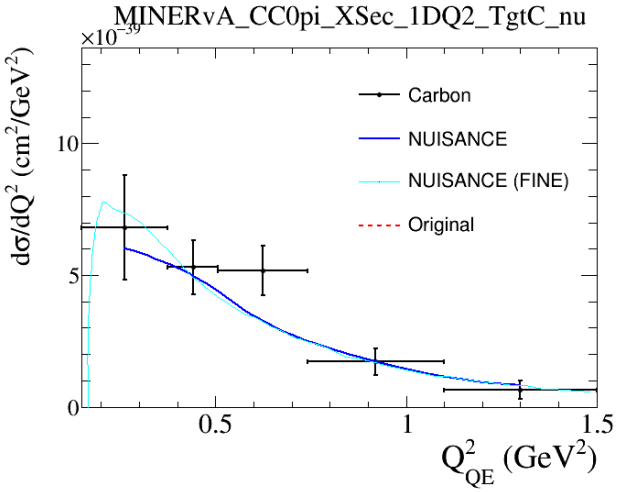
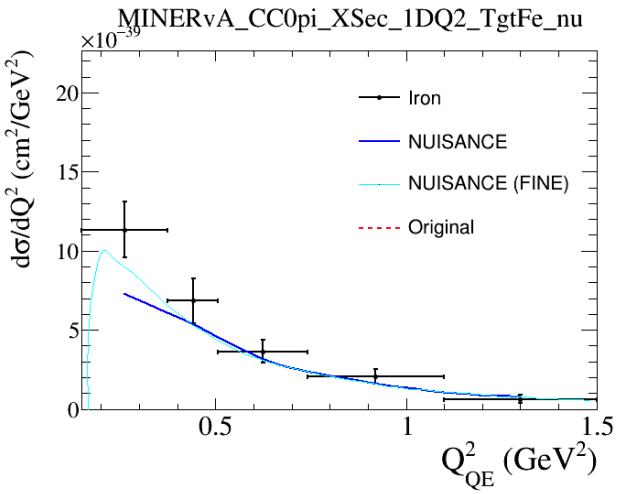


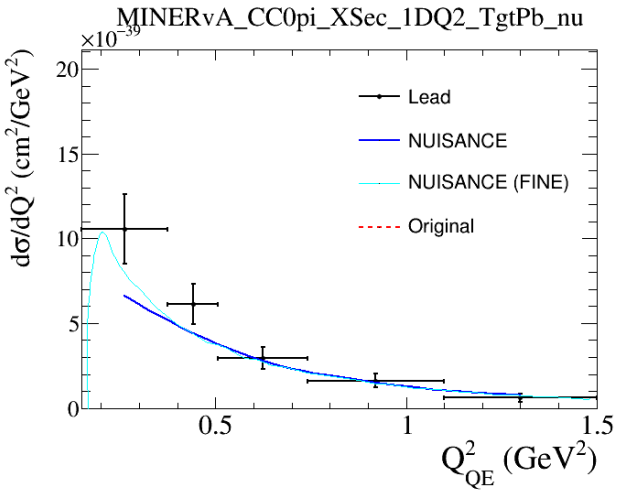
MINERvA_CC0pi_XSec_1DQ2_TgtC_nu_settings

- **name** : MINERvA_CC0pi_XSec_1DQ2_TgtC_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.C.2500000.5.prepared.r
- **type** : DEFAULT
- **description** :
  |--> MINERvA_CC0pi_XSec_1DQ2_Tgt_nu sample.
  |--> Target: Either C, CH, Fe, Pb
  |--> Flux: MINERvA Forward Horn numu
  |--> Signal: Any event with 1 muon, 1 proton p>450, no pions
- **xtitle** : Q^2_{QE} (GeV^2)
- **ytitle** : dσ/dQ^2 (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/DIAG/NORM
- **allowed_types** : FIX/DIAG
- **enu_min** : 0
- **enu_max** : 100
- **title** : MINERvA_CC0pi_XSec_1DQ2_Tgt_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **originalname** : MINERvA_CC0pi_XSec_1DQ2_TgtC_nu
- χ^2 : 5.84509
- **NDOF** : 5
- χ^2/**NDOF** : 1.16902



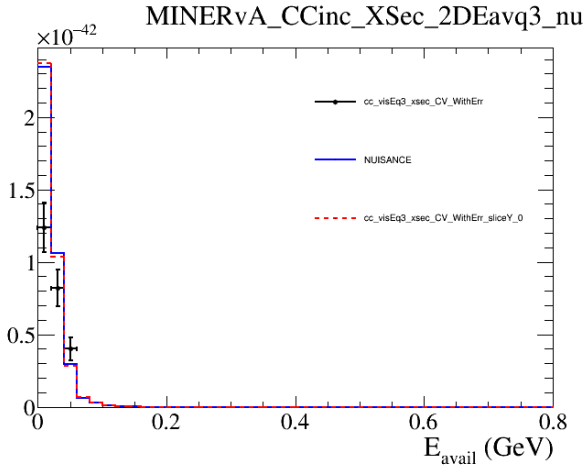
MINERvA_CC0pi_XSec_1DQ2_TgtFe_nu_settings

- **name** : MINERvA_CC0pi_XSec_1DQ2_TgtFe_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.Fe.2500000.6.prepared.
- **type** : DEFAULT
- **description** :
  |--> MINERvA_CC0pi_XSec_1DQ2_Tgt_nu sample.
  |--> Target: Either C, CH, Fe, Pb
  |--> Flux: MINERvA Forward Horn numu
  |--> Signal: Any event with 1 muon, 1 proton p>450, no pions
- **xtitle** : Q^2_{QE} (GeV^2)
- **ytitle** : dσ/dQ^2 (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/DIAG/NORM
- **allowed_types** : FIX/DIAG
- **enu_min** : 0
- **enu_max** : 100
- **title** : MINERvA_CC0pi_XSec_1DQ2_Tgt_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **originalname** : MINERvA_CC0pi_XSec_1DQ2_TgtFe_nu
- χ^2 : 10.7643
- **NDOF** : 5
- χ^2/**NDOF** : 2.15285



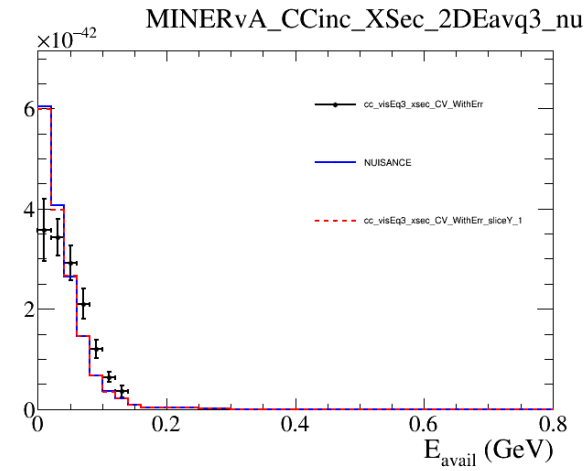
MINERvA_CC0pi_XSec_1DQ2_TgtPb_nu_settings

- **name** : MINERvA_CC0pi_XSec_1DQ2_TgtPb_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.Pb.2500000.7.prepared.
- **type** : DEFAULT
- **description** :
  |--> MINERvA_CC0pi_XSec_1DQ2_Tgt_nu sample.
  |--> Target: Either C, CH, Fe, Pb
  |--> Flux: MINERvA Forward Horn numu
  |--> Signal: Any event with 1 muon, 1 proton p>450, no pions
- **xtitle** : Q^2_{QE} (GeV^2)
- **ytitle** : dσ/dQ^2 (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/DIAG/NORM
- **allowed_types** : FIX/DIAG
- **enu_min** : 0
- **enu_max** : 100
- **title** : MINERvA_CC0pi_XSec_1DQ2_Tgt_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **originalname** : MINERvA_CC0pi_XSec_1DQ2_TgtPb_nu
- χ^2 : 5.43915
- **NDOF** : 5
- χ^2/**NDOF** : 1.08783



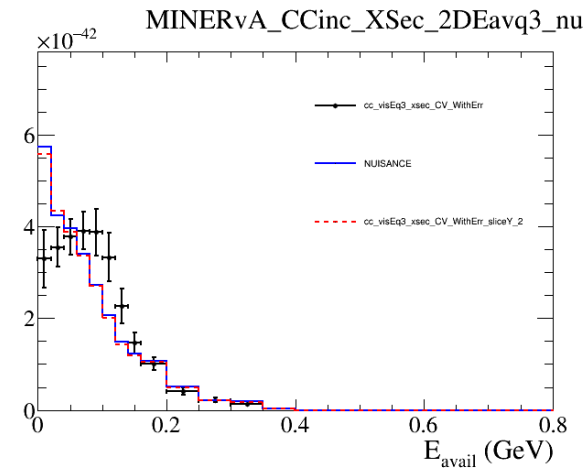
MINERvA_CCinc_XSec_2DEavq3_nu_settings

- **name** : MINERvA_CCinc_XSec_2DEavq3_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.CH.2500000.1.prepared
- **type** : DEFAULT
- **description** :
  - |--> MINERvA_CCinc_XSec_2DEavq3_nu sample.
  - |--> Target: CH
  - |--> Flux: MINERvA Medium Energy FHC numu
  - |--> Signal: CC-inclusive with theta < 20deg
- **xtitle** : q_3 (GeV)
- **ytitle** : E_{avail} (GeV)
- **ztitle** : $d^2\sigma/dq_3 dE_{avail}$ (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/FULL,DIAG/MASK
- **allowed_types** : FIX/FULL
- **enu_min** : 2
- **enu_max** : 6
- **title** : MINERvA_CCinc_XSec_2DEavq3_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **map** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **originalname** : MINERvA_CCinc_XSec_2DEavq3_nu
- χ^2 : 2152.07
- **NDOF** : 67
- χ^2/**NDOF** : 32.1204



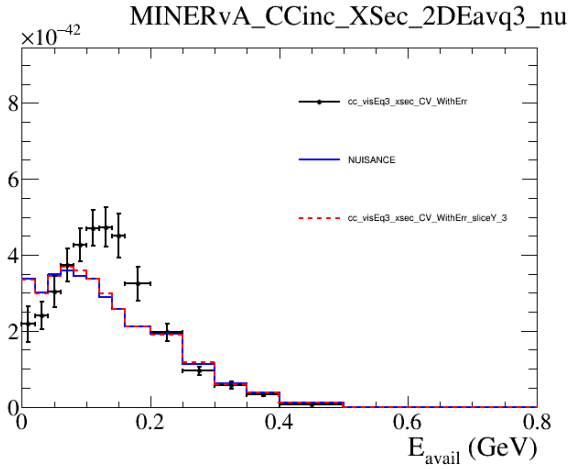
MINERvA_CCinc_XSec_2DEavq3_nu_settings

- **name** : MINERvA_CCinc_XSec_2DEavq3_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.CH.2500000.1.prepared
- **type** : DEFAULT
- **description** :
  - |--> MINERvA_CCinc_XSec_2DEavq3_nu sample.
  - |--> Target: CH
  - |--> Flux: MINERvA Medium Energy FHC numu
  - |--> Signal: CC-inclusive with theta < 20deg
- **xtitle** : q_3 (GeV)
- **ytitle** : E_{avail} (GeV)
- **ztitle** : $d^2\sigma/dq_3 dE_{avail}$ (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/FULL,DIAG/MASK
- **allowed_types** : FIX/FULL
- **enu_min** : 2
- **enu_max** : 6
- **title** : MINERvA_CCinc_XSec_2DEavq3_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **map** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **originalname** : MINERvA_CCinc_XSec_2DEavq3_nu
- χ^2 : 2152.07
- **NDOF** : 67
- χ^2/**NDOF** : 32.1204



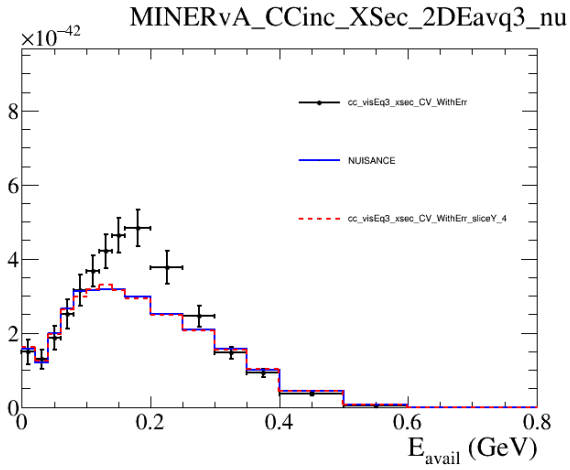
MINERvA_CCinc_XSec_2DEavq3_nu_settings

- **name** : MINERvA_CCinc_XSec_2DEavq3_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.CH.2500000.1.prepared
- **type** : DEFAULT
- **description** :
  - |--> MINERvA_CCinc_XSec_2DEavq3_nu sample.
  - |--> Target: CH
  - |--> Flux: MINERvA Medium Energy FHC numu
  - |--> Signal: CC-inclusive with theta < 20deg
- **xtitle** : q_3 (GeV)
- **ytitle** : E_{avail} (GeV)
- **ztitle** : $d^2\sigma/dq_3 dE_{avail}$ (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/FULL,DIAG/MASK
- **allowed_types** : FIX/FULL
- **enu_min** : 2
- **enu_max** : 6
- **title** : MINERvA_CCinc_XSec_2DEavq3_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **map** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **originalname** : MINERvA_CCinc_XSec_2DEavq3_nu
- χ^2 : 2152.07
- **NDOF** : 67
- χ^2/**NDOF** : 32.1204



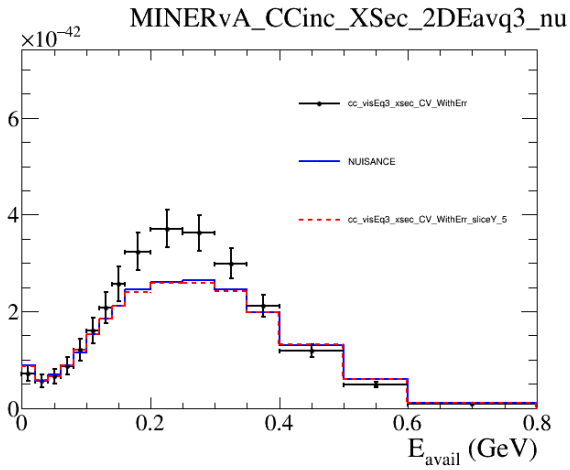
MINERvA_CCinc_XSec_2DEavq3_nu_settings

- **name** : MINERvA_CCinc_XSec_2DEavq3_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.CH.2500000.1.prepared
- **type** : DEFAULT
- **description** :
  |--> MINERvA_CCinc_XSec_2DEavq3_nu sample.
  |--> Target: CH
  |--> Flux: MINERvA Medium Energy FHC numu
  |--> Signal: CC-inclusive with theta < 20deg
- **xtitle** : q_3 (GeV)
- **ytitle** : E_{avail} (GeV)
- **ztitle** : $d^2\sigma/dq_3 dE_{avail}$ (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/FULL,DIAG/MASK
- **allowed_types** : FIX/FULL
- **enu_min** : 2
- **enu_max** : 6
- **title** : MINERvA_CCinc_XSec_2DEavq3_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **map** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **originalname** : MINERvA_CCinc_XSec_2DEavq3_nu
- χ^2 : 2152.07
- **NDOF** : 67
- χ^2/**NDOF** : 32.1204



MINERvA_CCinc_XSec_2DEavq3_nu_settings

- **name** : MINERvA_CCinc_XSec_2DEavq3_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.CH.2500000.1.prepared
- **type** : DEFAULT
- **description** :
  |--> MINERvA_CCinc_XSec_2DEavq3_nu sample.
  |--> Target: CH
  |--> Flux: MINERvA Medium Energy FHC numu
  |--> Signal: CC-inclusive with theta < 20deg
- **xtitle** : q_3 (GeV)
- **ytitle** : E_{avail} (GeV)
- **ztitle** : $d^2\sigma/dq_3 dE_{avail}$ (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/FULL,DIAG/MASK
- **allowed_types** : FIX/FULL
- **enu_min** : 2
- **enu_max** : 6
- **title** : MINERvA_CCinc_XSec_2DEavq3_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **map** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **originalname** : MINERvA_CCinc_XSec_2DEavq3_nu
- χ^2 : 2152.07
- **NDOF** : 67
- χ^2/**NDOF** : 32.1204



MINERvA_CCinc_XSec_2DEavq3_nu_settings

- **name** : MINERvA_CCinc_XSec_2DEavq3_nu
- **input** : GENIE:@GENIE_DIR/gntp.R-2_8_6.OfficialDefault.Default.MINERvA_fhc_numu.CH.2500000.1.prepared
- **type** : DEFAULT
- **description** :
  |--> MINERvA_CCinc_XSec_2DEavq3_nu sample.
  |--> Target: CH
  |--> Flux: MINERvA Medium Energy FHC numu
  |--> Signal: CC-inclusive with theta < 20deg
- **xtitle** : q_3 (GeV)
- **ytitle** : E_{avail} (GeV)
- **ztitle** : $d^2\sigma/dq_3 dE_{avail}$ (cm^2/GeV^2)
- **default_types** : FIX,FREE,SHAPE/FULL,DIAG/MASK
- **allowed_types** : FIX/FULL
- **enu_min** : 2
- **enu_max** : 6
- **title** : MINERvA_CCinc_XSec_2DEavq3_nu
- **data** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **covar** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/
- **map** : /data/stowell/NIWG/NUISANCEMC/minerva_tuning/sample_validations/minerva-validation-061117/builds/n
- **originalname** : MINERvA_CCinc_XSec_2DEavq3_nu
- χ^2 : 2152.07
- **NDOF** : 67
- χ^2/**NDOF** : 32.1204