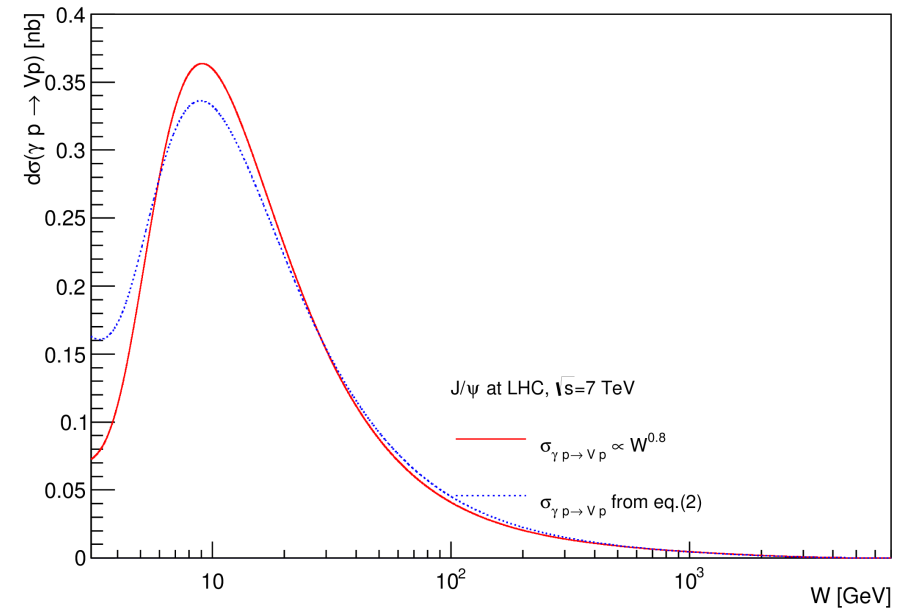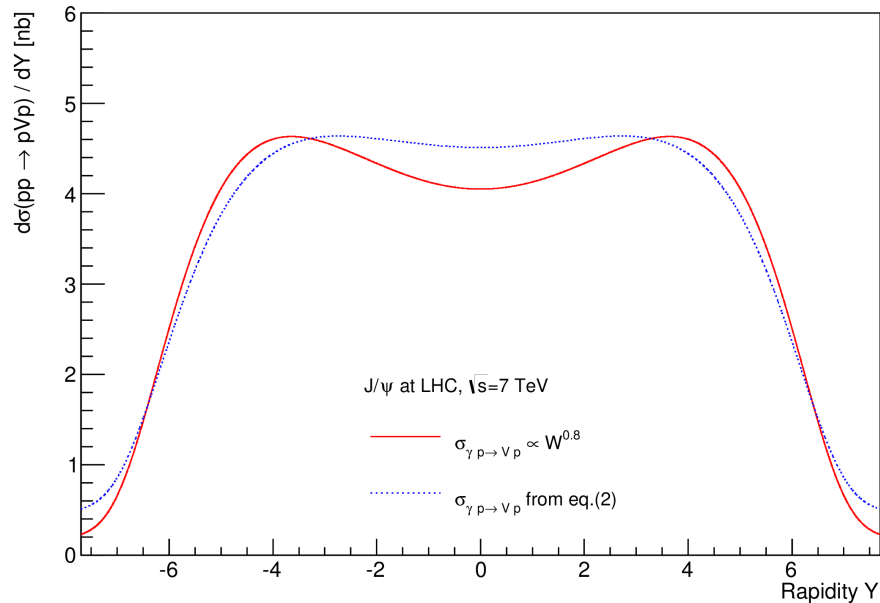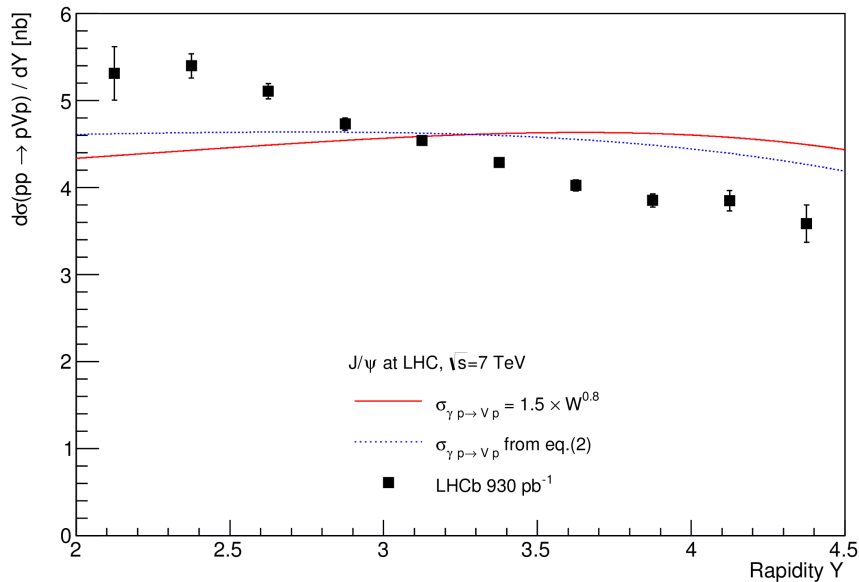# Power law vs geometric model at LHC
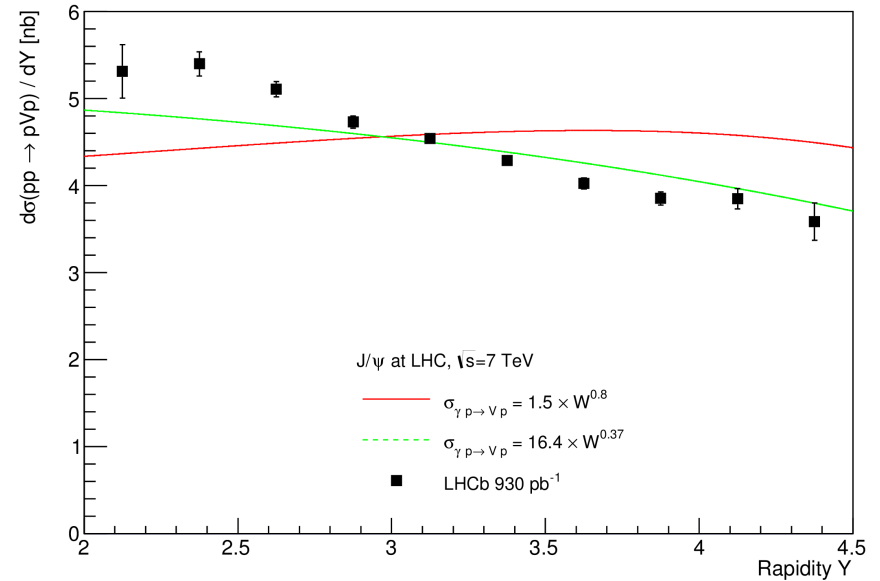

Generally similar behaviour
Power law is somewhat steeper in W → more distinct bell-like structure in y

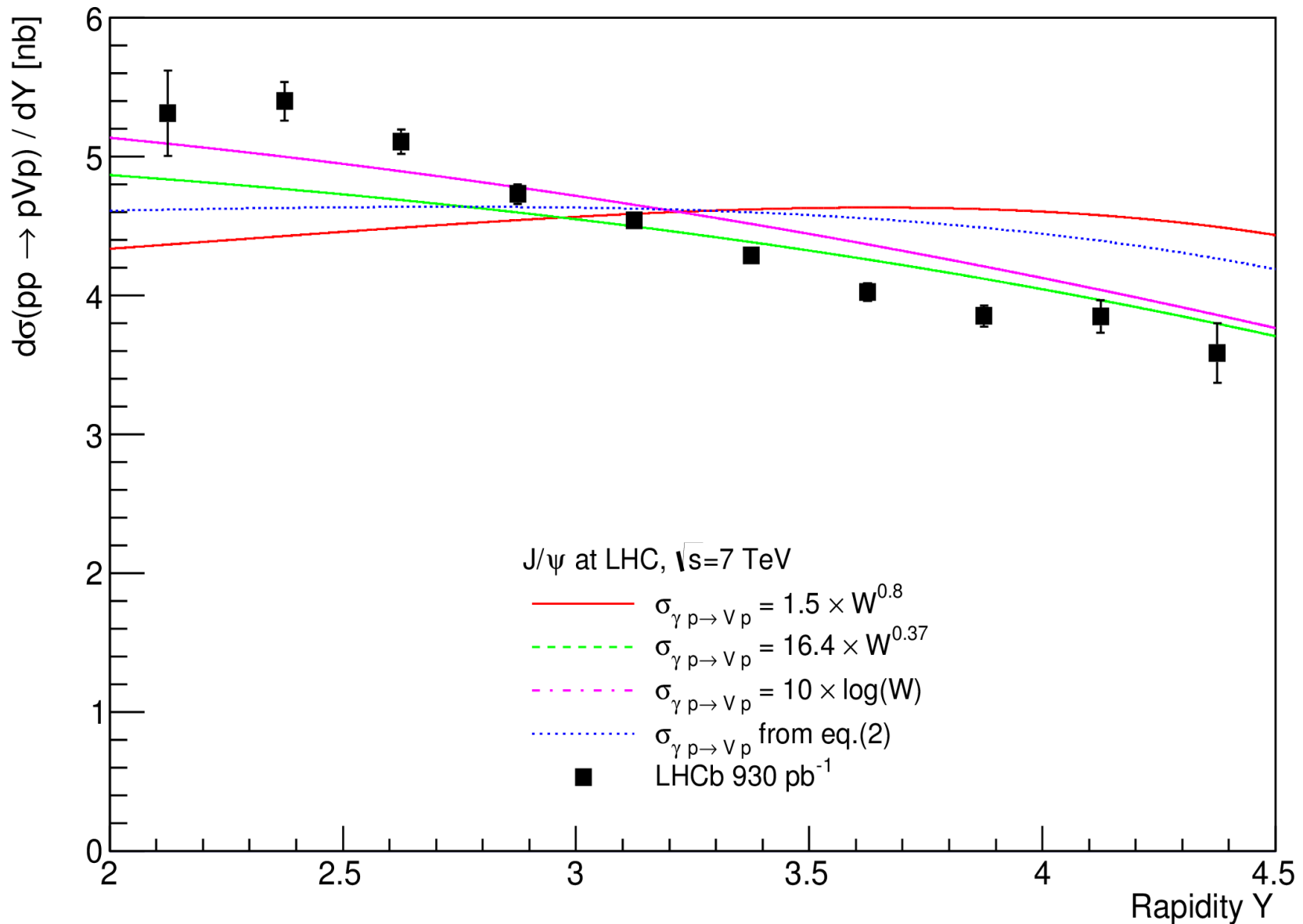# Adding LHCb rapidity cross section

Both power law and geometric model are much flatter than the data

By fitting the power (and normalization) a much better description of data can be obtained (green curve)
However, power tends to be very small (0.37)
This contradicts **(yes or no?)** HERA

Grand comparison

Here all available curves are summarized, also a logarithmic growth of the photon-proton cross section is shown

Logarithm describes data best