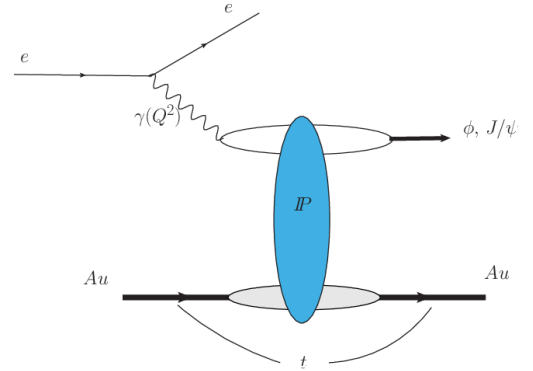


# Coherent VM production at EIC

*Zvi Citron, Eden Mautner, Michael Pitt*

## Signal studies

- Simulation with eStalLight: **VM + e + A** at the final state
- Different signal samples were generated
- Due to relatively large simulation time due to the ion(5min/ev), we changed ion status to 20 and exclude the ion from the dd4hep simulation
- Ion parameters available for: (anti)proton (A=1), Cu (A=29), Au (A=79) and Pb (A=82).
- Other ions will have:  $R_A = 1.2A^{1/3}$ , and  $\rho = \frac{0.138}{1.13505 - 0.0004283 \cdot A}$  for  $A > 7$  otherwise  $\rho = A$
- Tritium is not supported (for large A/Z)



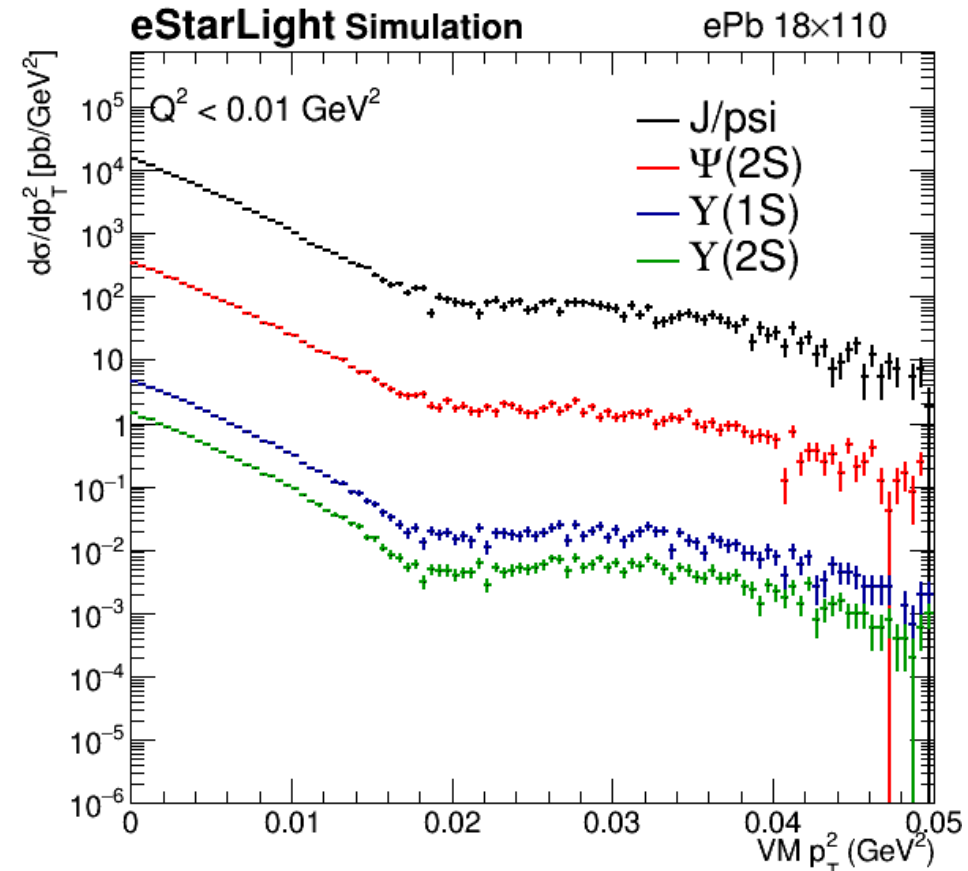
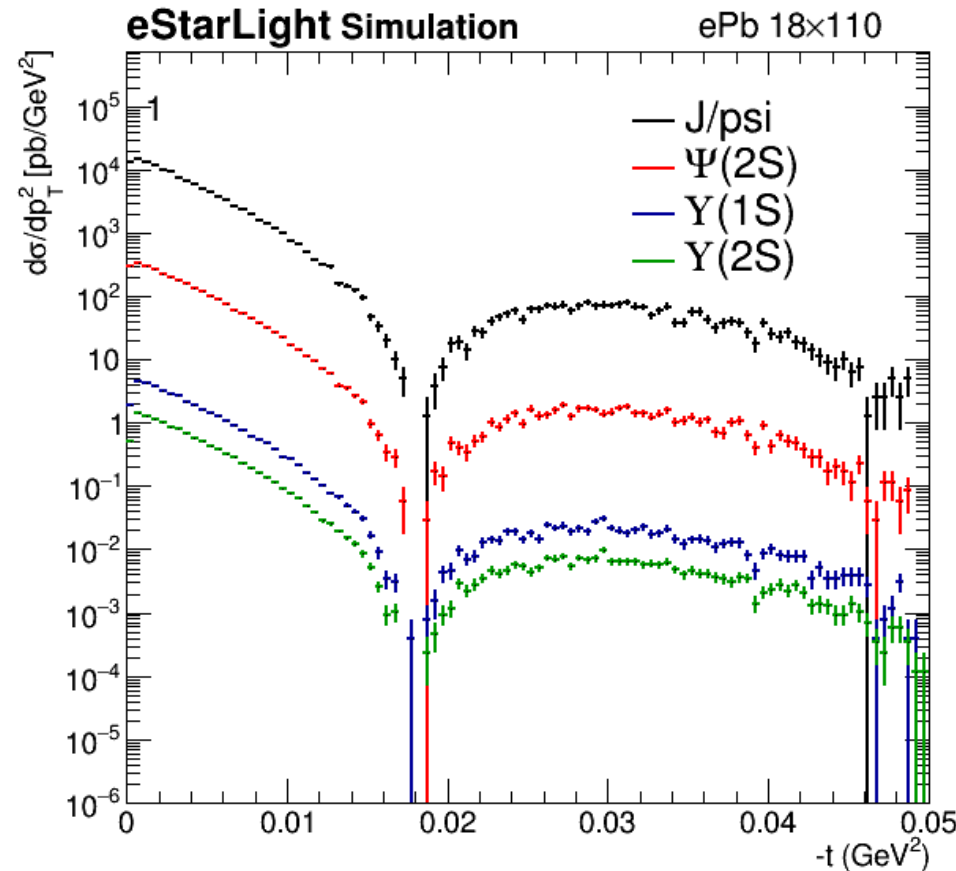
## Next steps

- Low-Q acceptance

# Coherent VM production at EIC

## Different VM and target particles

- All VM processes show the same  $t$  spectra



# Coherent VM production at EIC

Coherent J/psi with different target particles / beam energies

