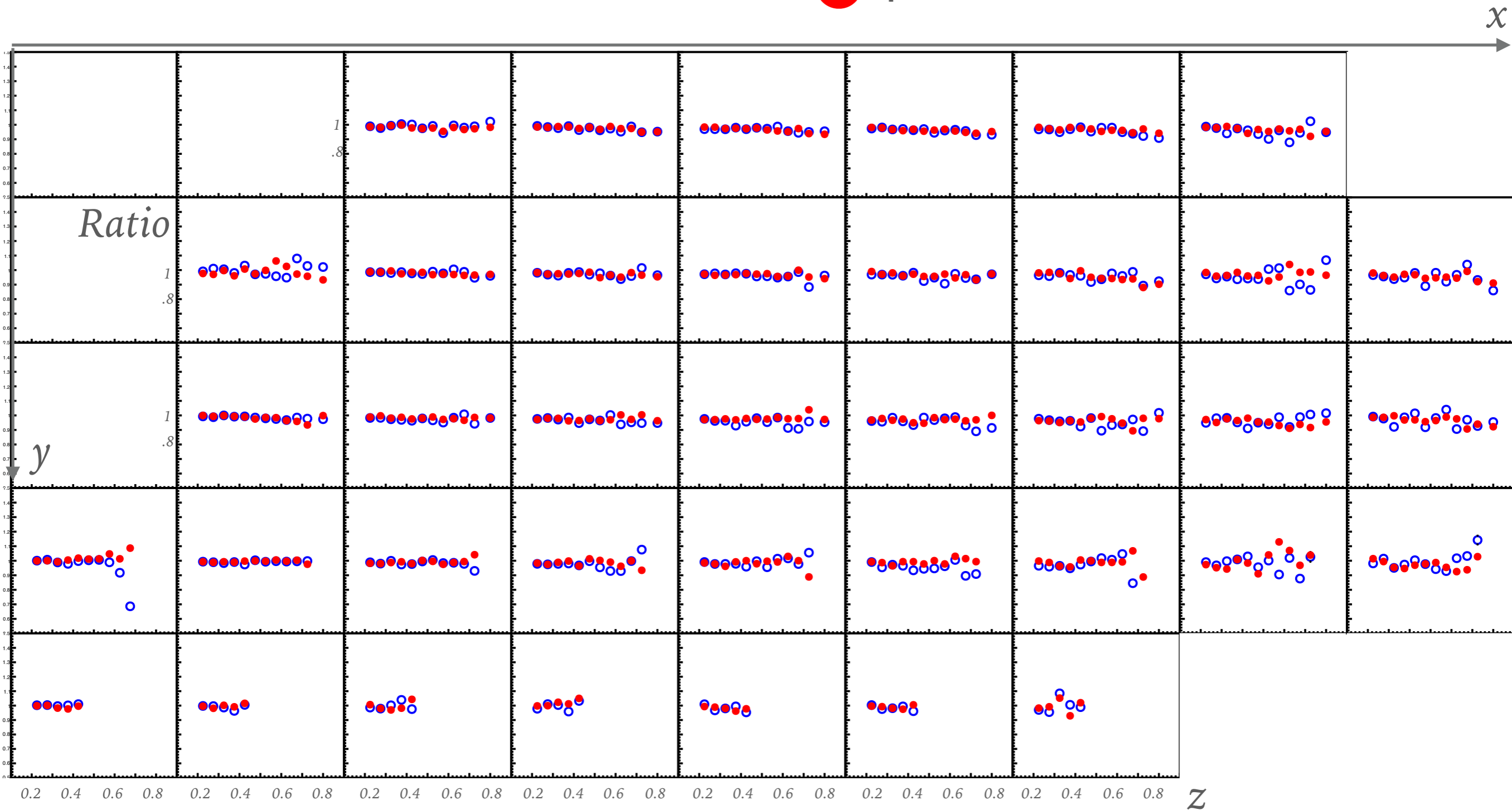
Born+o(alpha), positive hadrons



SEMI-INCLUSIVE RC

➤ Ratio of Born+o(alpha)/Born (x,y,z)

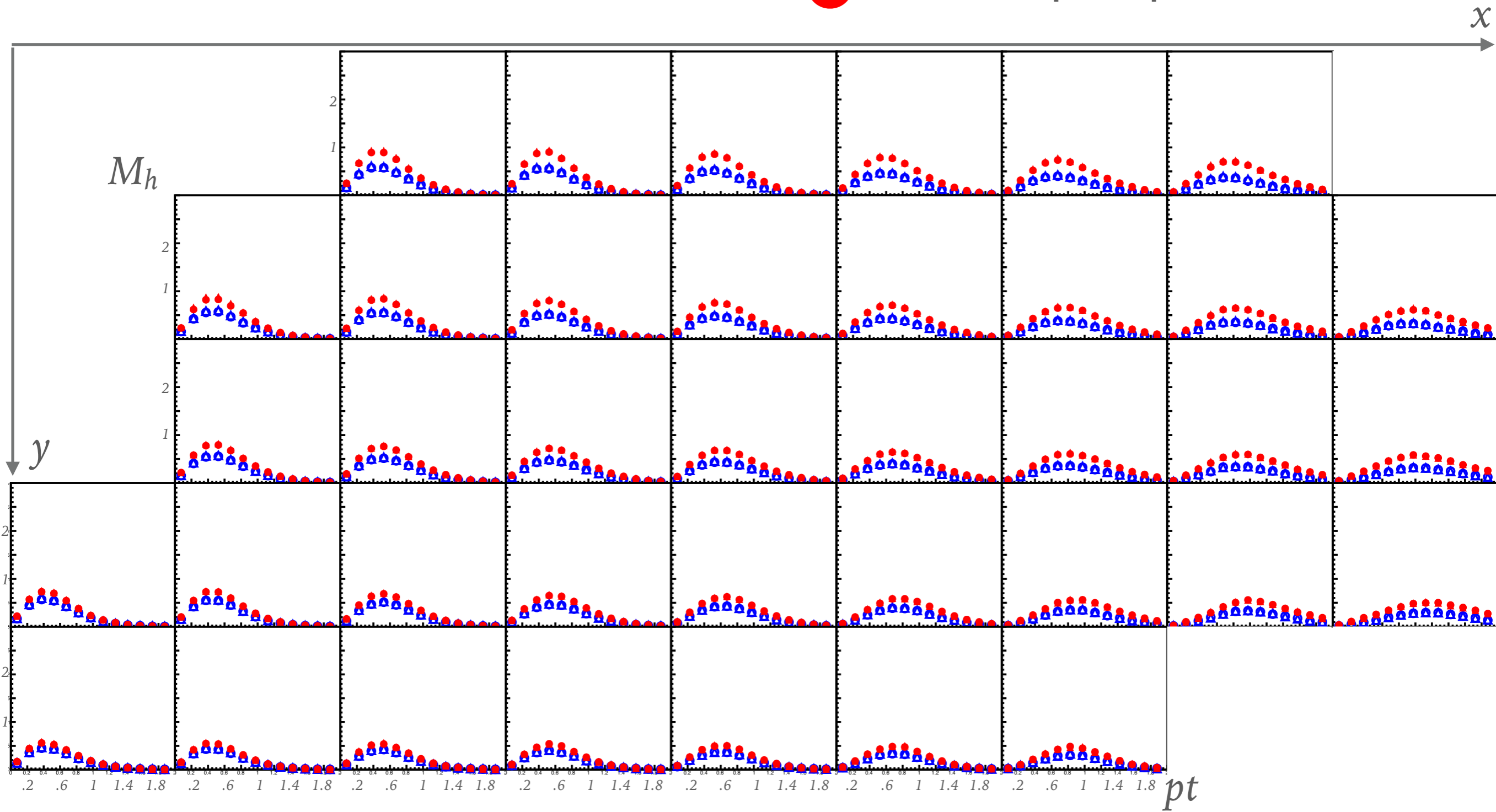
○ negative hadrons
● positive hadrons



SEMI-INCLUSIVE RC

➤ Effect of RC on multiplicities (x,y,pt)

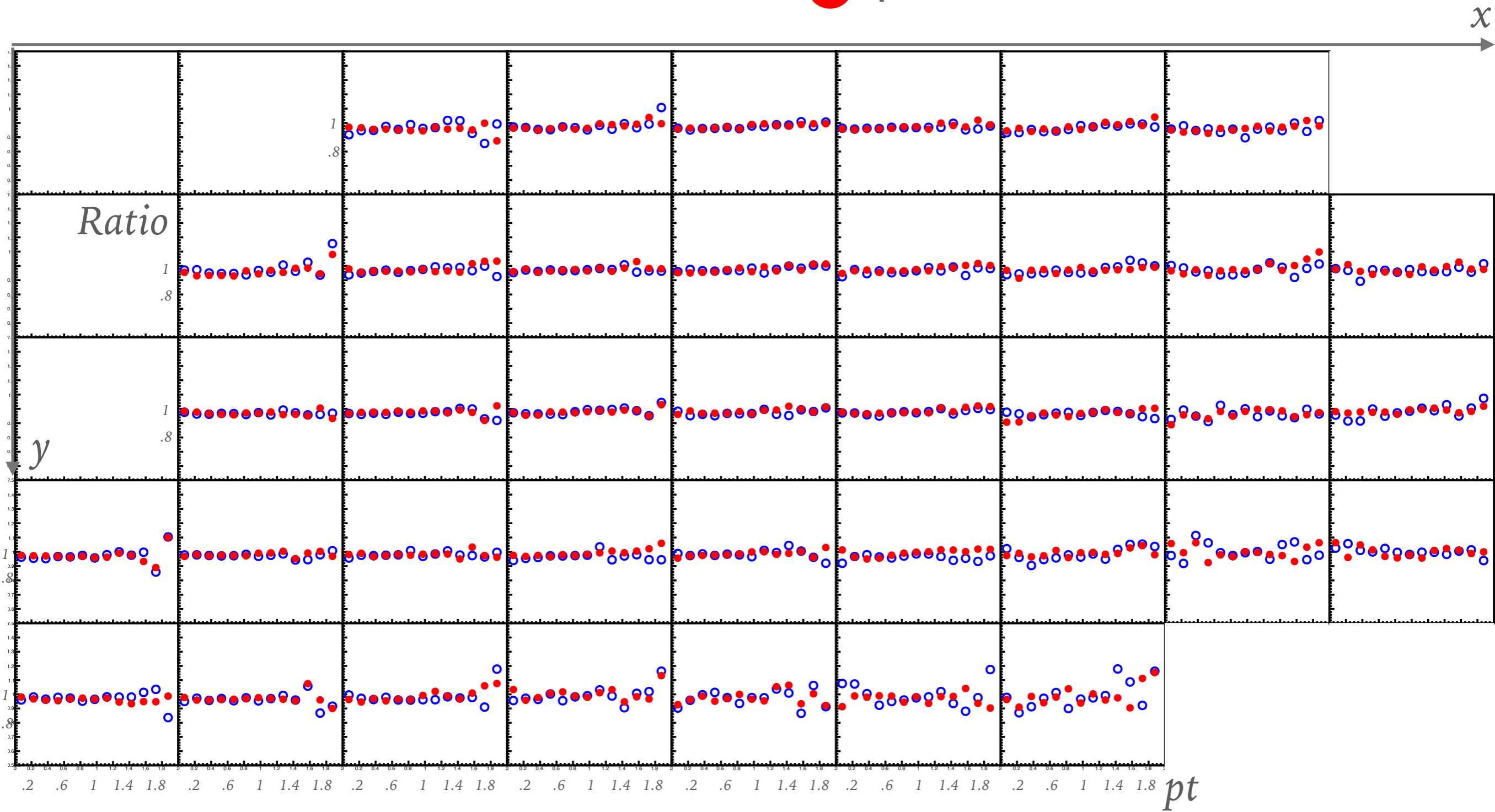
- ▲ Born, negative hadrons
- Born+o(alpha), positive hadrons



SEMI-INCLUSIVE RC

➤ Ratio of Born+o(alpha)/Born (x,y,pt)

○ negative hadrons
● positive hadrons



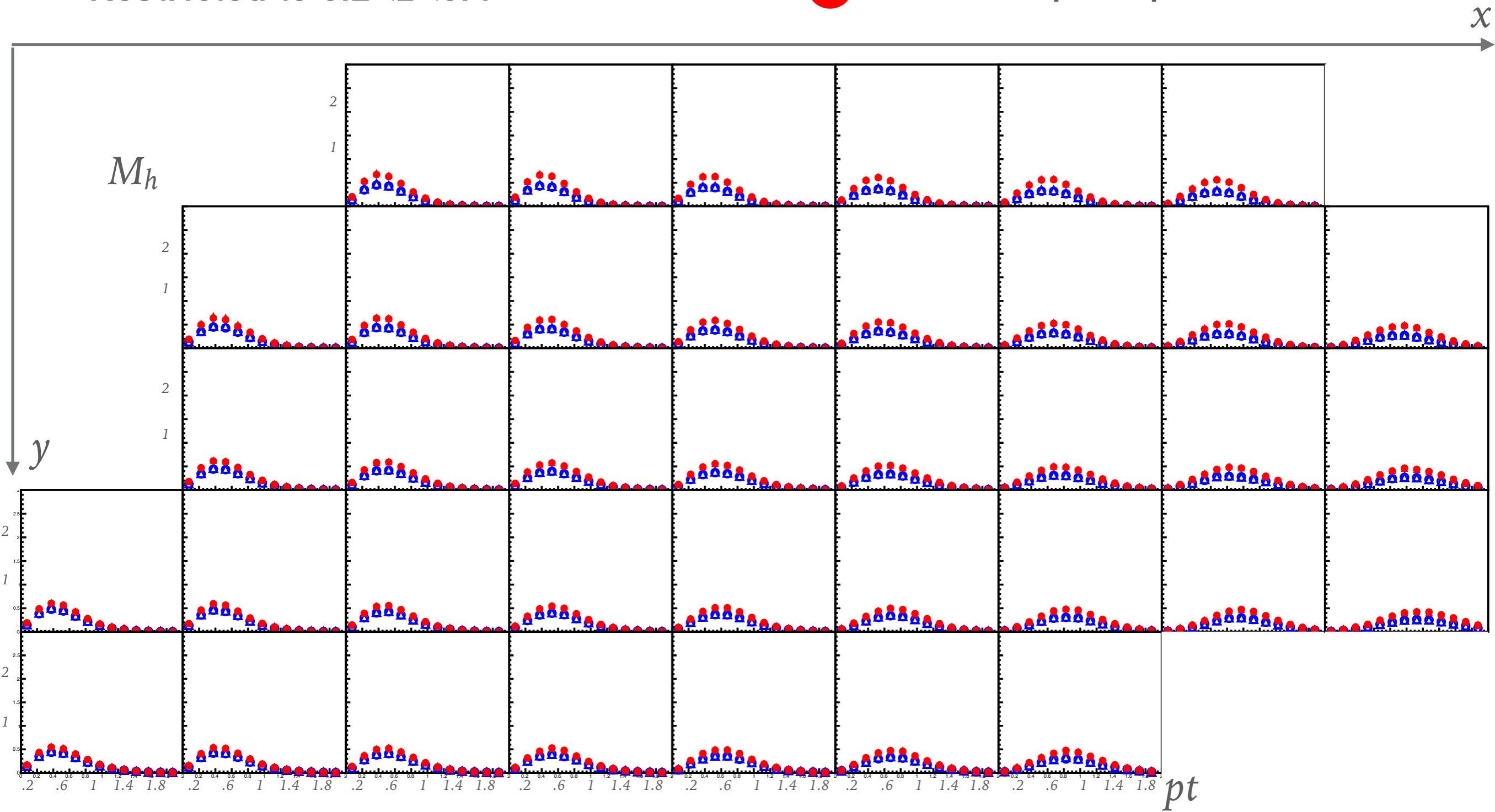
SEMI-INCLUSIVE RC

► Effect of RC on multiplicities (x,y,pt)

Restricted to $0.2 < z < 0.4$

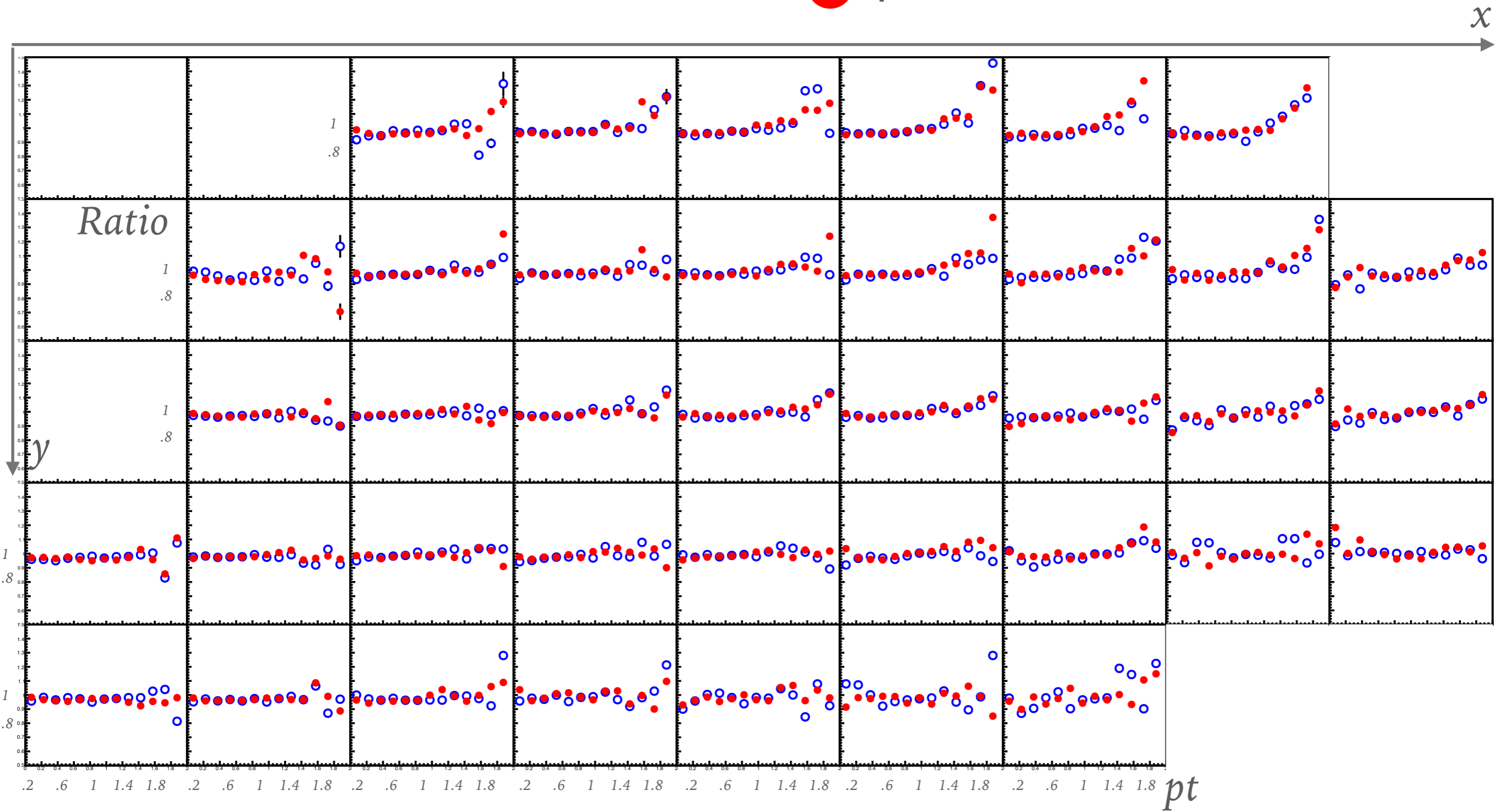
▲ Born, negative hadrons

● Born+o(alpha), positive hadrons



SEMI-INCLUSIVE RC

- Ratio of Born+o(α)/Born (x,y,pt)
- Restricted to $0.2 < z < 0.4$
- negative hadrons
- positive hadrons



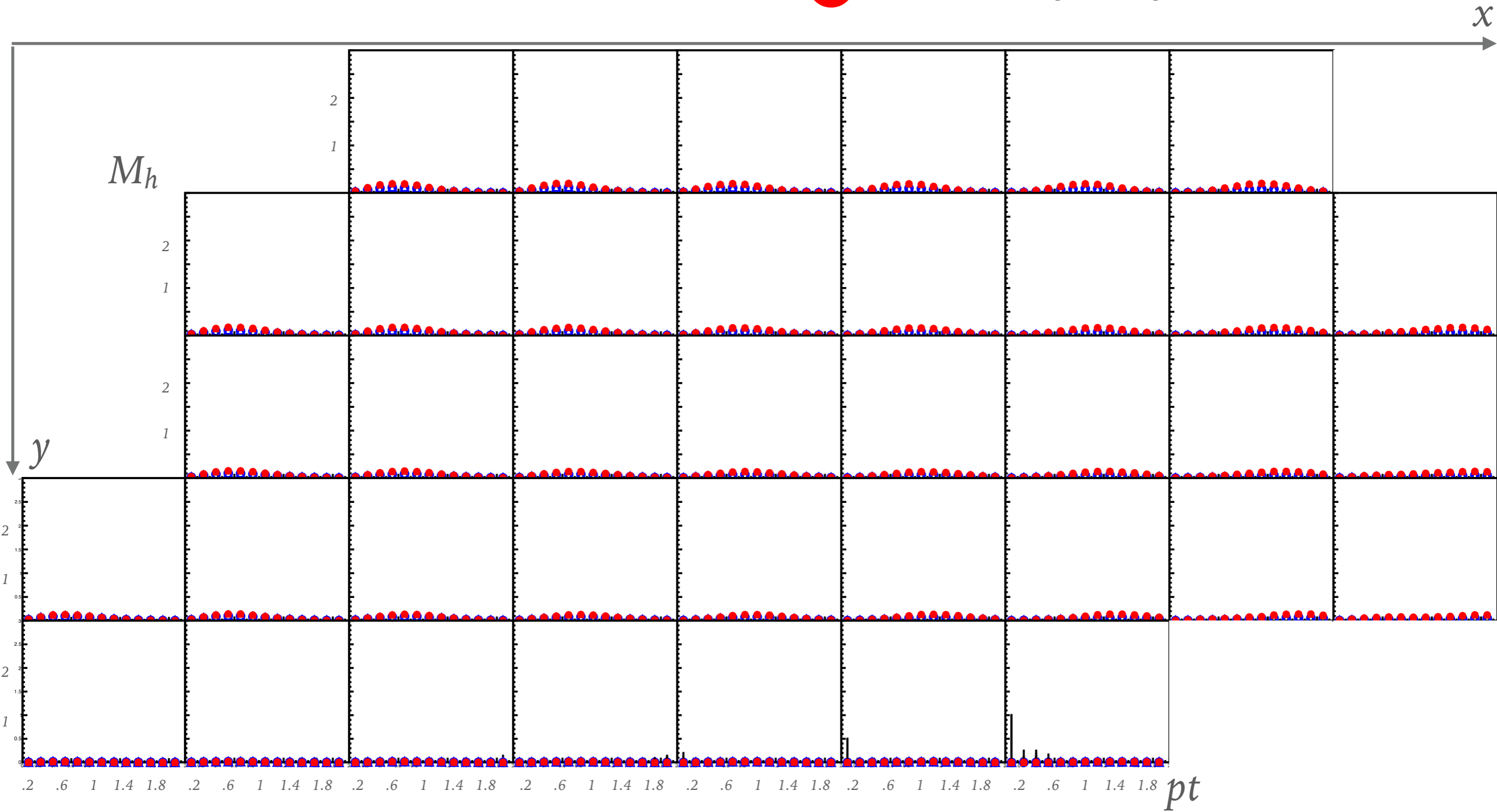
SEMI-INCLUSIVE RC

► Effect of RC on multiplicities (x,y,pt)

Restricted to $0.4 < z < 0.6$

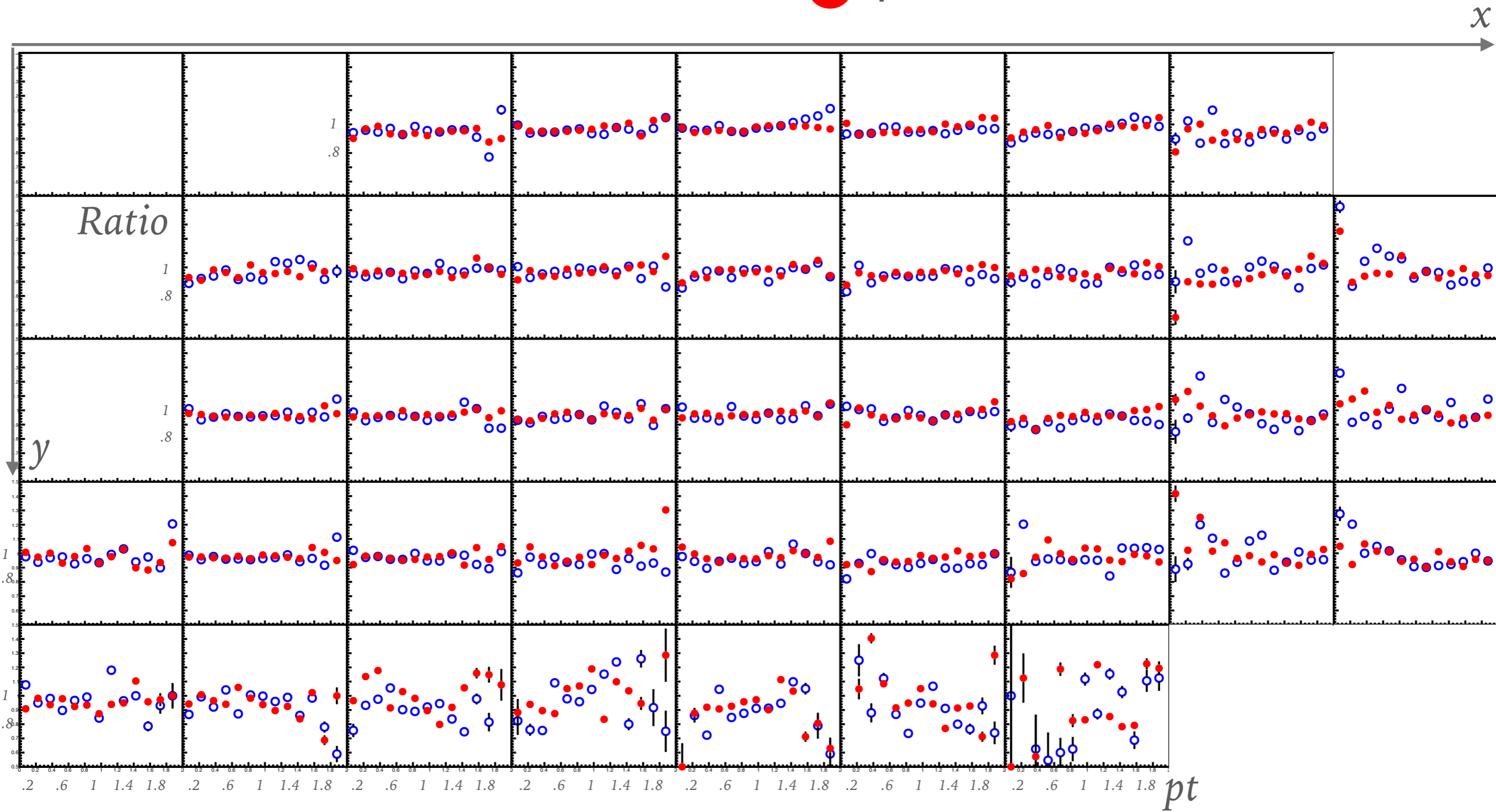
▲ Born, negative hadrons

● Born+o(alpha), positive hadrons



SEMI-INCLUSIVE RC

- Ratio of Born+o(α)/Born (x,y,pt)
- Restricted to $0.4 < z < 0.6$
- negative hadrons
- positive hadrons



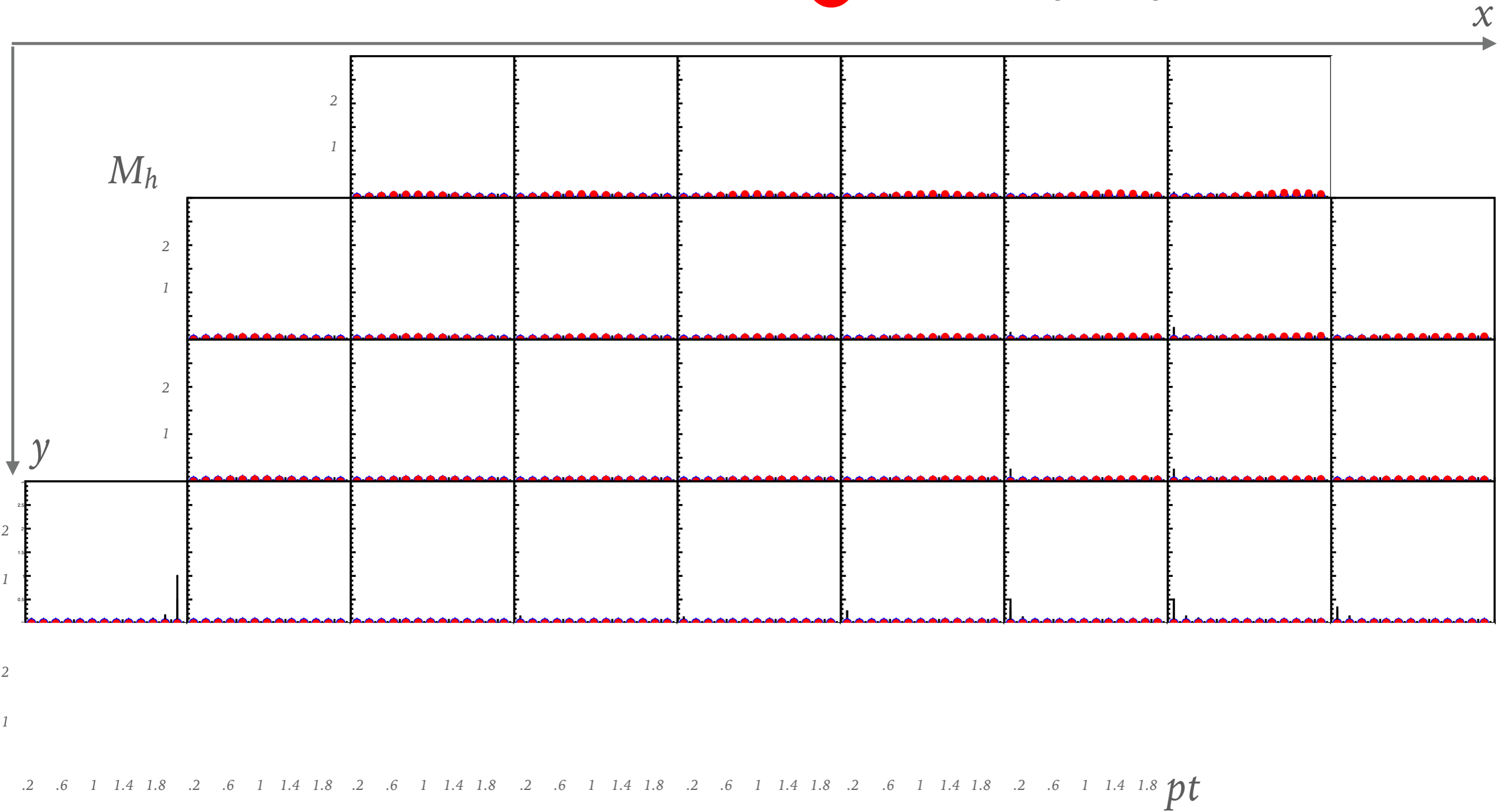
SEMI-INCLUSIVE RC

► Effect of RC on multiplicities (x,y,pt)

Restricted to $0.6 < z < 0.85$

▲ Born, negative hadrons

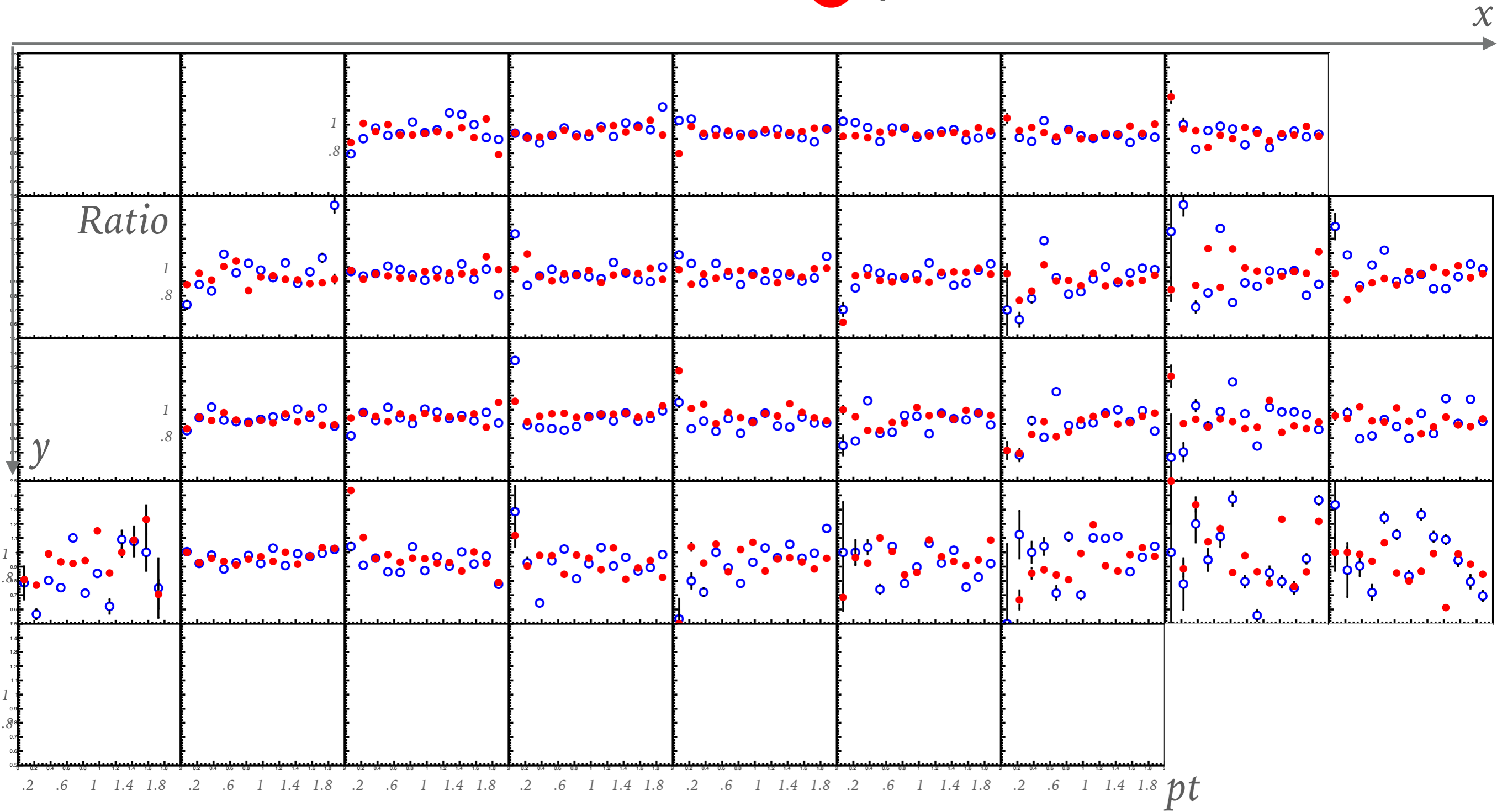
● Born+o(alpha), positive hadrons



SEMI-INCLUSIVE RC

- Ratio of Born+o(α)/Born (x,y,pt)
- Restricted to $0.6 < z < 0.85$

○ negative hadrons
● positive hadrons



RECONSTRUCTION OF TGEANTXTDJANGO IN CORAL

- Converting the .csh scripts from Yann for batching CORAL into .sh in order to begin reconstruction of batch of 500k events and compare later to real data.

NOTE ON DJANGO

- Almost finished, need to add some specific indication for the use of Django for people who wants to use it in the future

Ref: COMPASS Note 2017-5

Date: 4 September 2017

MEMORANDUM

From/De : Nicolas Pierre
To/à : COMPASS collaboration
Subject/Sujet : DJANGO : a Monte-Carlo Generator with Radiative Corrections

This note explains the functioning of the DJANGO Monte-Carlo generator (H. Spiesberger, generator of ep interaction at HERA modified for COMPASS needs) , its structure and its specificities, as well as reporting results obtained by the generator and the COMPASS Monte-Carlo chain after being coupled to TGEANT.
Also available at <http://wwwcompass.cern.ch/compass/notes/2017-5/2017-5.html> .

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