

# Neutron background simulations for CE $\nu$ NS

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Update on Geant4 simulation strategy



EUROPEAN  
SPALLATION  
SOURCE

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Ben-Gurion University of the Negev



dipc

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# Status updates

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- kick-off meeting held on 21/04 with the two groups (BGU and DIPC)
- Douglas DiJulio gave an overview of the simulation work done with Geant4
- main code developments to consider:
  - ▶ updating geometry
  - ▶ weight-window approach
  - ▶ MCPL tools
  - ▶ GIT repository: <https://github.com/ESSNeutronSimulations/essneutrons>
- work strategy:
  - ▶ start from what has been done in Geant4 standalone
  - ▶ reproduce neutron spectra for 2 GeV POT (Josh)
  - ▶ further model development and documentation