

GENIE Comparison

Datasets:

numuCC_all
numubarCC_all
numuCCQE_all
numubarCCQE_all
numuCCppi+_noPCut
numuCCppi+_SKAT,7 [Grabosch et al., Zeit.Phys.C41:527 (1988)]
numuCCppi+_noWcut
numuCCppi+_Wcut1.4
numuCCppi+_Wcut2
numuCCppi+_SKAT,4 [Ammosov et al., Sov.J.Nucl.Phys.50:67 (1988)]
numuCCppi+_SKAT,5 [Grabosch et al., Zeit.Phys.C41:527 (1988)]
numuCCppi0_noPCut
numuCCppi0_SKAT,6 [Grabosch et al., Zeit.Phys.C41:527 (1988)]
numuCCn2pi+_ANL_12FT,13 [Day et al., Phys.Rev.D28:2714 (1983)]
numuCCppi+pi0_ANL_12FT,12 [Day et al., Phys.Rev.D28:2714 (1983)]
numuCCppi+pi_all
numubarCCppi-_Gargamelle,7 [Bolognese et al., Phys.Lett.B81:393 (1979)]
numubarCCppi-_SKAT,10 [Grabosch et al., Zeit.Phys.C41:527 (1988)]
numubarCCppi-_FNAL_15FT,10 [Barish et al., Phys.Lett.B91:161 (1980)]
numubarCCppi-_SKAT,11 [Grabosch et al., Zeit.Phys.C41:527 (1988)]

Models:

v3.0.0/G18_02a_00_000
v3.0.0/G18_02a_02_11a
v3.0.0/G18_10j_00_000

2018/11/01 20:54:26

Dataset:
numuCC_all

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 119 / 143$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 97.3 / 143$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 117 / 143$ DoF

Subsets:

ANL_12FT,2 [Barish et al., Phys.Lett.B66:291 (1977)]
1 DoF, $\chi^2 = 0.754$ **0.108** **0.652**

ANL_12FT,4 [Barish et al., Phys.Rev.D19:2521 (1979)]
2 DoF, $\chi^2 = 3.23$ **1.34** **2.99**

BBBC,0 [Bosetti et al., Phys.Lett.B70:273 (1977)]
4 DoF, $\chi^2 = 6.43$ **6.19** **6.44**

BBBC,2 [Colley et al., Zeit.Phys.C2:187 (1979)]
3 DoF, $\chi^2 = 0.0677$ **0.134** **0.0696**

BBBC,5 [Bosetti et al., Phys.Lett.B110:167 (1982)]
6 DoF, $\chi^2 = 4.59$ **4.64** **4.57**

BBBC,8 [Parker et al., Nucl.Phys.B232:1 (1984)]
1 DoF, $\chi^2 = 9.6$ **8.58** **9.56**

BNL_7FT,0 [Baltay et al., Phys.Rev.Lett.44:916 (1980)]
2 DoF, $\chi^2 = 0.116$ **0.0188** **0.0982**

BNL_7FT,4 [Baker et al., Phys.Rev.D25:617 (1982)]
13 DoF, $\chi^2 = 14.7$ **9** **14.5**

CCFR,2 [Seligman et al., Nevis Report 292 (1996)]
12 DoF, $\chi^2 = 8.95$ **8.65** **8.93**

CCFRR,0 [MacFarlane et al., Zeit.Phys.C26:1 (1984)]
13 DoF, $\chi^2 = 2.39$ **3.78** **2.37**

CHARM,0 [Jonker et al., Phys.Lett.B99:265 (1981)]
1 DoF, $\chi^2 = 6.27$ **4.69** **6.23**

CHARM,4 [Allaby et al., Zeit.Phys.C38:403 (1988)]
1 DoF, $\chi^2 = 0.17$ **0.0536** **0.15**

FNAL_15FT,1 [Kitagaki et al., Phys.Rev.Lett.49:98 (1982)]
6 DoF, $\chi^2 = 0.409$ **0.352** **0.403**

FNAL_15FT,2 [Baker et al., Phys.Rev.Lett.51:735 (1983)]
4 DoF, $\chi^2 = 3.63$ **3.28** **3.63**

Gargamelle,0 [Eichten et al., Phys.Lett.B46:274 (1973)]
1 DoF, $\chi^2 = 0.597$ **0.0408** **0.526**

Gargamelle,10 [Ciampolillo et al., Phys.Lett.B84:281 (1979)]
2 DoF, $\chi^2 = 1.4$ **0.992** **1.36**

Gargamelle,12 [Morfin et al., Phys.Lett.B104:235 (1981)]
5 DoF, $\chi^2 = 4.33$ **3.86** **4.3**

IHEP_ITEP,0 [Asratyan et al., Phys.Lett.B76:239 (1978)]
1 DoF, $\chi^2 = 0.103$ **8.25e-07** **0.0887**

IHEP_ITEP,2 [Vovenko et al., Sov.J.Nucl.Phys.30:528 (1979)]
4 DoF, $\chi^2 = 0.104$ **0.682** **0.116**

IHEP_JINR,0 [Anikeev et al., Zeit.Phys.C70:39 (1996)]
9 DoF, $\chi^2 = 9.83$ **12.1** **9.8**

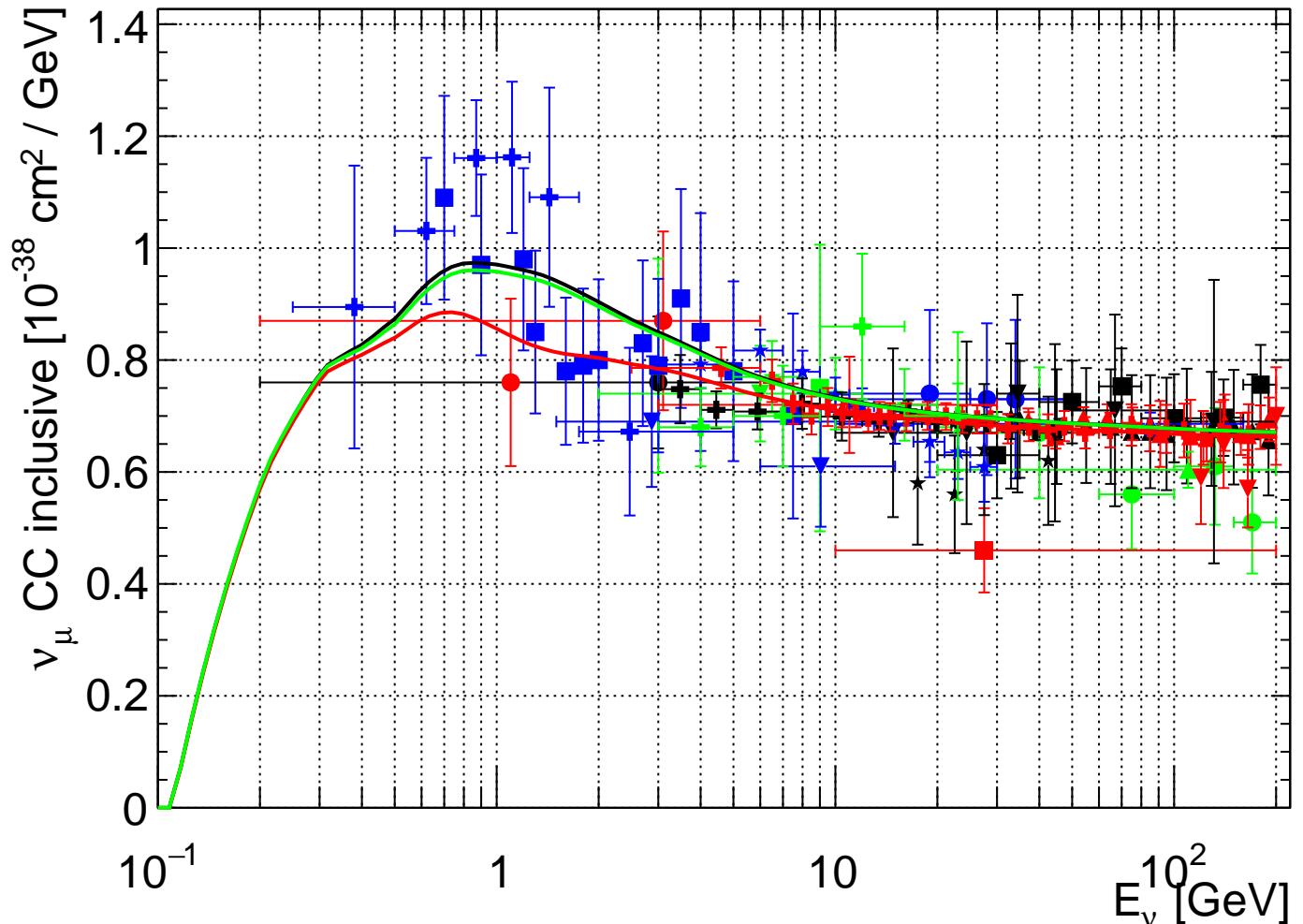
MINOS,0 [Adamson et al., Phys.Rev.D81:072002 (2010)]
13 DoF, $\chi^2 = 20.5$ **4.01** **18.8**

NOMAD,5 [Wu et al., Phys.Lett.B660:19 (2008)]
29 DoF, $\chi^2 = 7.09$ **4.22** **6.49**

SKAT,0 [Baranov et al., Phys.Rev.B81:255 (1979)]
4 DoF, $\chi^2 = 5.59$ **3.19** **5.33**

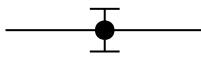
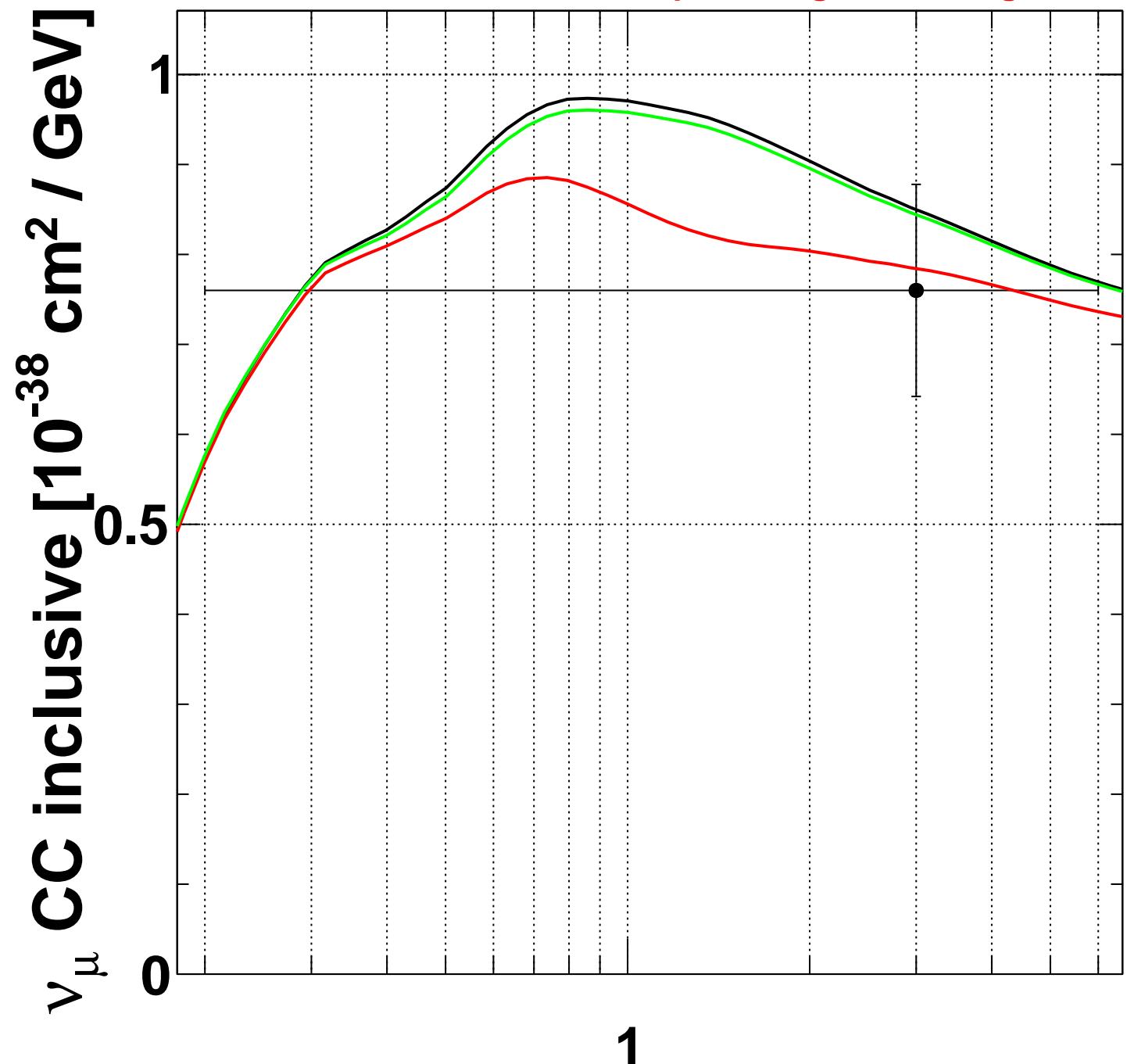
SciBooNE,0 [Nakajima et al., Phys.Rev.D83:012005 (2011)]
6 DoF, $\chi^2 = 8.26$ **17.4** **9.16**

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|---|--|
| ANL_12FT,2 [Barish et al., Phys.Lett.B66:291 (1977)] | ANL_12FT,4 [Barish et al., Phys.Rev.D19:2521 (1979)] |
| BEBC,0 [Bosetti et al., Phys.Lett.B70:273 (1977)] | BEBC,2 [Colley et al., Zeit.Phys.C2:187 (1979)] |
| BEBC,5 [Bosetti et al., Phys.Lett.B110:167 (1982)] | BEBC,8 [Parker et al., Nucl.Phys.B232:1 (1984)] |
| BNL_7FT,0 [Baltay et al., Phys.Rev.Lett.44:916 (1980)] | BNL_7FT,4 [Baker et al., Phys.Rev.D25:617 (1982)] |
| CCFR,2 [Seligman et al., Nevis Report 292 (1996)] | CCFRR,0 [MacFarlane et al., Zeit.Phys.C26:1 (1984)] |
| CHARM,0 [Jonker et al., Phys.Lett.B99:265 (1981)] | CHARM,4 [Allaby et al., Zeit.Phys.C38:403 (1988)] |
| FNAL_15FT,1 [Kitagaki et al., Phys.Rev.Lett.49:98 (1982)] | FNAL_15FT,2 [Baker et al., Phys.Rev.Lett.51:735 (1983)] |
| Gargamelle,0 [Eichten et al., Phys.Lett.B46:274 (1973)] | Gargamelle,10 [Ciampolillo et al., Phys.Lett.B84:281 (1979)] |
| Gargamelle,12 [Morfin et al., Phys.Lett.B104:235 (1981)] | IHEP_Itep,0 [Asratyan et al., Phys.Lett.B76:239 (1978)] |
| IHEP_Itep,2 [Vovenko et al., Sov.J.Nucl.Phys.30:528 (1979)] | IHEP_JINR,0 [Anikeev et al., Zeit.Phys.C70:39 (1996)] |
| MINOS,0 [Adamson et al., Phys.Rev.D81:072002 (2010)] | NOMAD,5 [Wu et al., Phys.Lett.B660:19 (2008)] |
| SKAT,0 [Baranov et al., Phys.Rev.B81:255 (1979)] | SciBooNE,0 [Nakajima et al., Phys.Rev.D83:012005 (2011)] |

v3.0.0:G18_02a_00_000:numu_freenuc
v3.0.0:G18_02a_02_11a:numu_freenuc
v3.0.0:G18_10j_00_000:numu_freenuc



ANL_12FT,2 [Barish et al., Phys.Lett.B66:291 (1977)]



v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 0.754/1 \text{ DoF}$

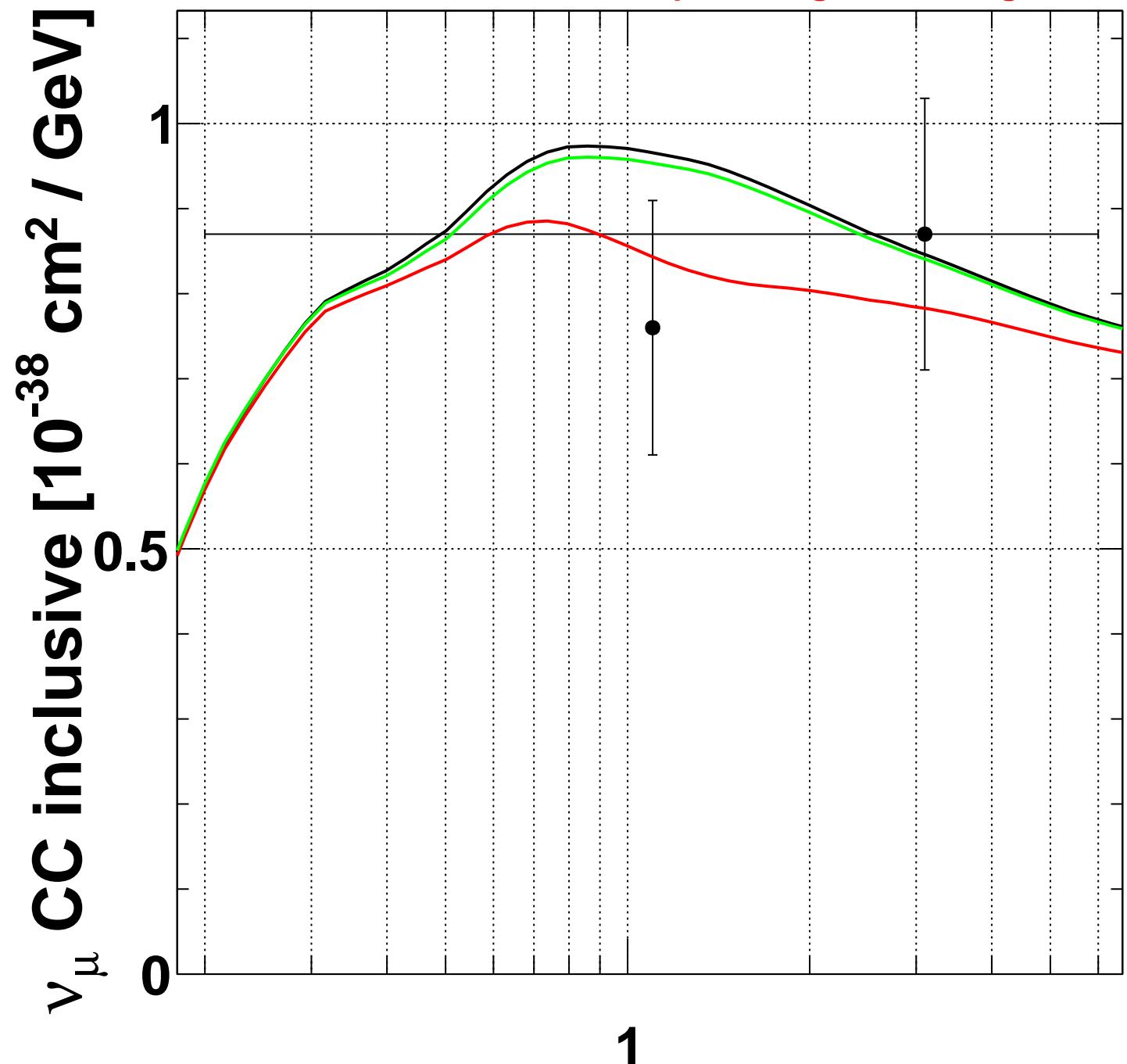


v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 0.108/1 \text{ DoF}$



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 0.652/1 \text{ DoF}$

[GeV]



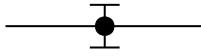
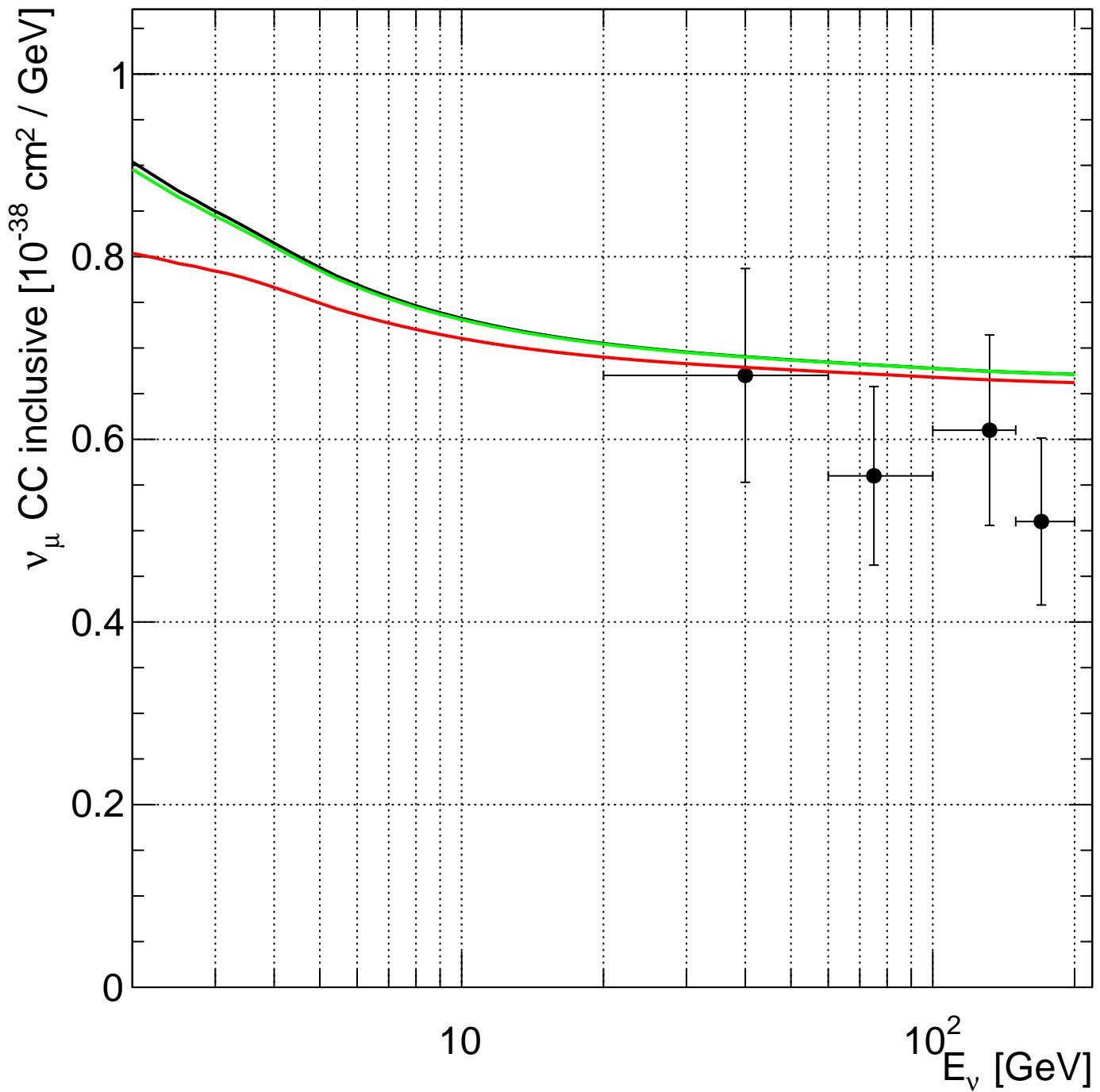
ANL_12FT,4 [Barish et al., Phys.Rev.D19:2521 (1979)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 3.23/2 \text{ DoF}$

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 1.34/2 \text{ DoF}$

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 2.99/2 \text{ DoF}$

[GeV]



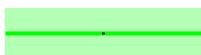
BEBC,0 [Bosetti et al., Phys.Lett.B70:273 (1977)]



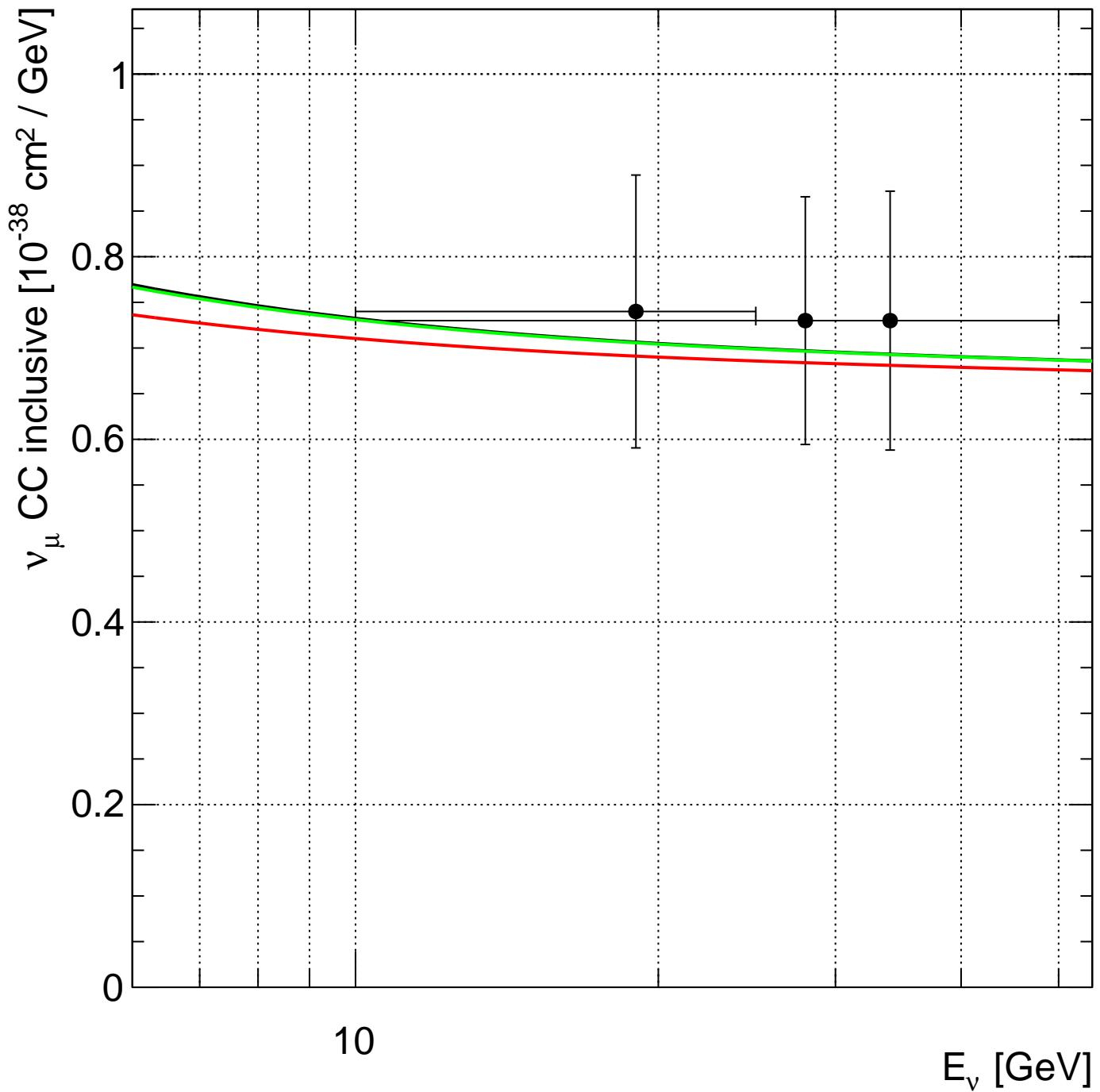
$v3.0.0:\text{G18_02a_00_000}:\text{numu_freenuc}$ $\chi^2 = 6.43/4 \text{ DoF}$



$v3.0.0:\text{G18_02a_02_11a}:\text{numu_freenuc}$ $\chi^2 = 6.19/4 \text{ DoF}$



$v3.0.0:\text{G18_10j_00_000}:\text{numu_freenuc}$ $\chi^2 = 6.44/4 \text{ DoF}$

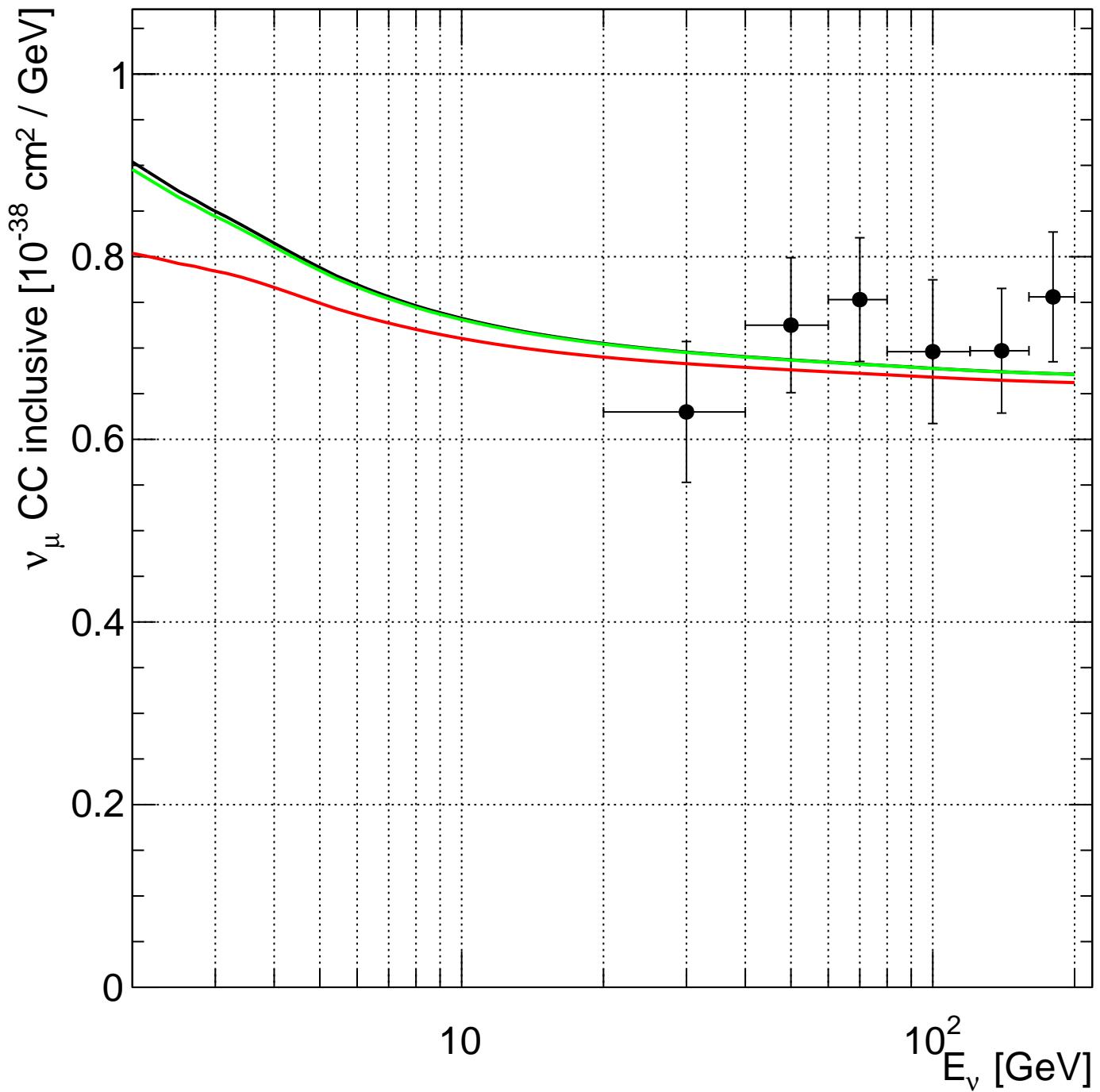


— BEBC,2 [Colley et al., Zeit.Phys.C2:187 (1979)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.0677/3 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.134/3 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.0696/3 \text{ DoF}$

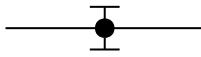
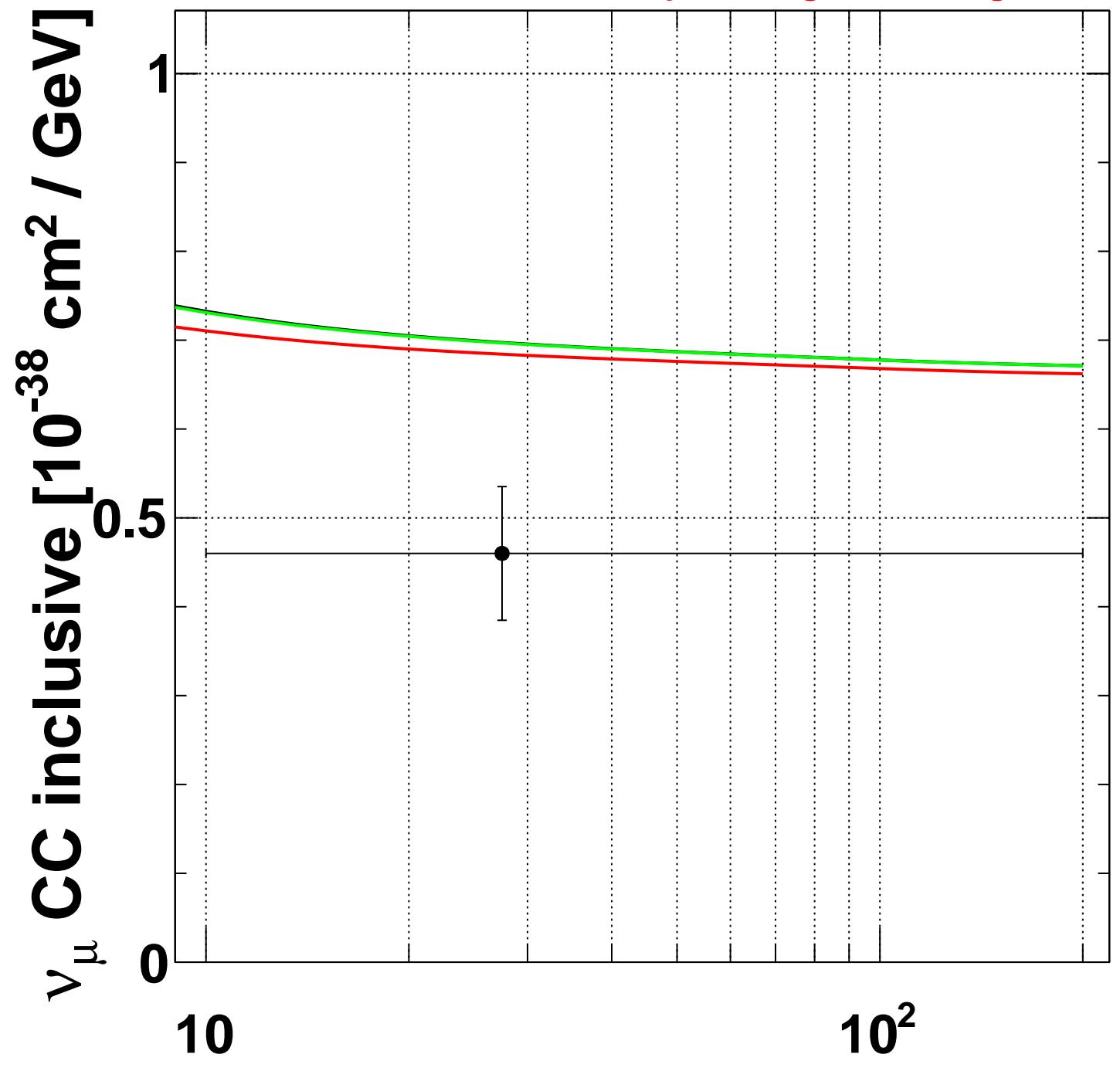


BEBC,5 [Bosetti et al., Phys.Lett.B110:167 (1982)]

v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 4.59/6 \text{ DoF}$

v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 4.64/6 \text{ DoF}$

v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 4.57/6 \text{ DoF}$



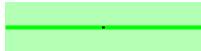
BEBC,8 [Parker et al., Nucl.Phys.B232:1 (1984)]



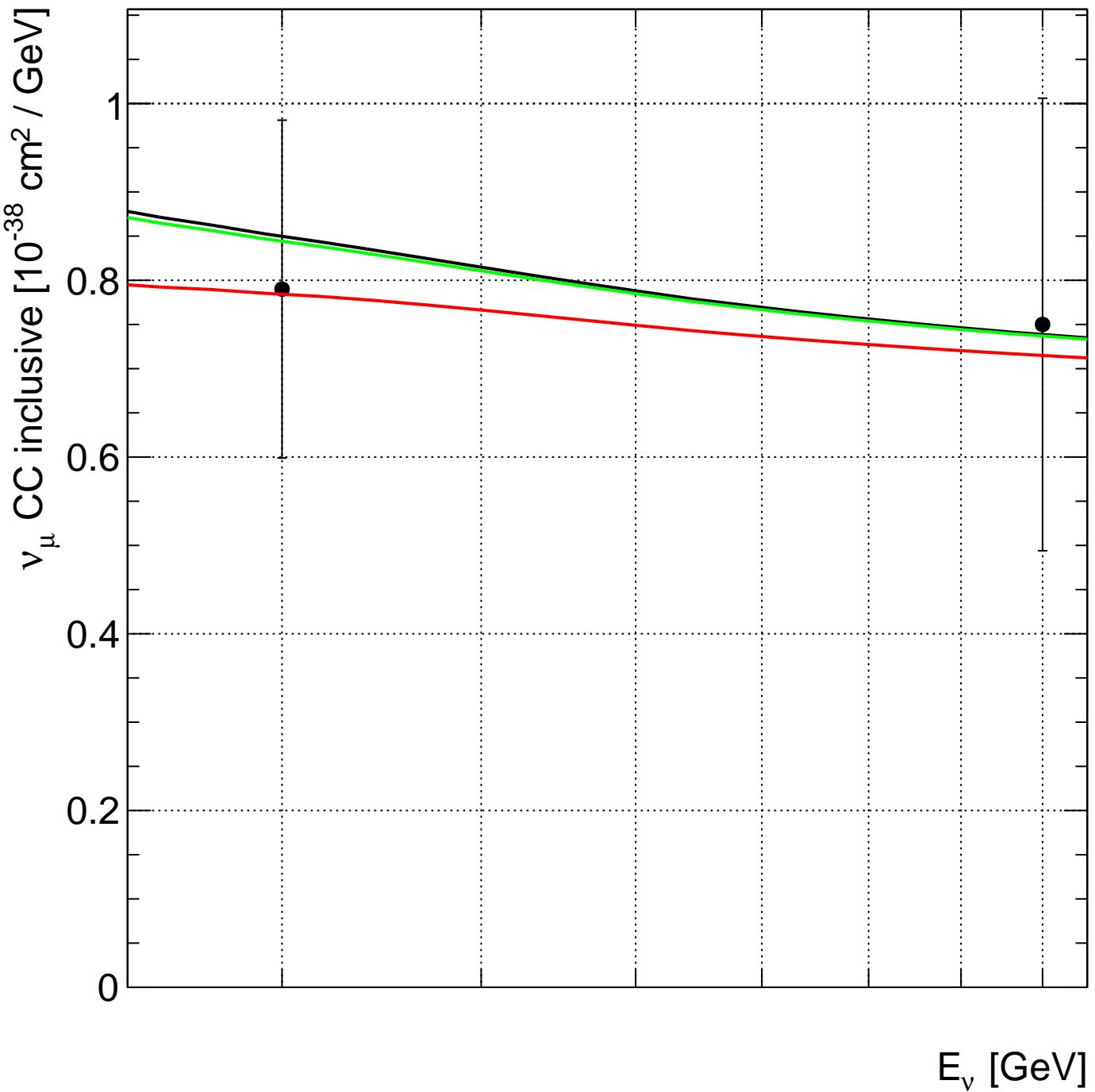
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 9.6/1 \text{ DoF}$



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 8.58/1 \text{ DoF}$



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 9.56/1 \text{ DoF}$

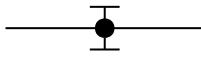
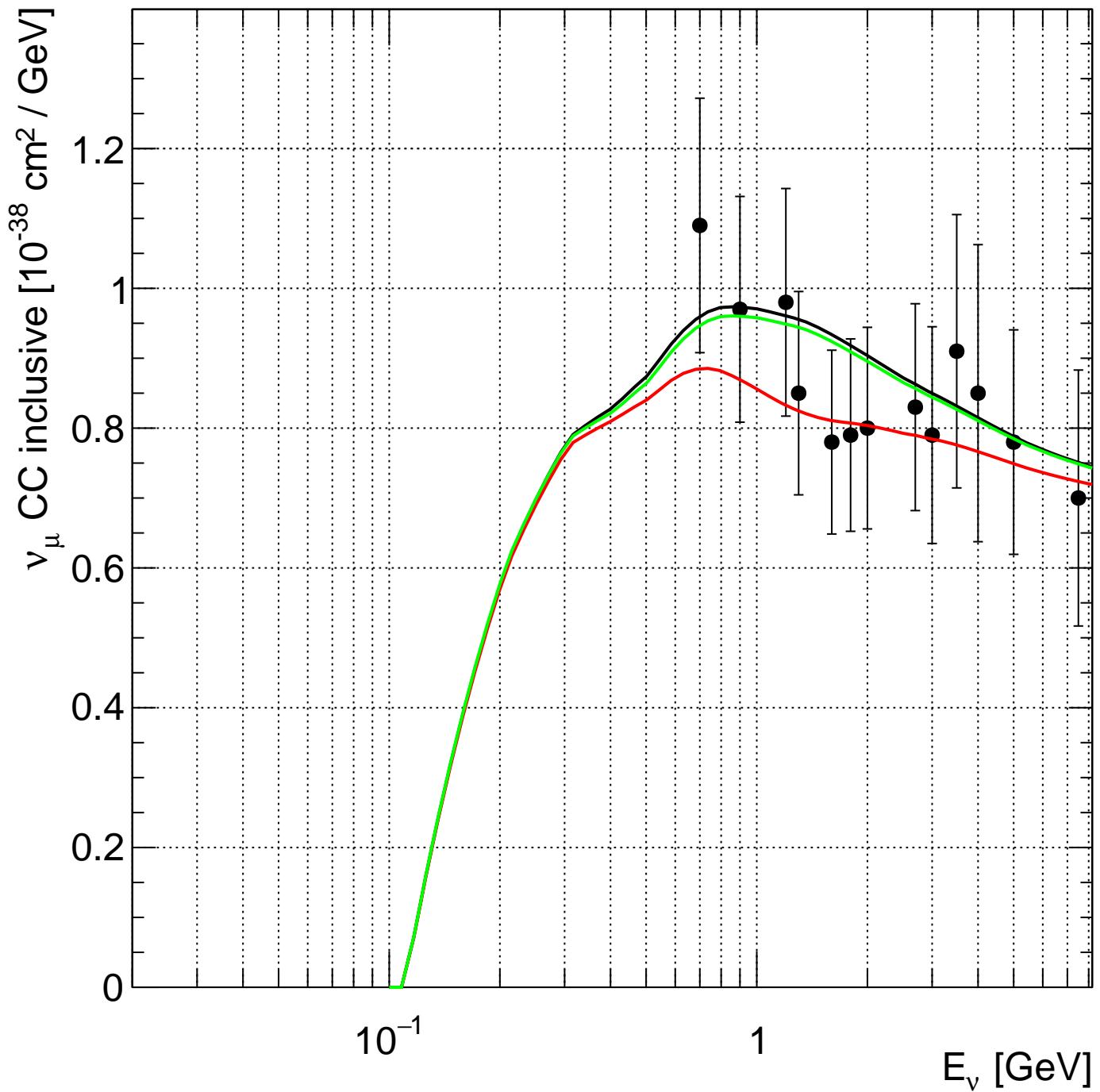


BNL_7FT,0 [Baltay et al., Phys.Rev.Lett.44:916 (1980)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.116/2 \text{ DoF}$

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.0188/2 \text{ DoF}$

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.0982/2 \text{ DoF}$



BNL_7FT,4 [Baker et al., Phys.Rev.D25:617 (1982)]



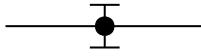
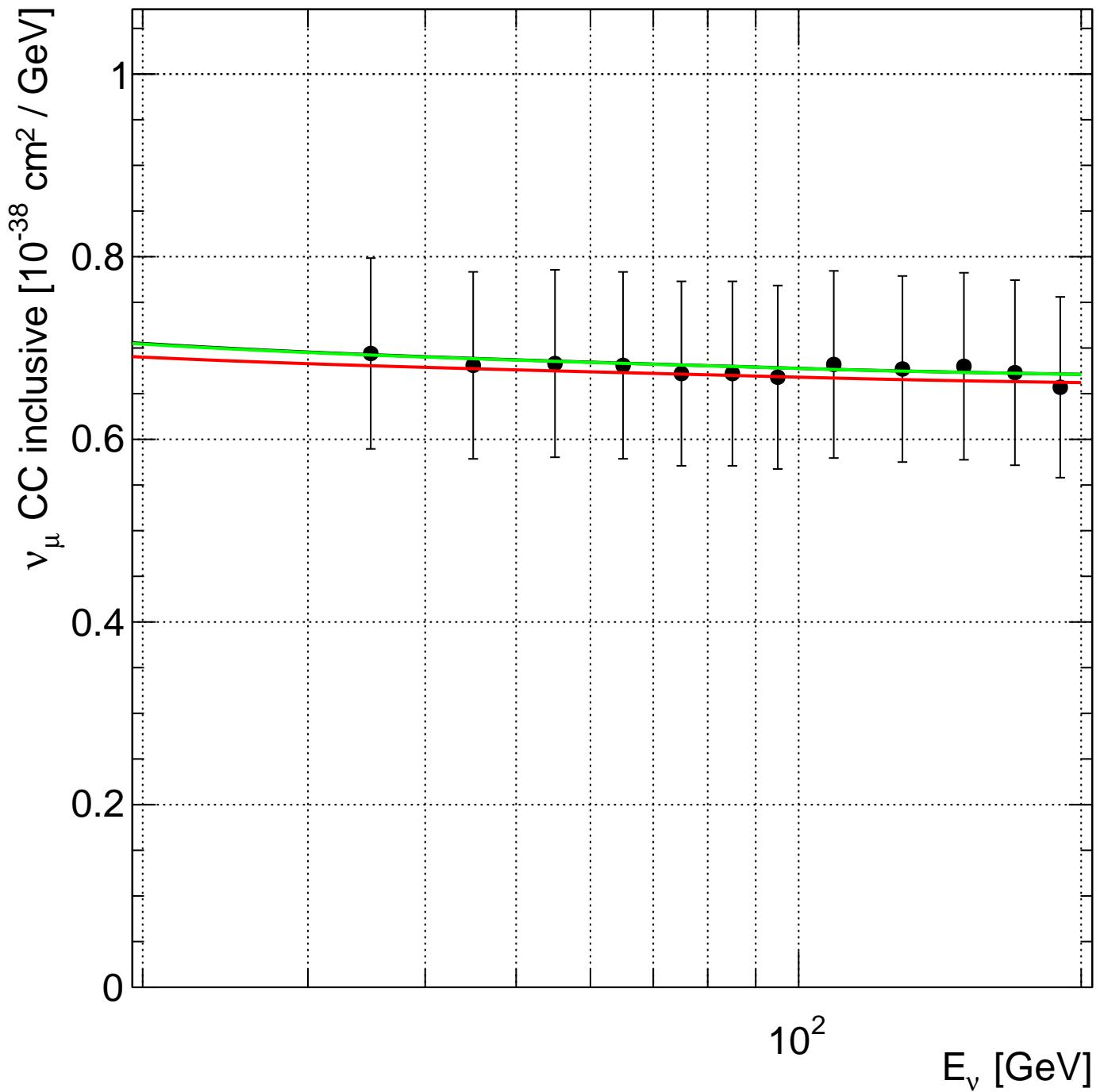
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 14.7/13$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 9/13$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 14.5/13$ DoF



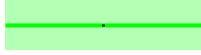
CCFR,2 [Seligman et al., Nevis Report 292 (1996)]



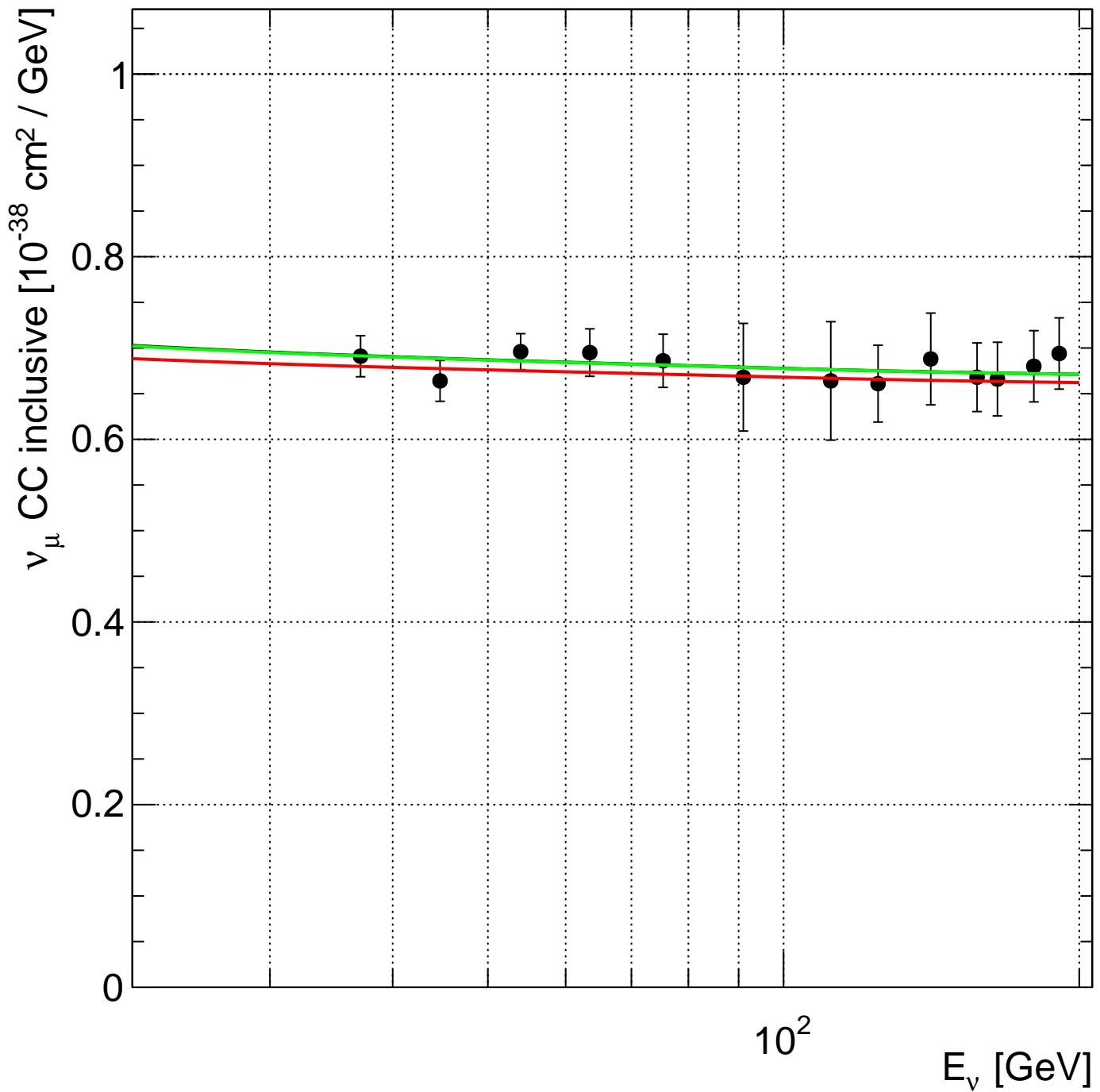
v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 8.95/12 \text{ DoF}$



v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 8.65/12 \text{ DoF}$



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 8.93/12 \text{ DoF}$

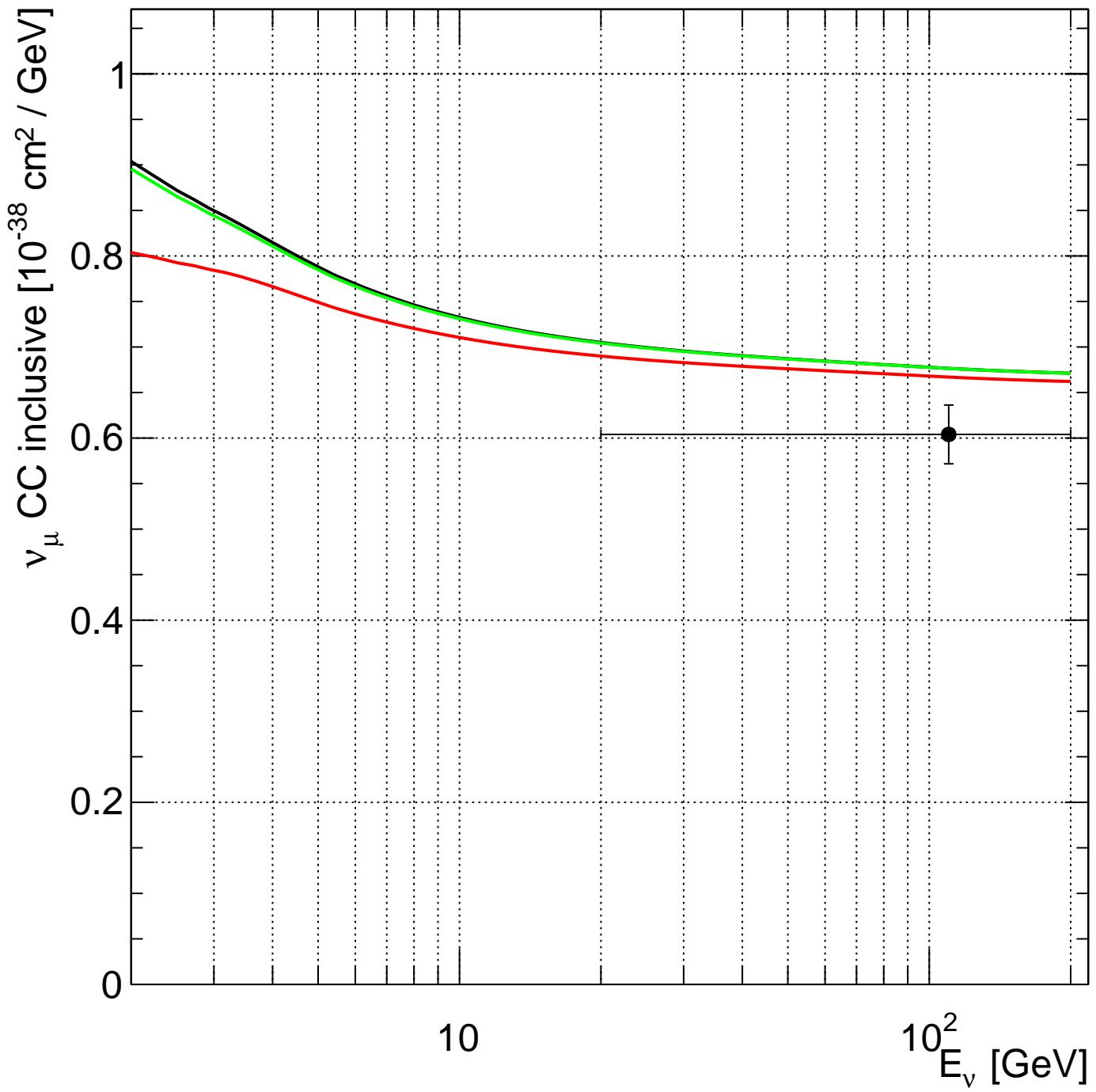


— CCFRR,0 [MacFarlane et al., Zeit.Phys.C26:1 (1984)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 2.38/13 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 3.78/13 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 2.37/13 \text{ DoF}$

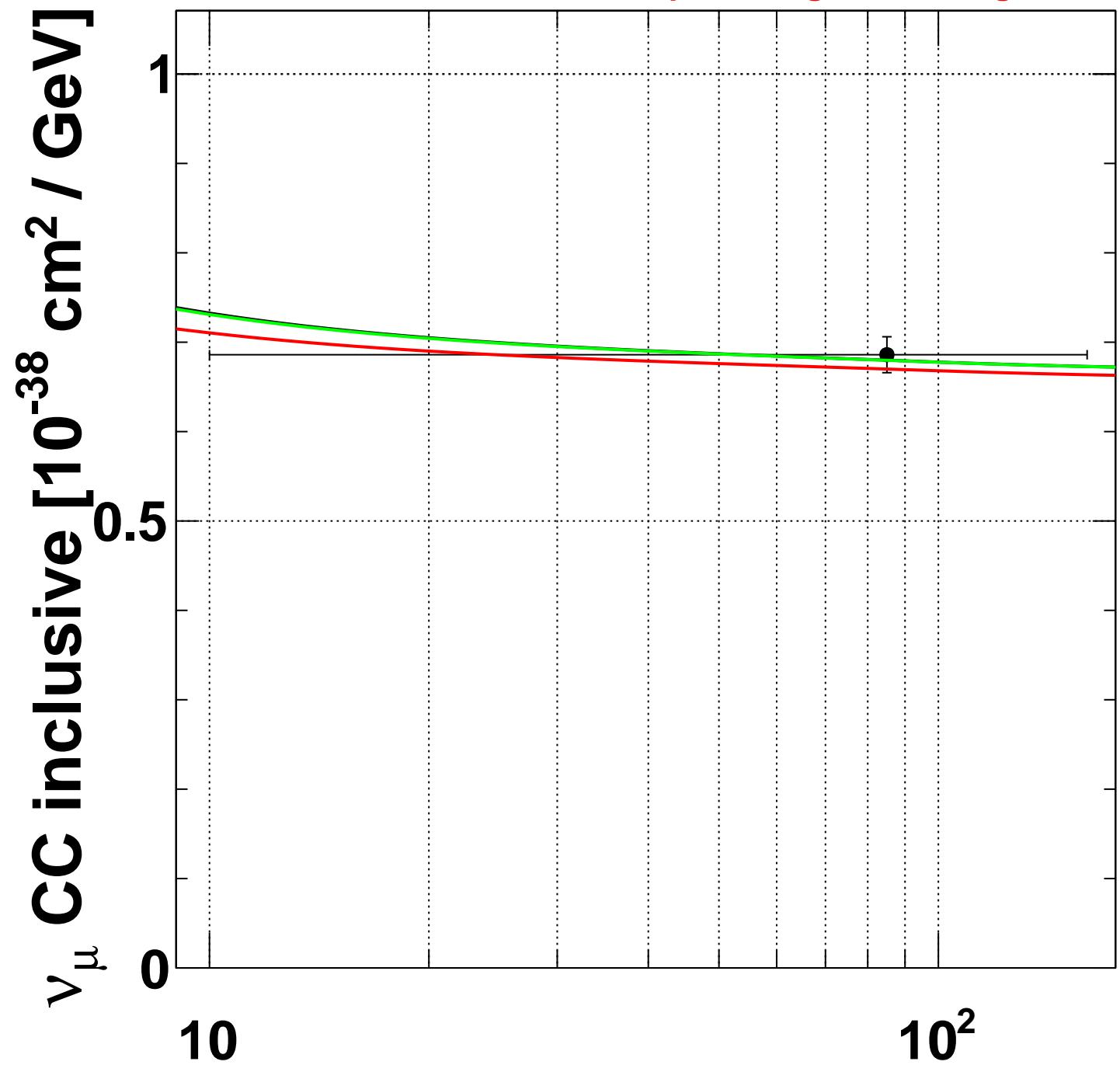


— CHARM,0 [Jonker et al., Phys.Lett.B99:265 (1981)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 6.27/1 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 4.69/1 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 6.23/1 \text{ DoF}$



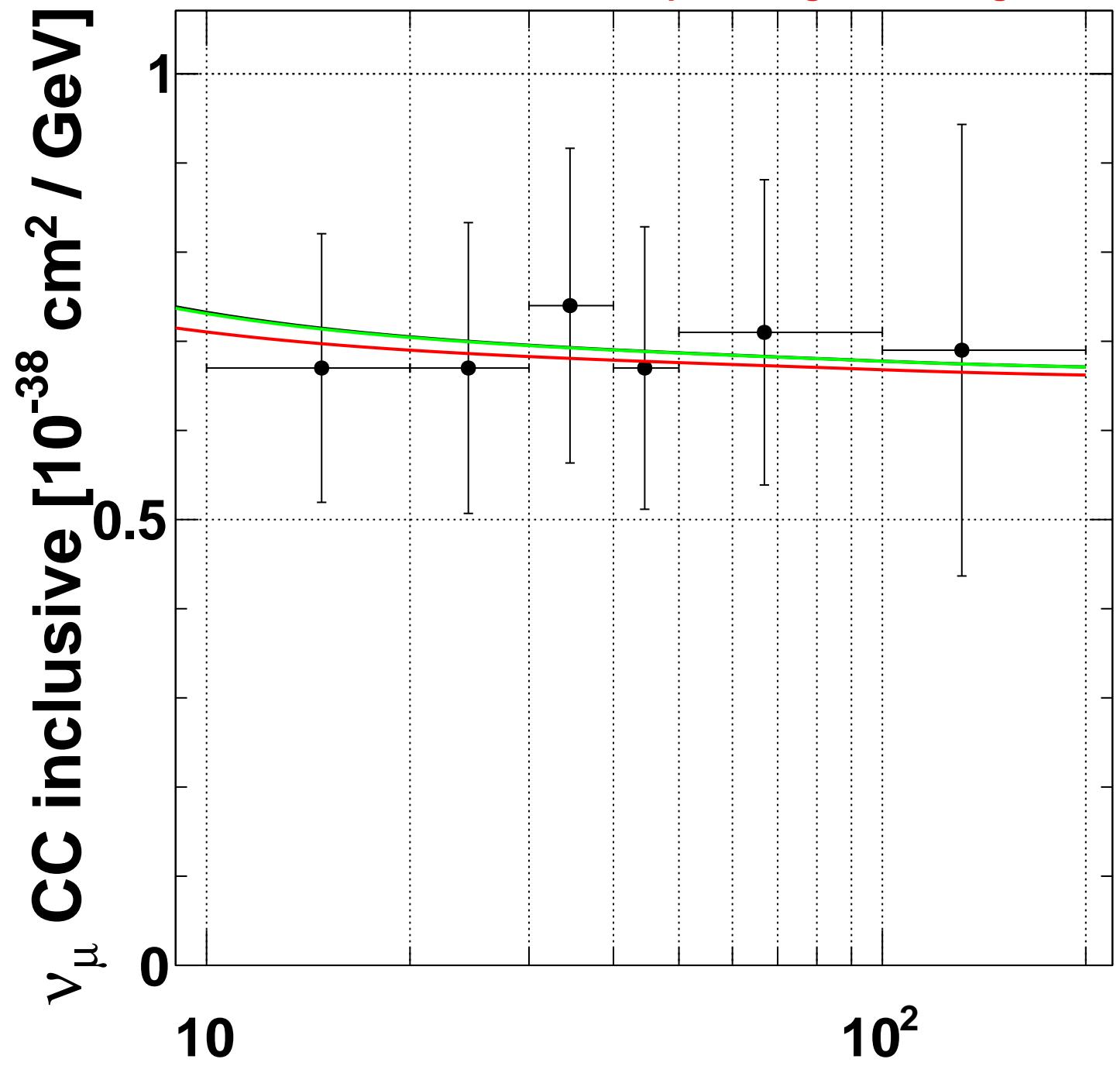
—●— CHARM,4 [Allaby et al., Zeit.Phys.C38:403 (1988)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.17/1 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.0536/1 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.15/1 \text{ DoF}$

[GeV]



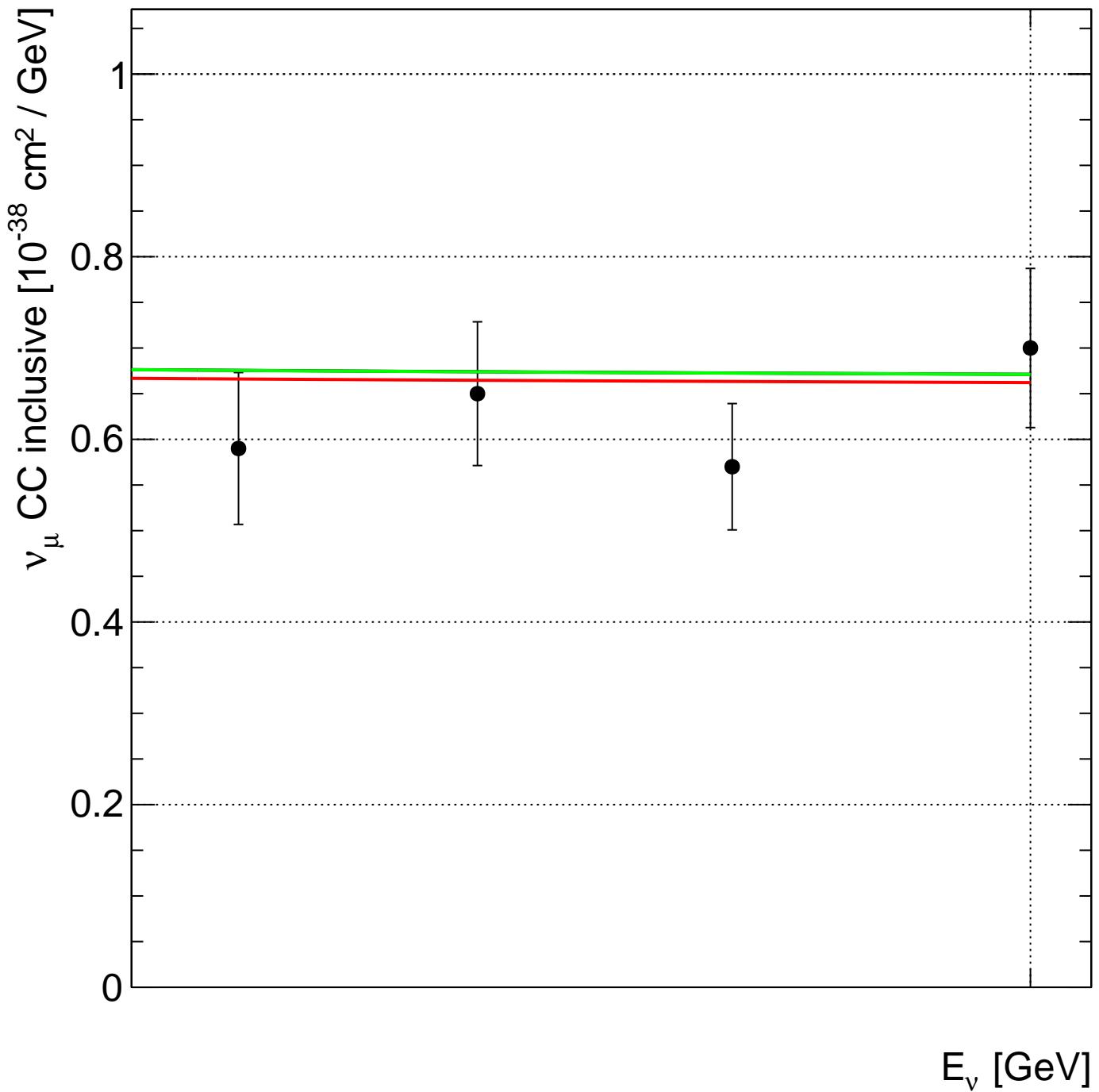
—●— FNAL_15FT,1 [Kitagaki et al., Phys.Rev.Lett.49:98 (1982)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.409/6 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.352/6 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.403/6 \text{ DoF}$

[GeV]

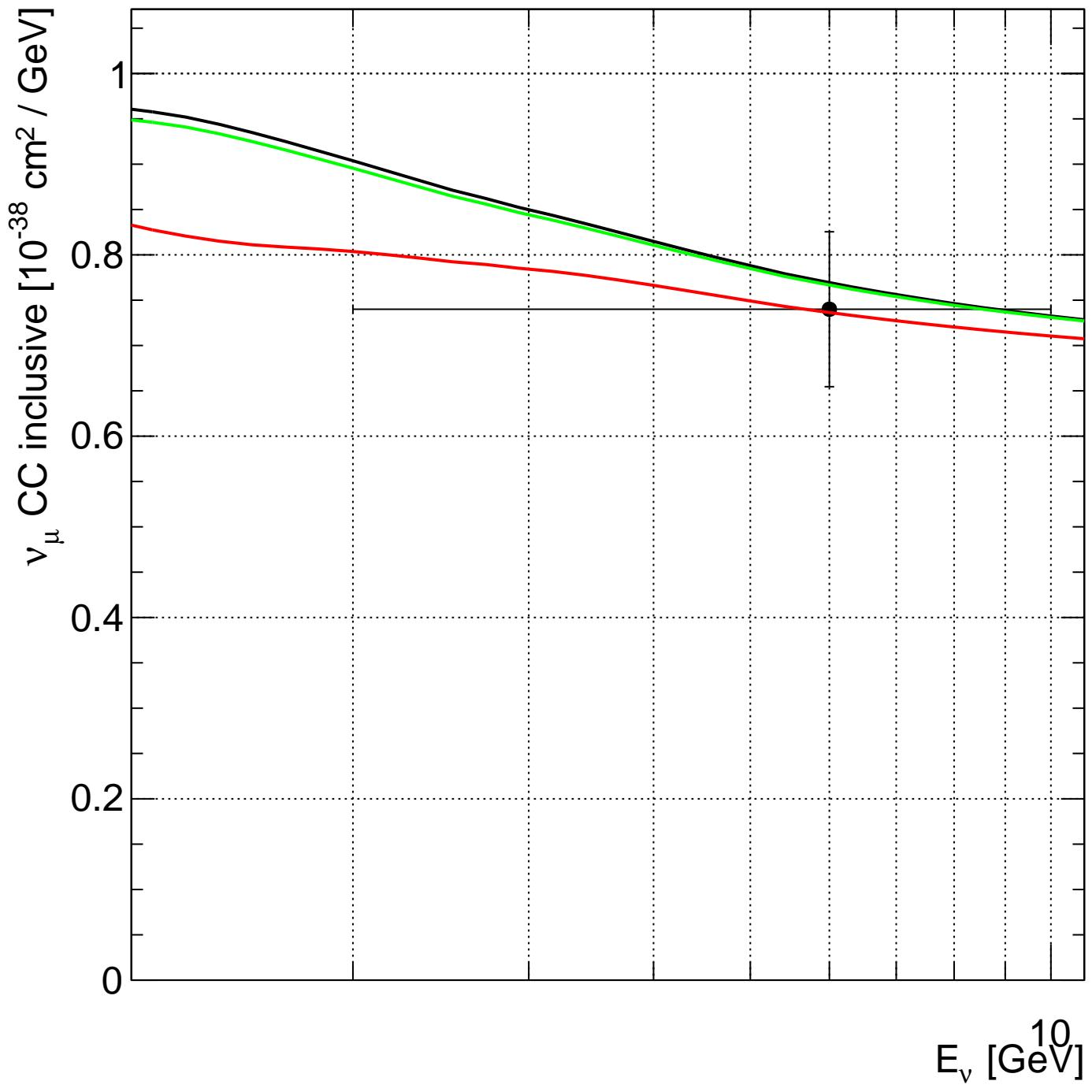


— FNAL_15FT,2 [Baker et al., Phys.Rev.Lett.51:735 (1983)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 3.63/4 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 3.28/4 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 3.63/4 \text{ DoF}$

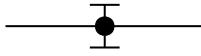
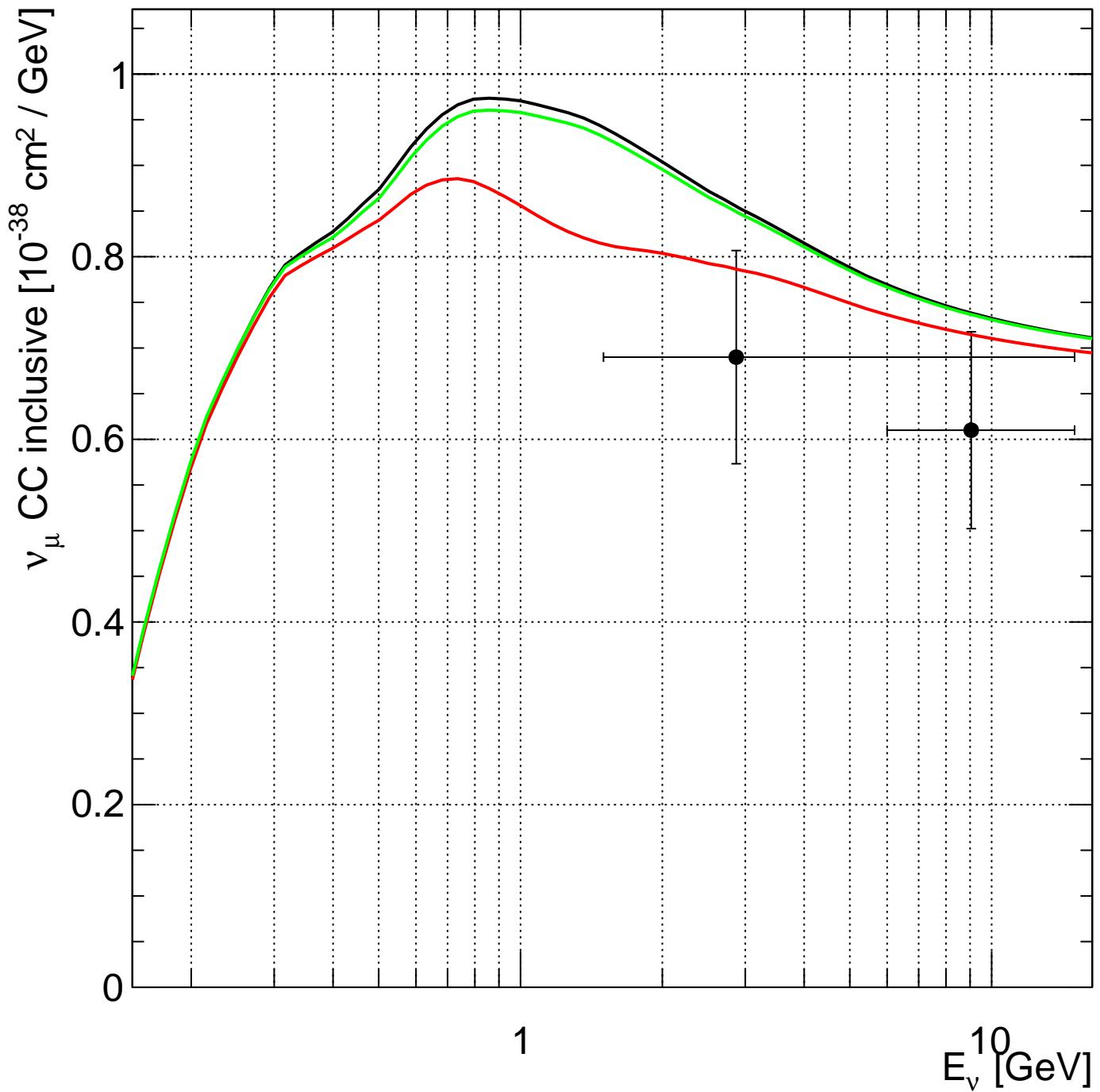


— Gargamelle,0 [Eichten et al., Phys.Lett.B46:274 (1973)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.597/1 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.0408/1 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.526/1 \text{ DoF}$



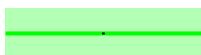
Gargamelle,10 [Ciampolillo et al., Phys.Lett.B84:281 (1979)]



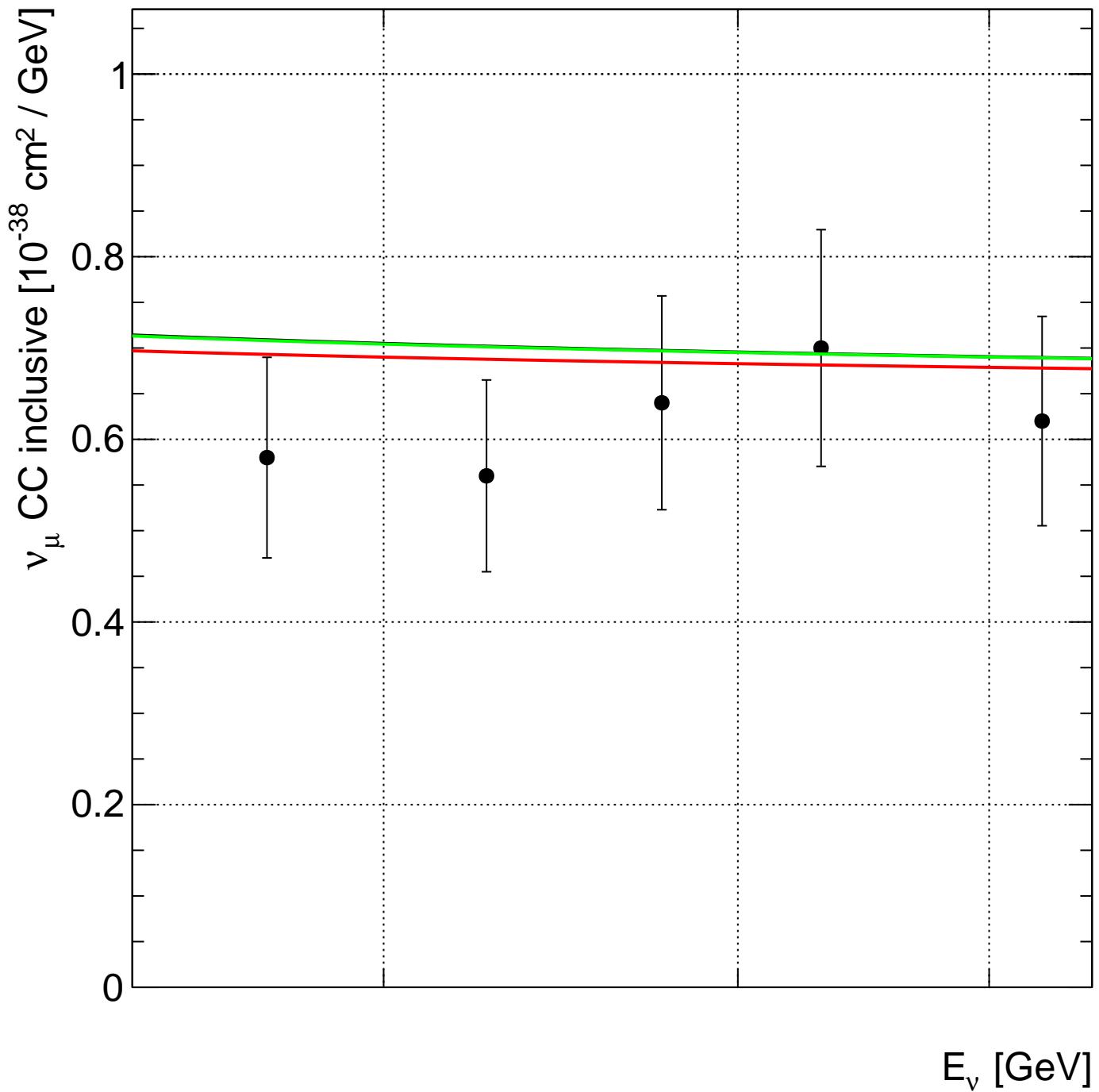
v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 1.4/2 \text{ DoF}$



v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 0.992/2 \text{ DoF}$



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 1.36/2 \text{ DoF}$

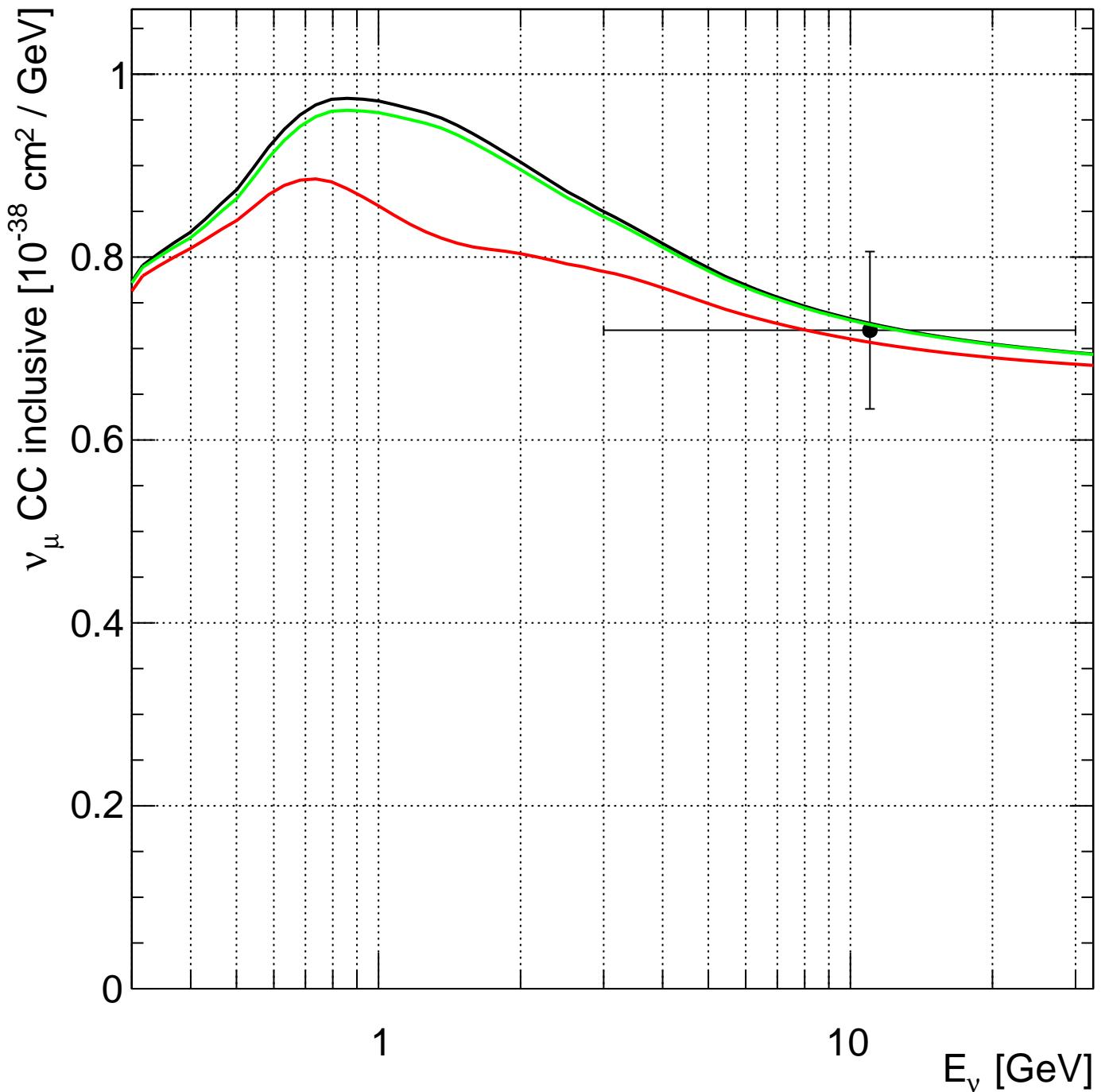


Gargamelle,12 [Morfin et al., Phys.Lett.B104:235 (1981)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 4.33/5 \text{ DoF}$

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 3.86/5 \text{ DoF}$

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 4.3/5 \text{ DoF}$

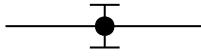
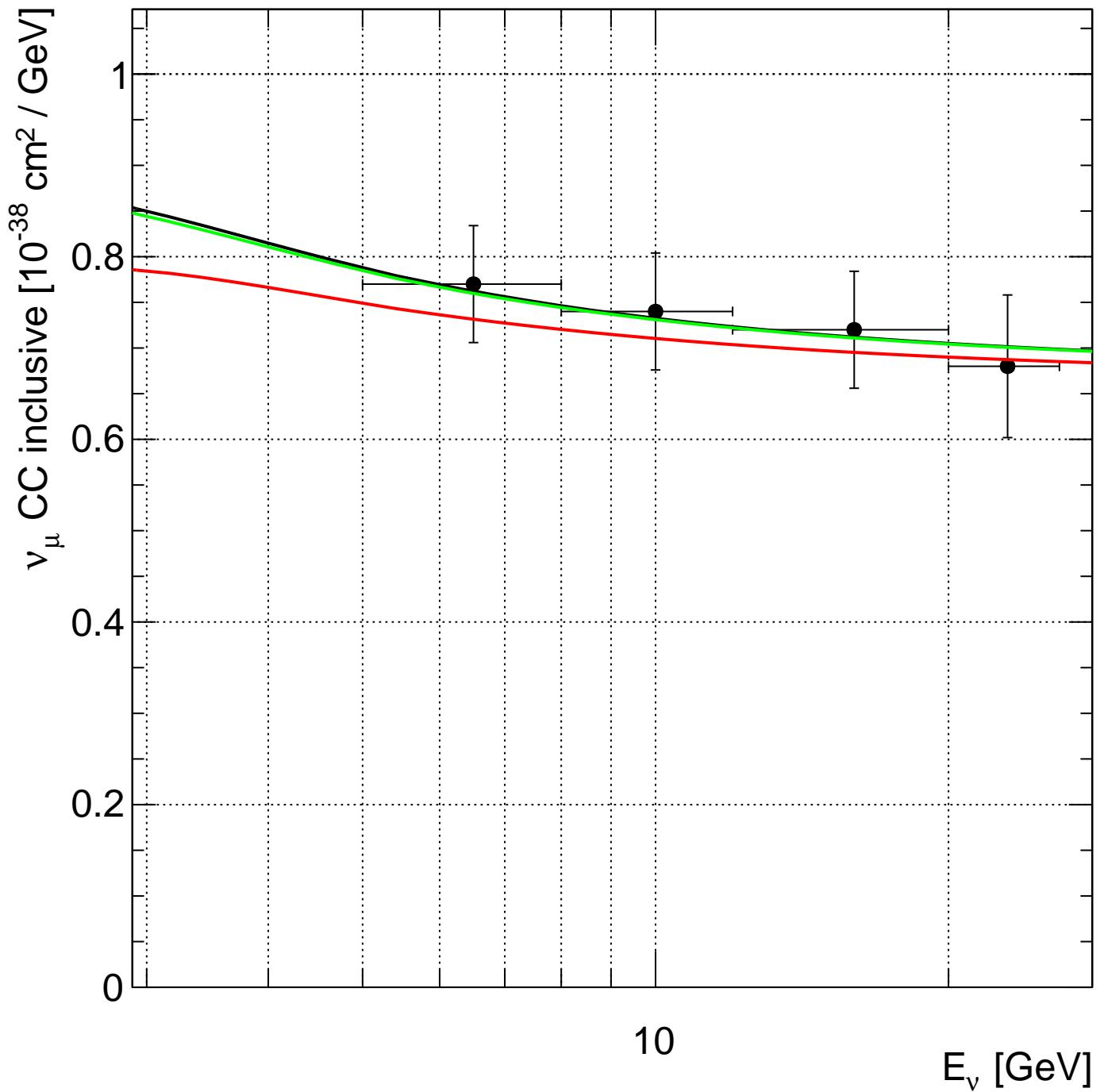


—●— IHEP_ITEP,0 [Asratyan et al., Phys.Lett.B76:239 (1978)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.103/1$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 8.25e-07/1$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.0887/1$ DoF



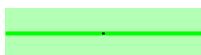
IHEP_ITEP,2 [Vovenko et al., Sov.J.Nucl.Phys.30:528 (1979)]



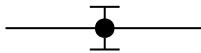
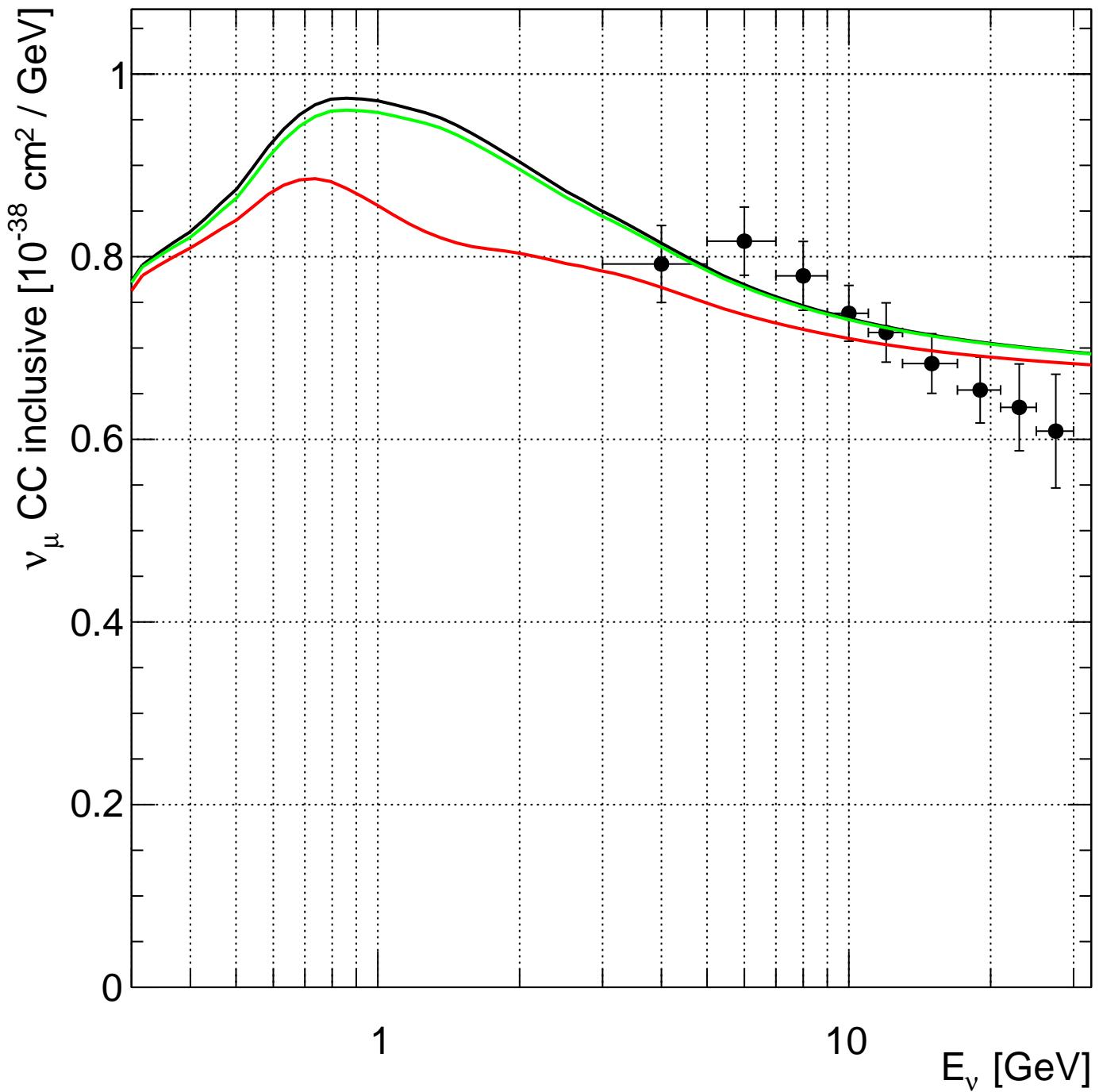
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.104/4$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.682/4$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.116/4$ DoF



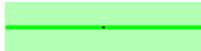
IHEP_JINR,0 [Anikeev et al., Zeit.Phys.C70:39 (1996)]



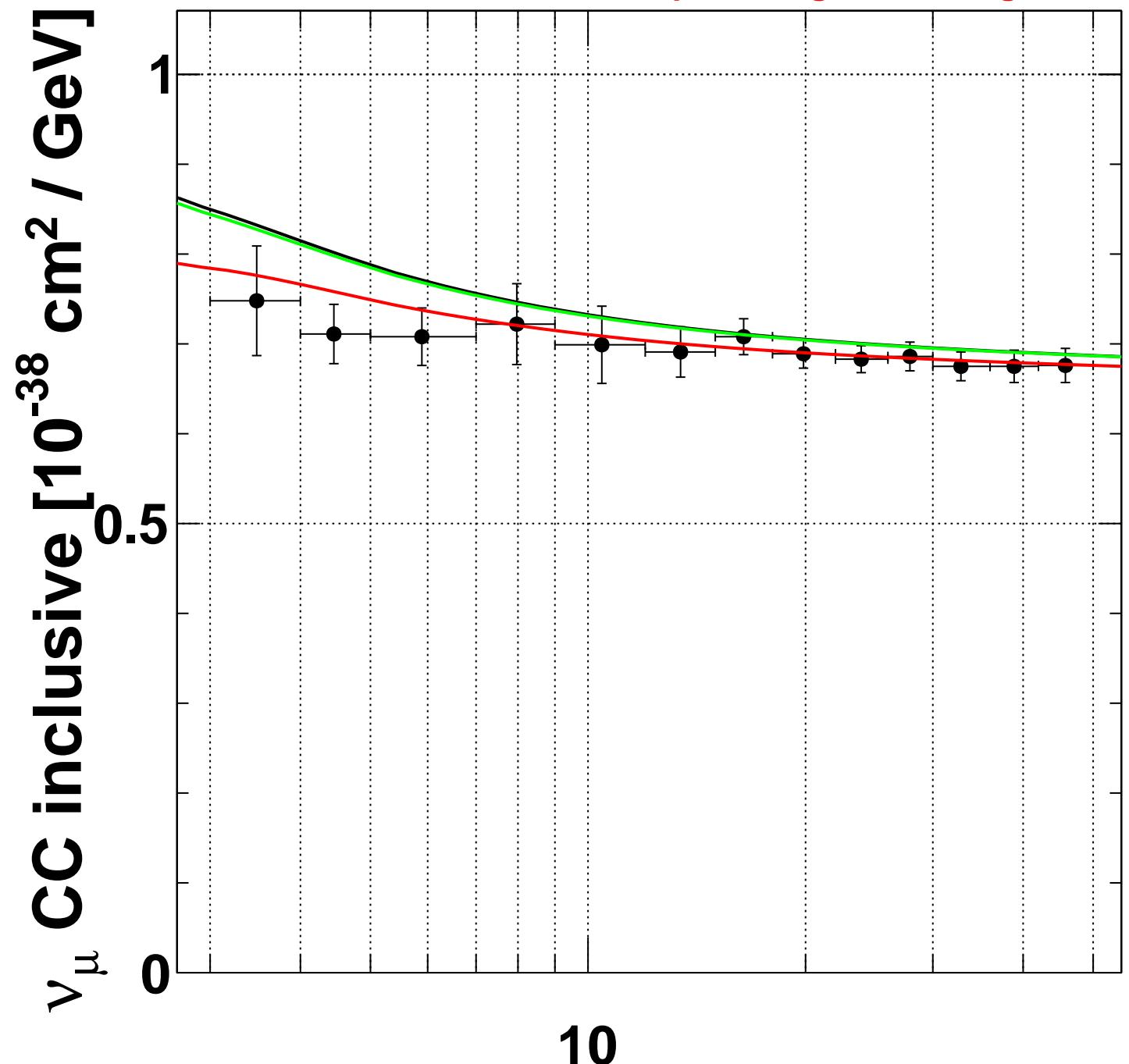
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 9.83/9$ DoF

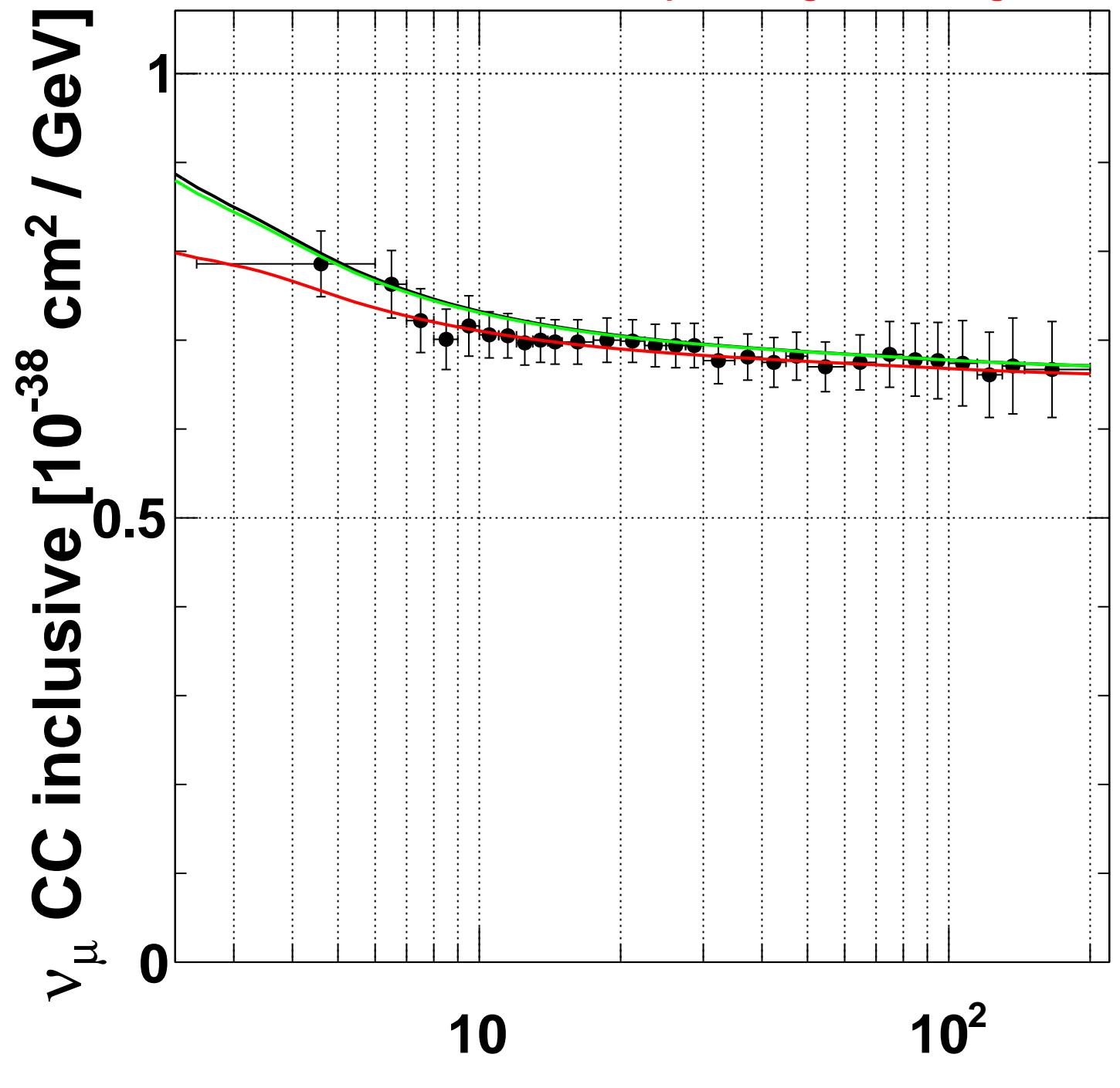


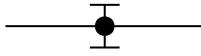
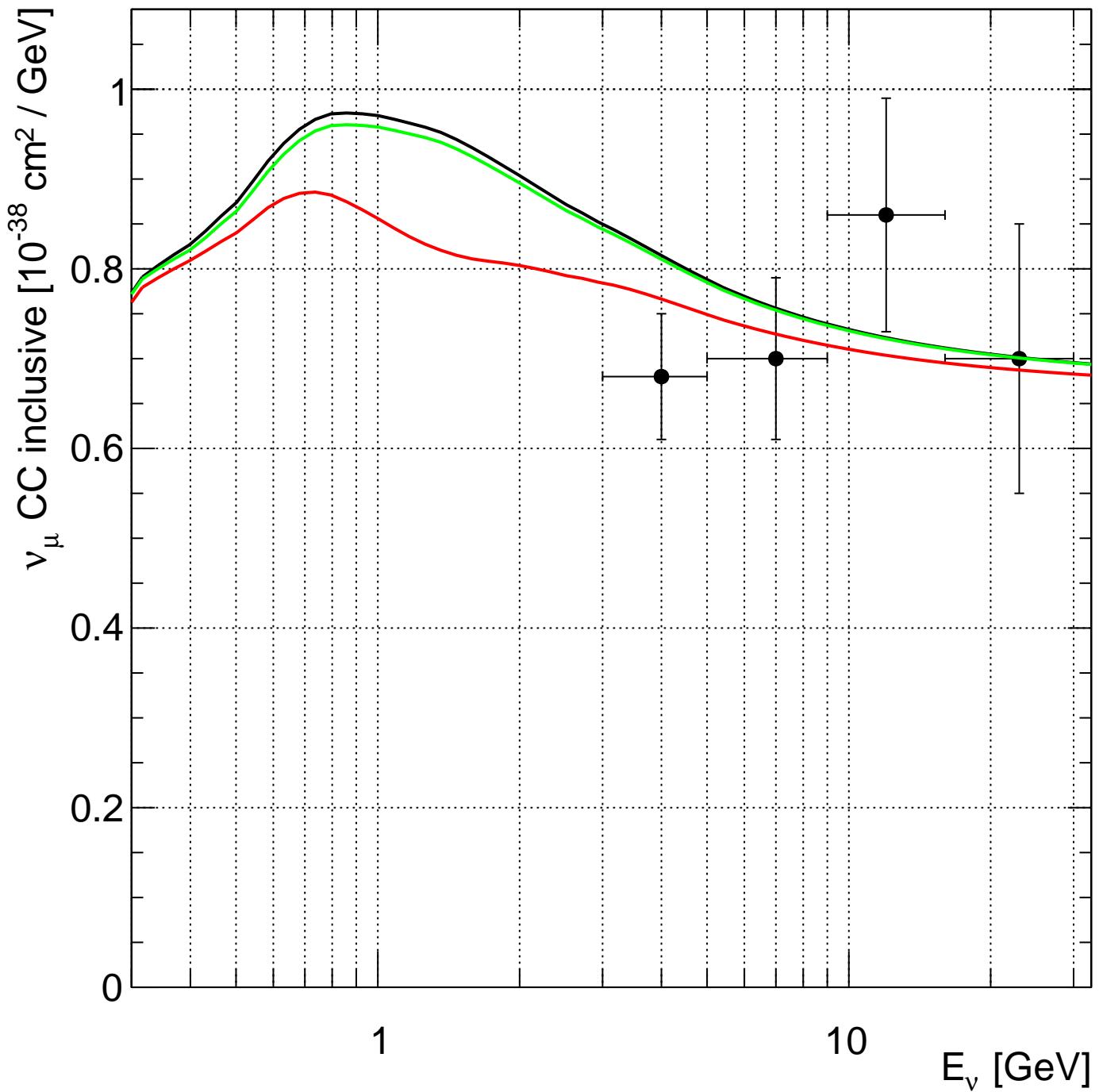
v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 12.1/9$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 9.8/9$ DoF







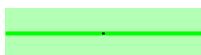
SKAT,0 [Baranov et al., Phys.Rev.B81 255 (1979)]



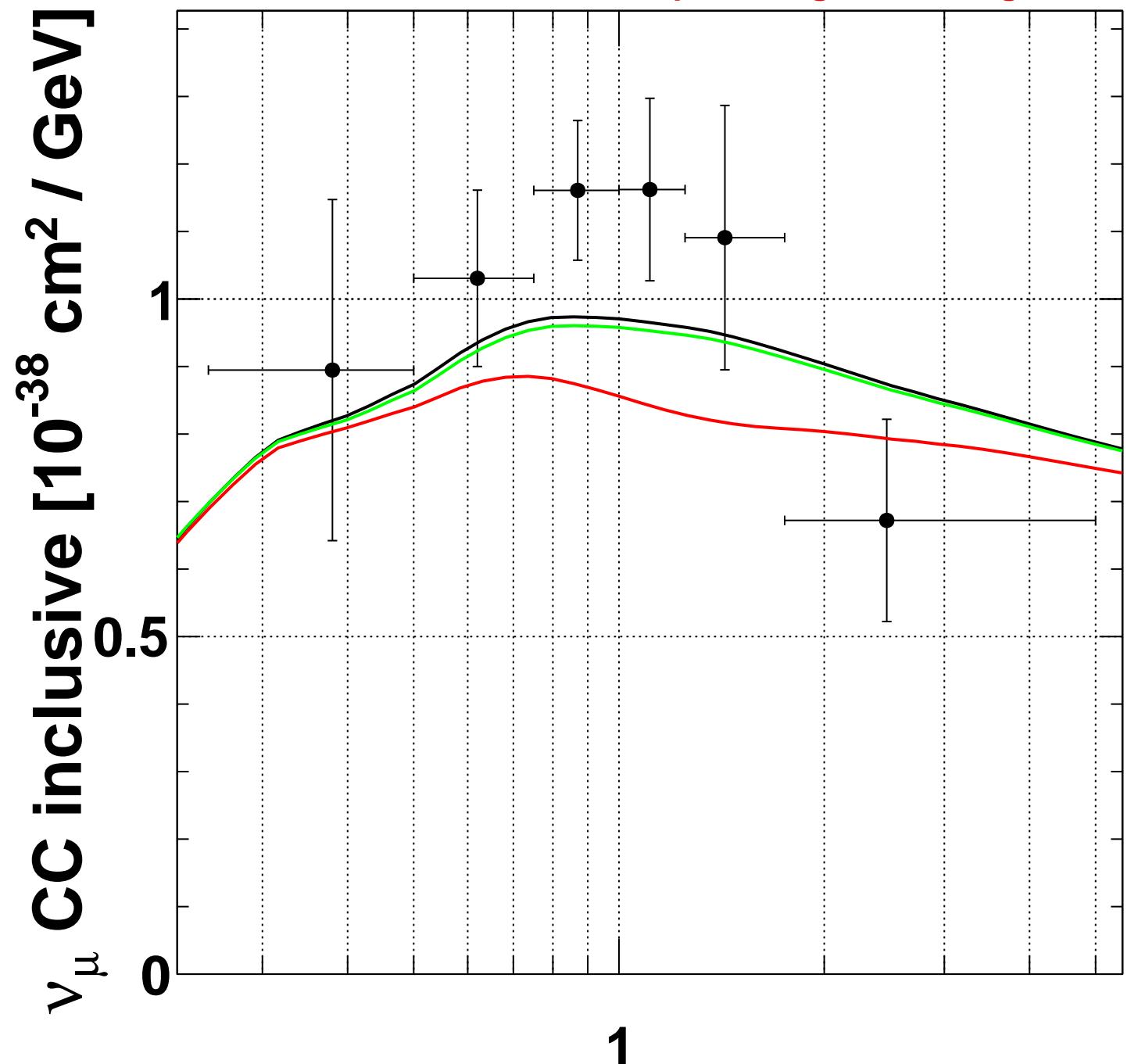
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 5.59/4 \text{ DoF}$



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 3.19/4 \text{ DoF}$



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 5.33/4 \text{ DoF}$



SciBooNE,0 [Nakajima et al., Phys.Rev.D83:012005 (2011)]

[GeV]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 8.26/6$ DoF

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 17.4/6$ DoF

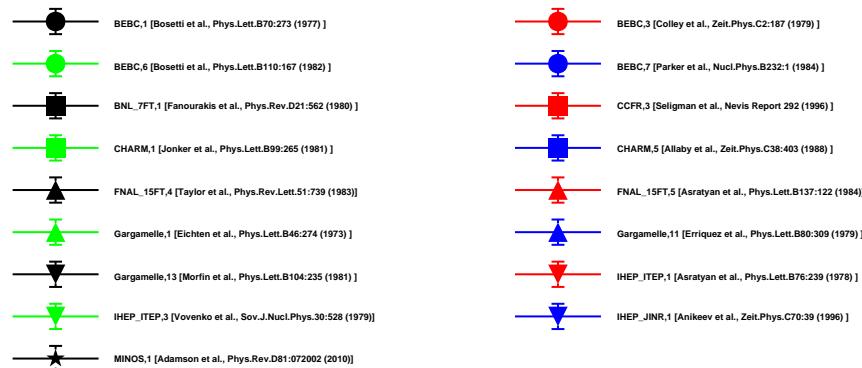
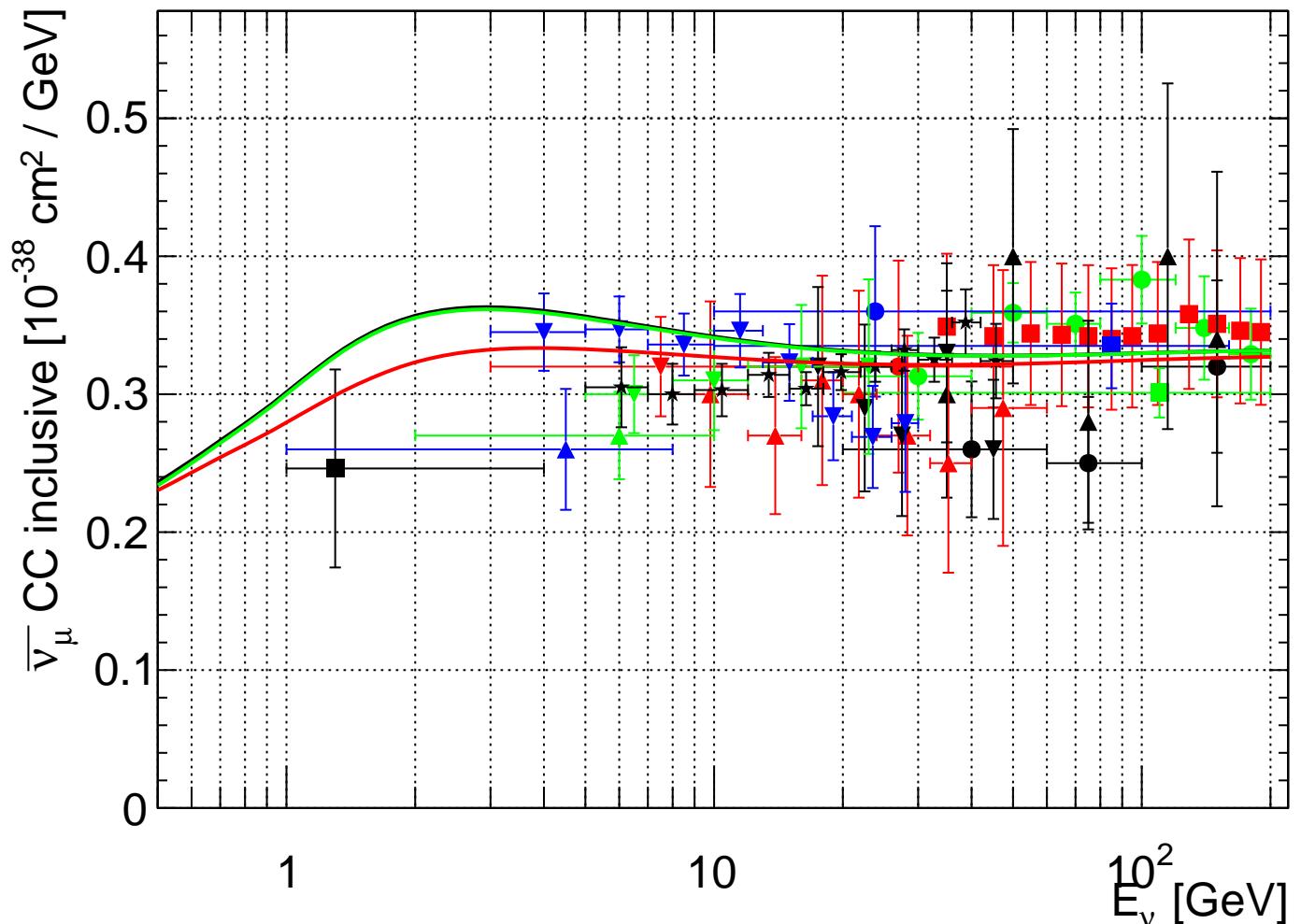
v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 9.16/6$ DoF

Dataset:
 numubarCC_all

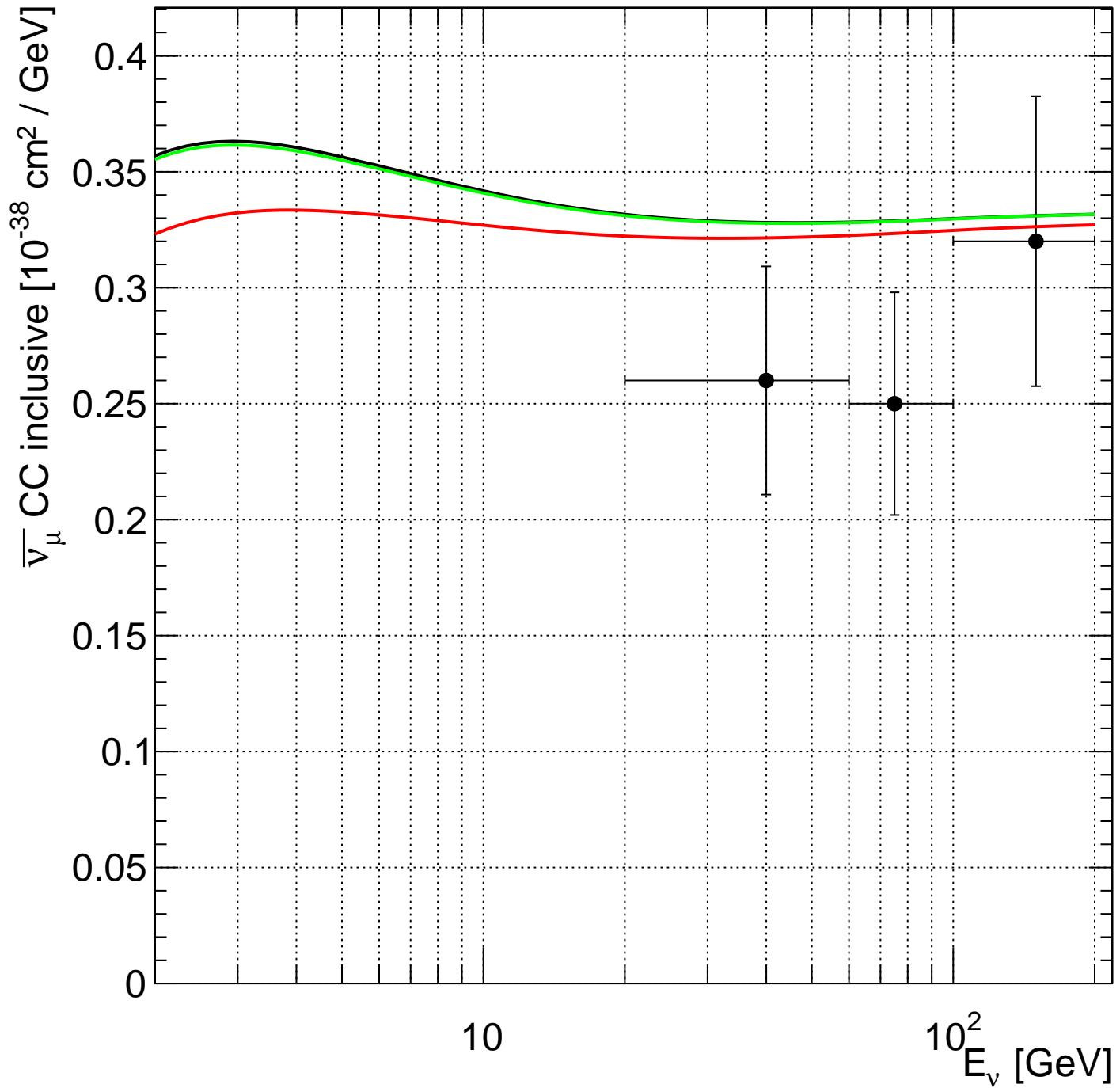
Models:
 v3.0.0/G18_02a_00_000 $\chi^2 = 74.6 / 69$ DoF
 v3.0.0/G18_02a_02_11a $\chi^2 = 50.1 / 69$ DoF
 v3.0.0/G18_10j_00_000 $\chi^2 = 72.5 / 69$ DoF

Subsets:

- BEBBC,1 [Bosetti et al., Phys.Lett.B70:273 (1977)]
3 DoF, $\chi^2 = 4.62 \text{ \color{red} 4.11 \color{green} 4.59}$
- BEBBC,3 [Colley et al., Zeit.Phys.C2:187 (1979)]
1 DoF, $\chi^2 = 0.0261 \text{ \color{red} 0.00139 \color{green} 0.0238}$
- BEBBC,6 [Bosetti et al., Phys.Lett.B110:167 (1982)]
6 DoF, $\chi^2 = 6.31 \text{ \color{red} 8.24 \color{green} 6.36}$
- BEBBC,7 [Parker et al., Nucl.Phys.B232:1 (1984)]
1 DoF, $\chi^2 = 0.218 \text{ \color{red} 0.347 \color{green} 0.224}$
- BNL_7FT,1 [Fanourakis et al., Phys.Rev.D21:562 (1980)]
1 DoF, $\chi^2 = 1.96 \text{ \color{red} 0.961 \color{green} 1.91}$
- CCFR,3 [Seligman et al., Nevis Report 292 (1996)]
12 DoF, $\chi^2 = 4.93 \text{ \color{red} 5.08 \color{green} 4.94}$
- CHARM,1 [Jonker et al., Phys.Lett.B99:265 (1981)]
1 DoF, $\chi^2 = 2.53 \text{ \color{red} 1.56 \color{green} 2.48}$
- CHARM,5 [Allaby et al., Zeit.Phys.C38:403 (1988)]
1 DoF, $\chi^2 = 0.0158 \text{ \color{red} 0.142 \color{green} 0.0191}$
- FNAL_15FT,4 [Taylor et al., Phys.Rev.Lett.51:739 (1983)]
5 DoF, $\chi^2 = 2.32 \text{ \color{red} 2.26 \color{green} 2.31}$
- FNAL_15FT,5 [Asratyan et al., Phys.Lett.B137:122 (1984)]
7 DoF, $\chi^2 = 2.03 \text{ \color{red} 1.61 \color{green} 2}$
- Gargamelle,1 [Eichten et al., Phys.Lett.B46:274 (1973)]
1 DoF, $\chi^2 = 7.41 \text{ \color{red} 3.71 \color{green} 7.17}$
- Gargamelle,11 [Erriquez et al., Phys.Lett.B80:309 (1979)]
1 DoF, $\chi^2 = 4.1 \text{ \color{red} 1.96 \color{green} 3.97}$
- Gargamelle,13 [Morfin et al., Phys.Lett.B104:235 (1981)]
5 DoF, $\chi^2 = 3.87 \text{ \color{red} 3.66 \color{green} 3.86}$
- IHEP_ITEP,1 [Asratyan et al., Phys.Lett.B76:239 (1978)]
1 DoF, $\chi^2 = 0.448 \text{ \color{red} 0.0424 \color{green} 0.411}$
- IHEP_ITEP,3 [Vovenko et al., Sov.J.Nucl.Phys.30:528 (1979)]
4 DoF, $\chi^2 = 4.21 \text{ \color{red} 1.42 \color{green} 3.99}$
- IHEP_JINR,1 [Anikeev et al., Zeit.Phys.C70:39 (1996)]
8 DoF, $\chi^2 = 6.89 \text{ \color{red} 5.49 \color{green} 6.64}$
- MINOS,1 [Adamson et al., Phys.Rev.D81:072002 (2010)]
11 DoF, $\chi^2 = 22.7 \text{ \color{red} 9.54 \color{green} 21.6}$



v3.0.0:G18_02a_00_000:numu_freenuc
 v3.0.0:G18_02a_02_11a:numu_freenuc
 v3.0.0:G18_10j_00_000:numu_freenuc

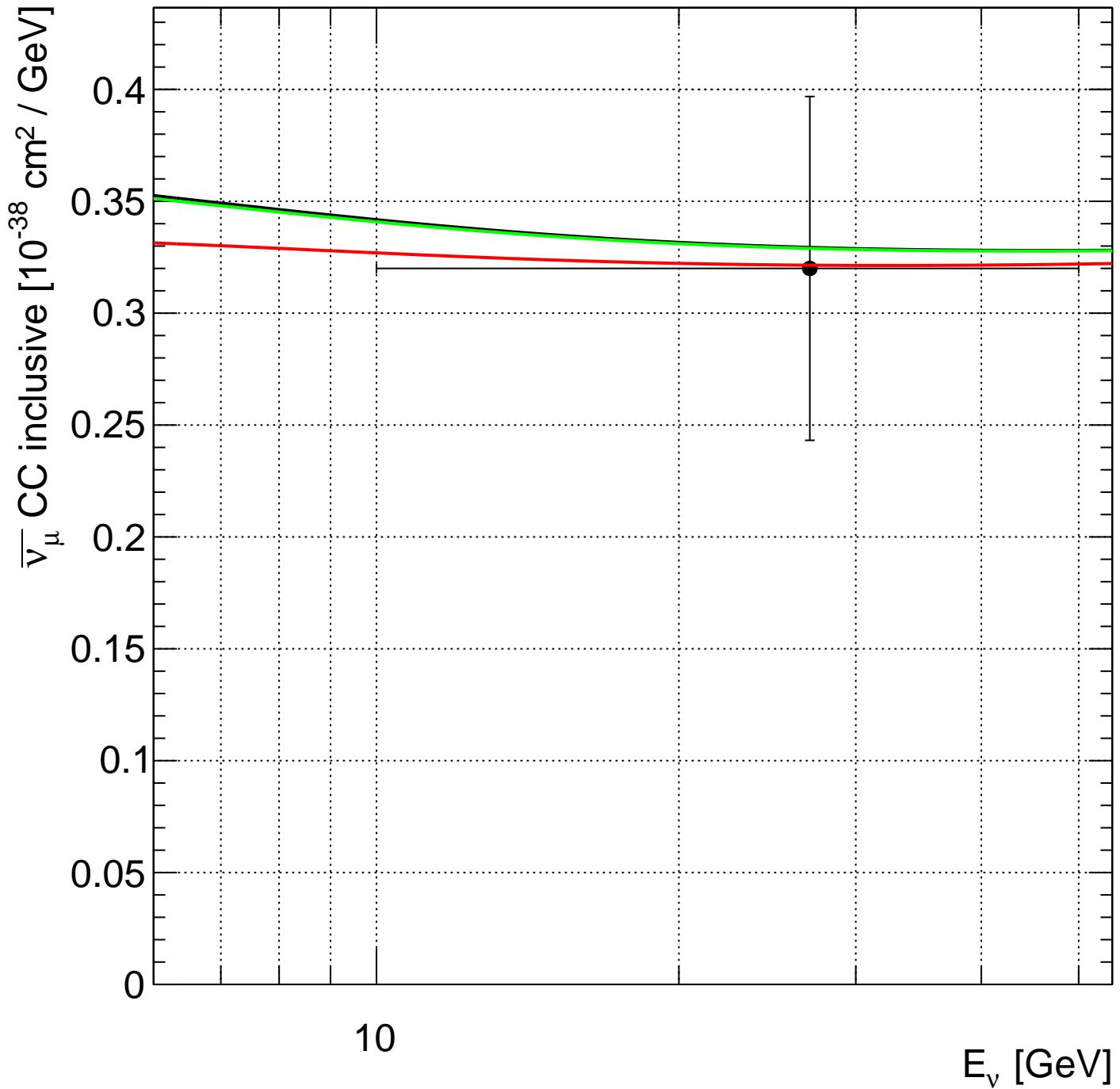


—●— BEBC,1 [Bosetti et al., Phys.Lett.B70:273 (1977)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 4.62/3 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 4.11/3 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 4.59/3 \text{ DoF}$

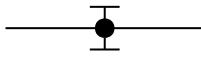
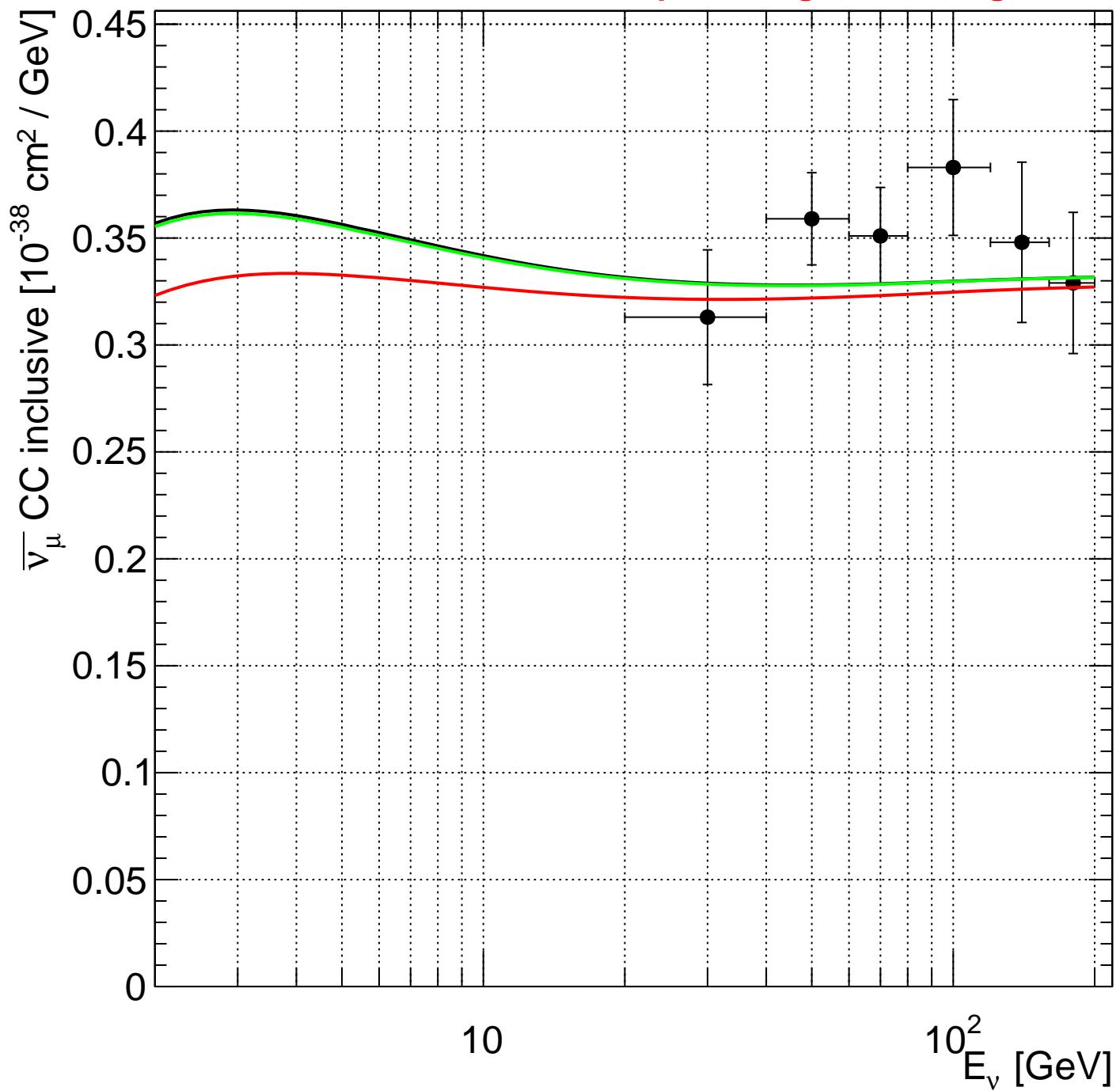


—●— BEBC,3 [Colley et al., Zeit.Phys.C2:187 (1979)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.0261/1$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.00139/1$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.0238/1$ DoF



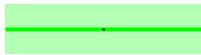
BEBC,6 [Bosetti et al., Phys.Lett.B110:167 (1982)]



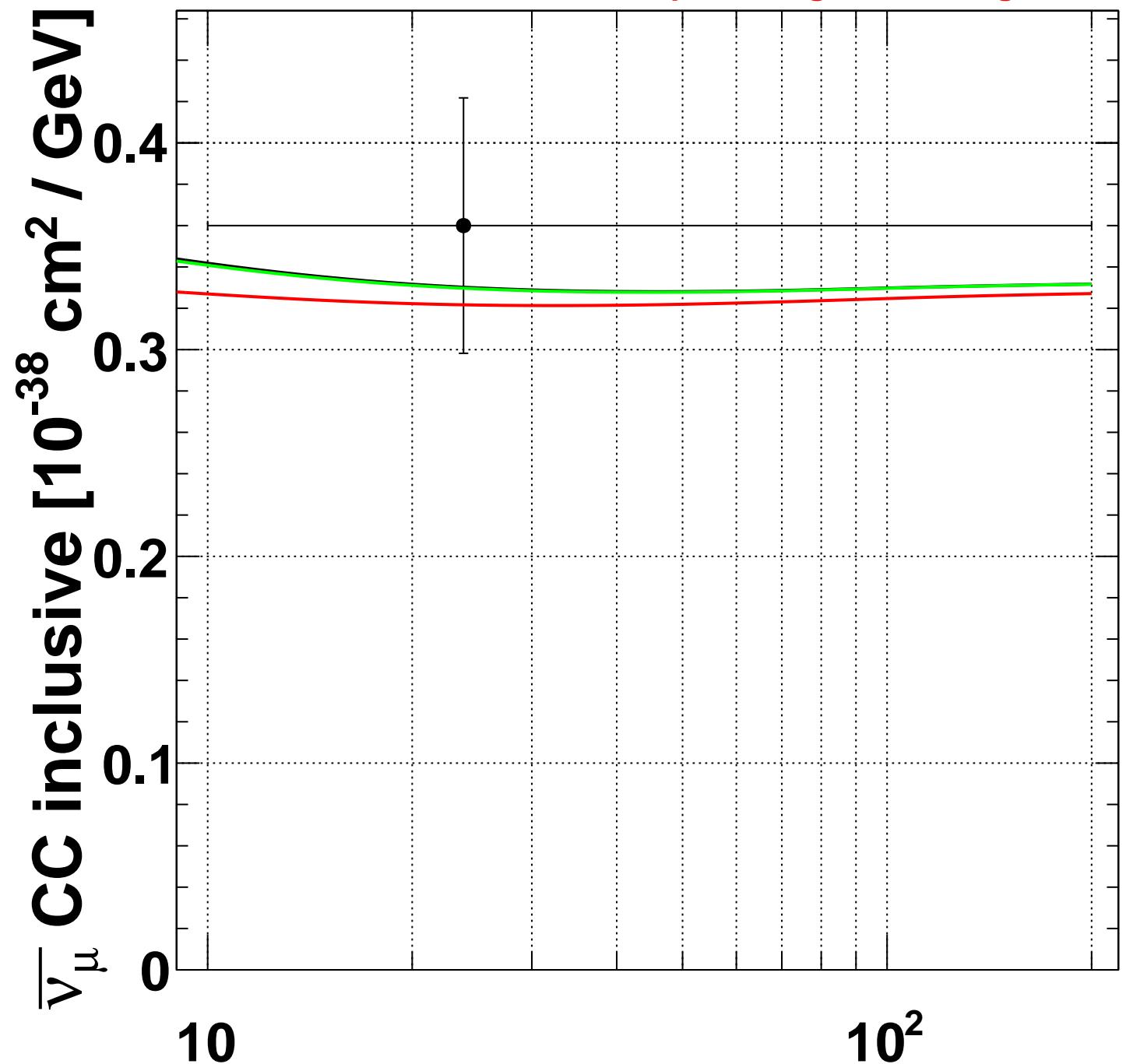
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 6.31/6$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 8.24/6$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 6.36/6$ DoF

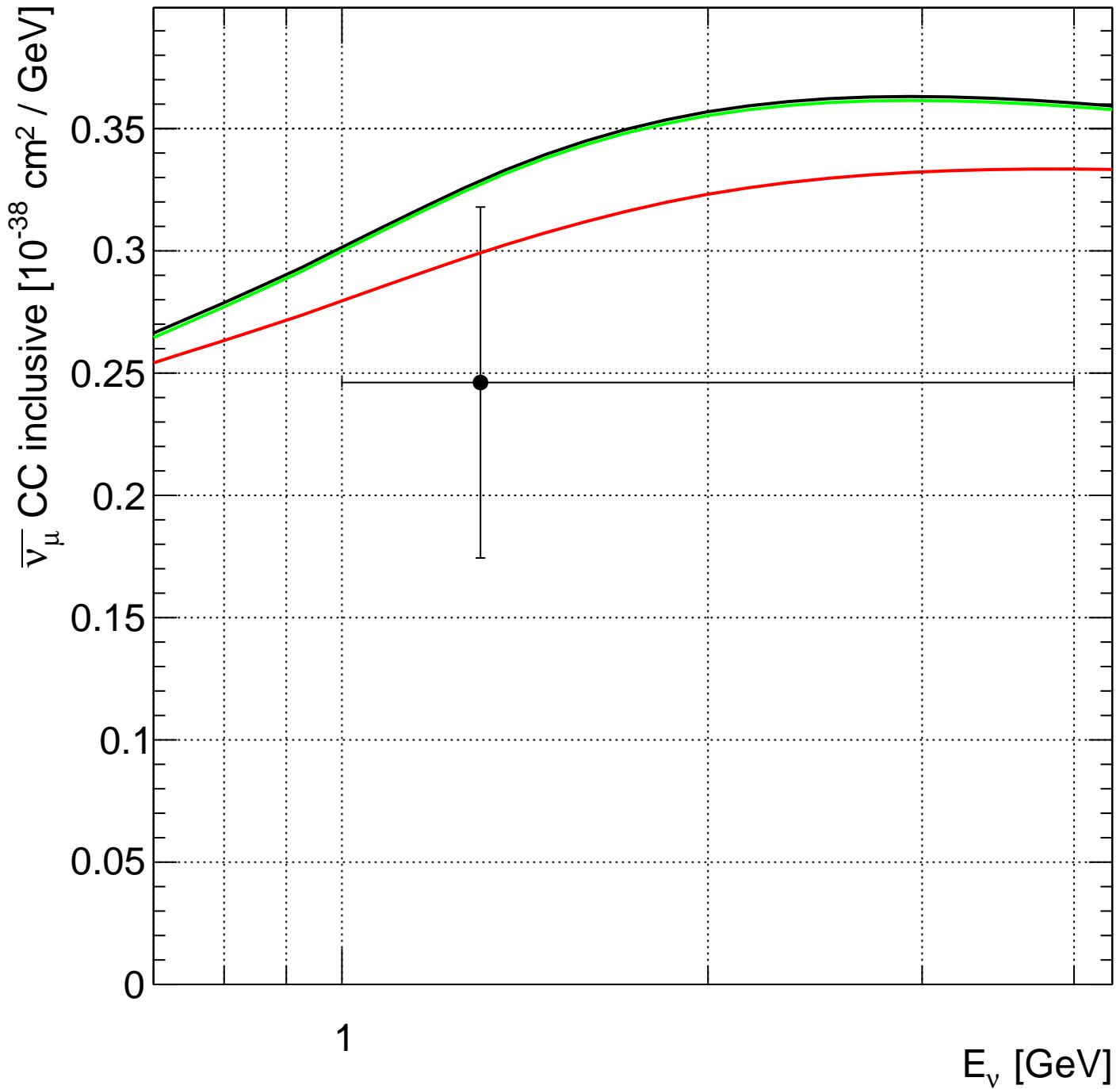


—●— BEBC,7 [Parker et al., Nucl.Phys.B232:1 (1984)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.218/1$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.347/1$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.224/1$ DoF

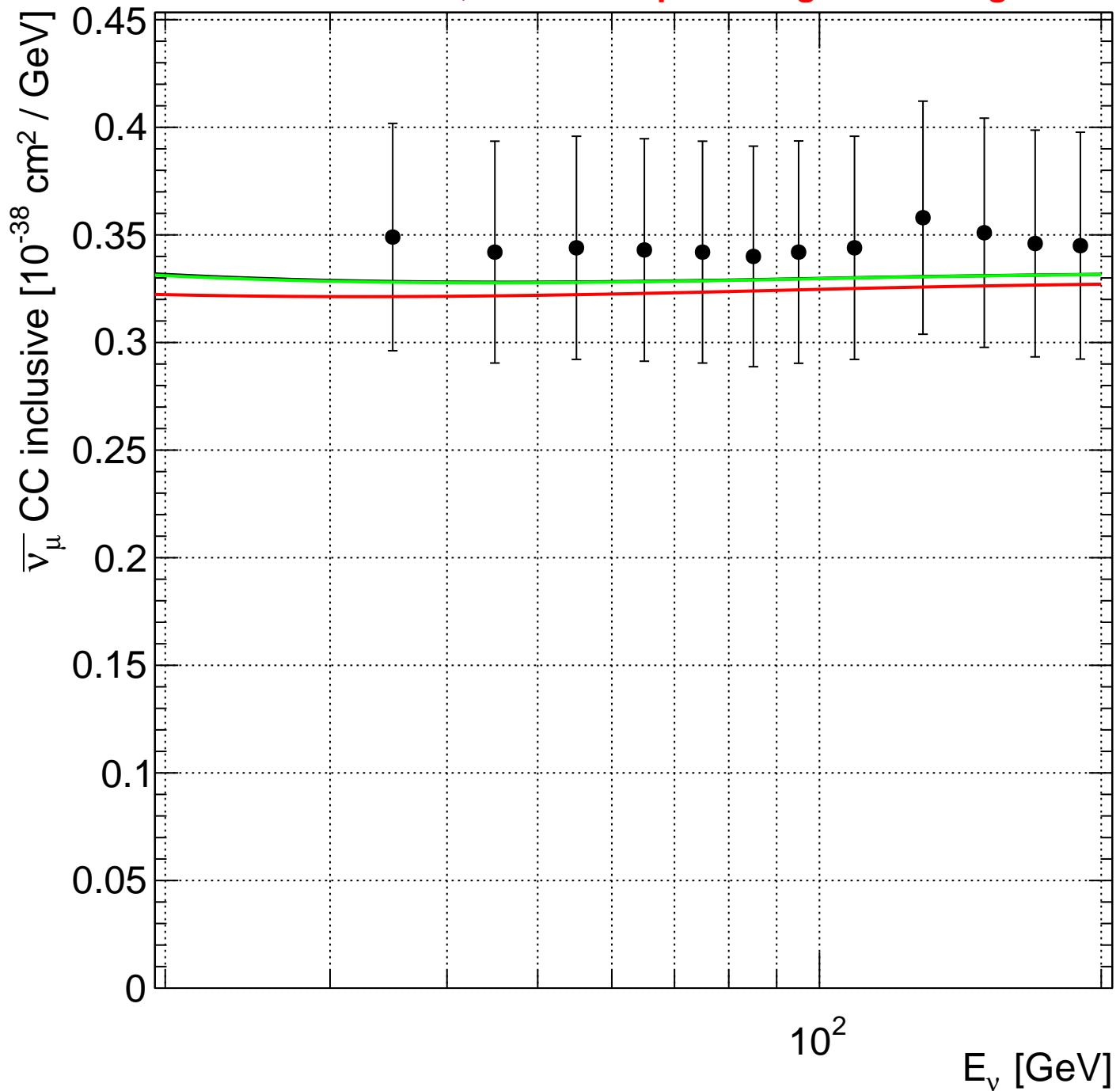


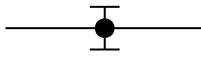
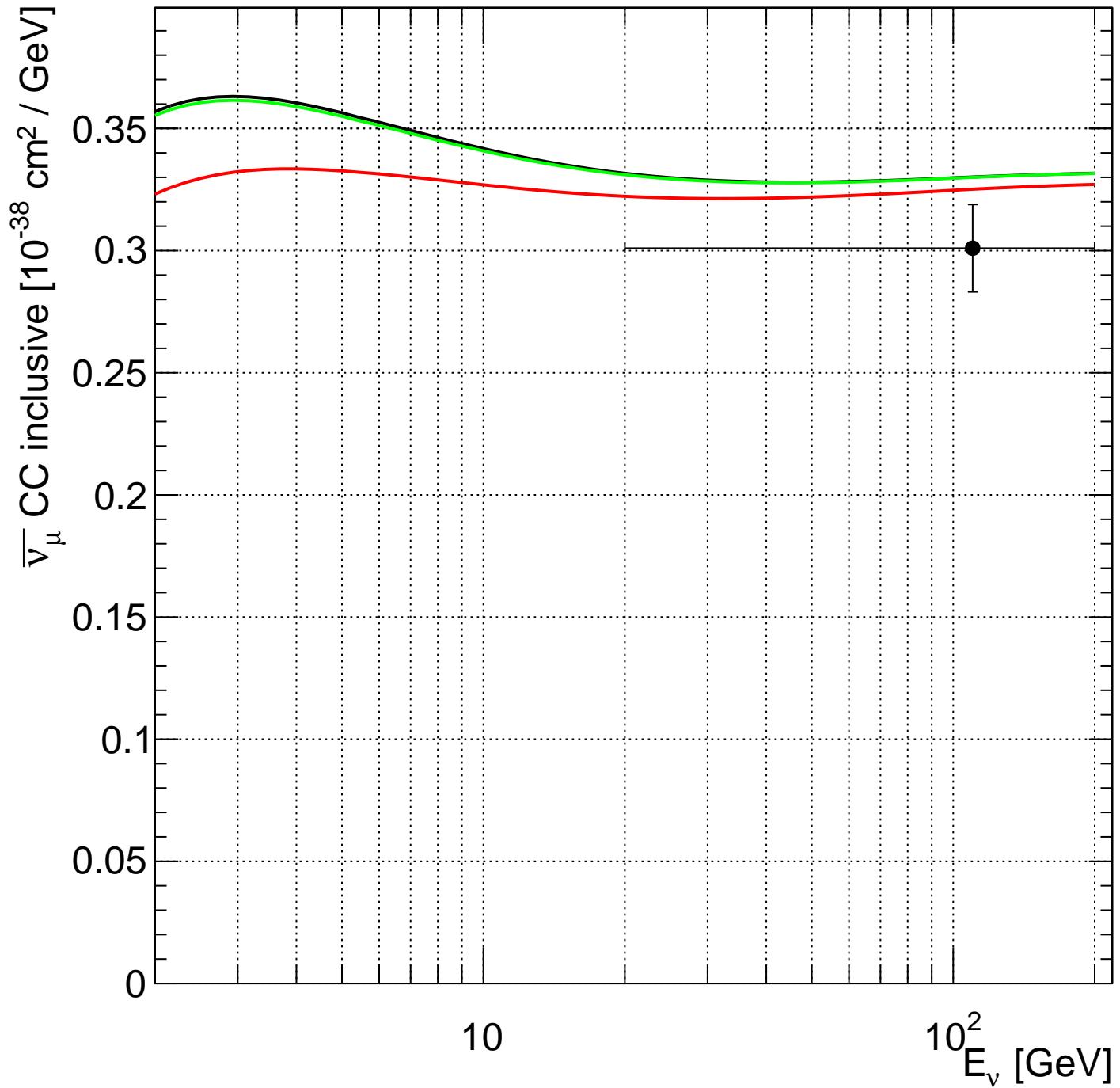
BNL_7FT,1 [Fanourakis et al., Phys.Rev.D21:562 (1980)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 1.96/1$ DoF

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.961/1$ DoF

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 1.91/1$ DoF





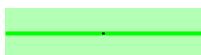
CHARM,1 [Jonker et al., Phys.Lett.B99:265 (1981)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 2.53/1$ DoF

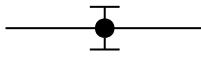
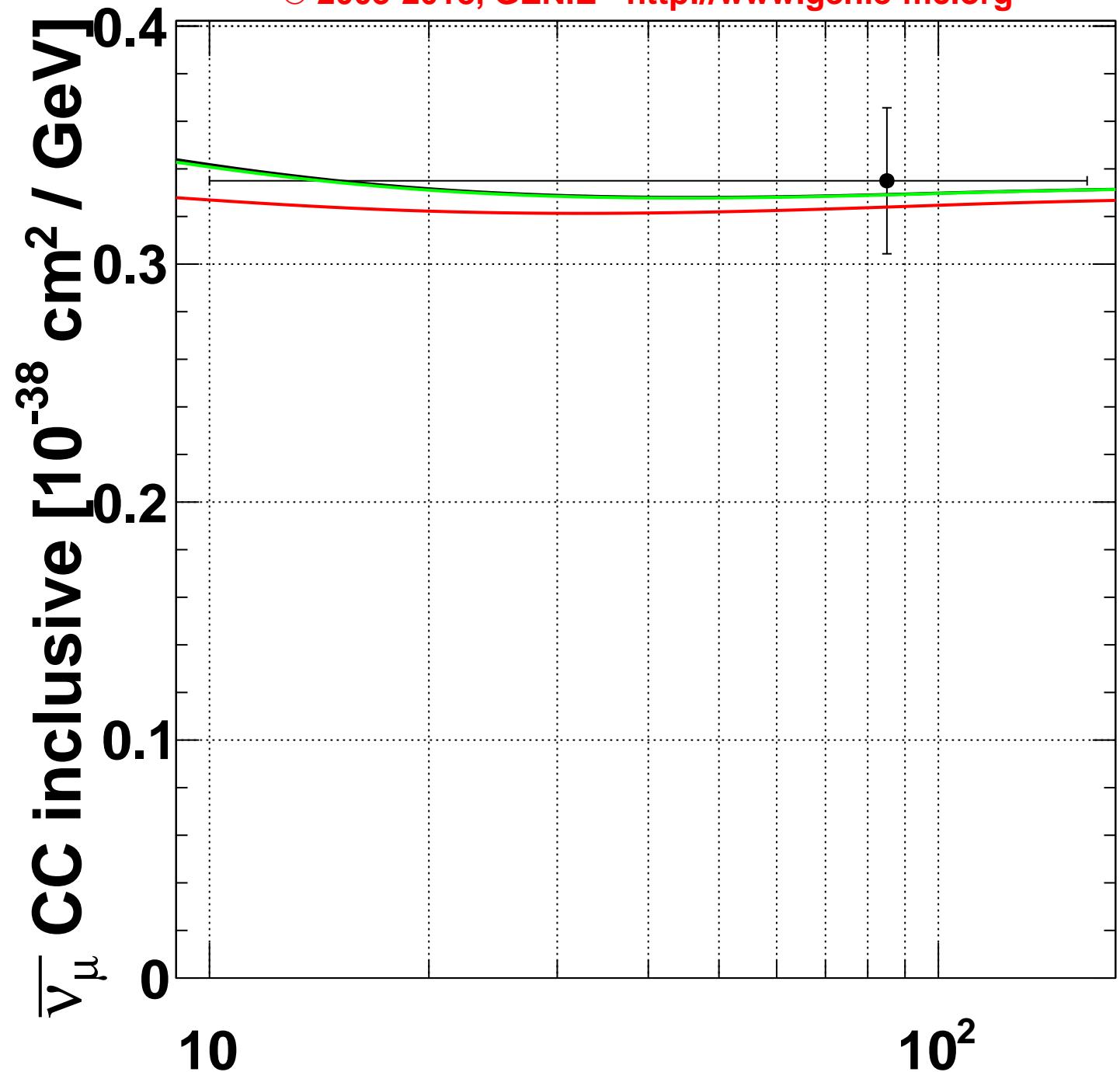


v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 1.56/1$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 2.48/1$ DoF

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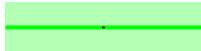
CHARM5 [Allaby et al., Zeit.Phys.C38:403 (1988)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.0158/1 \text{ DoF}$

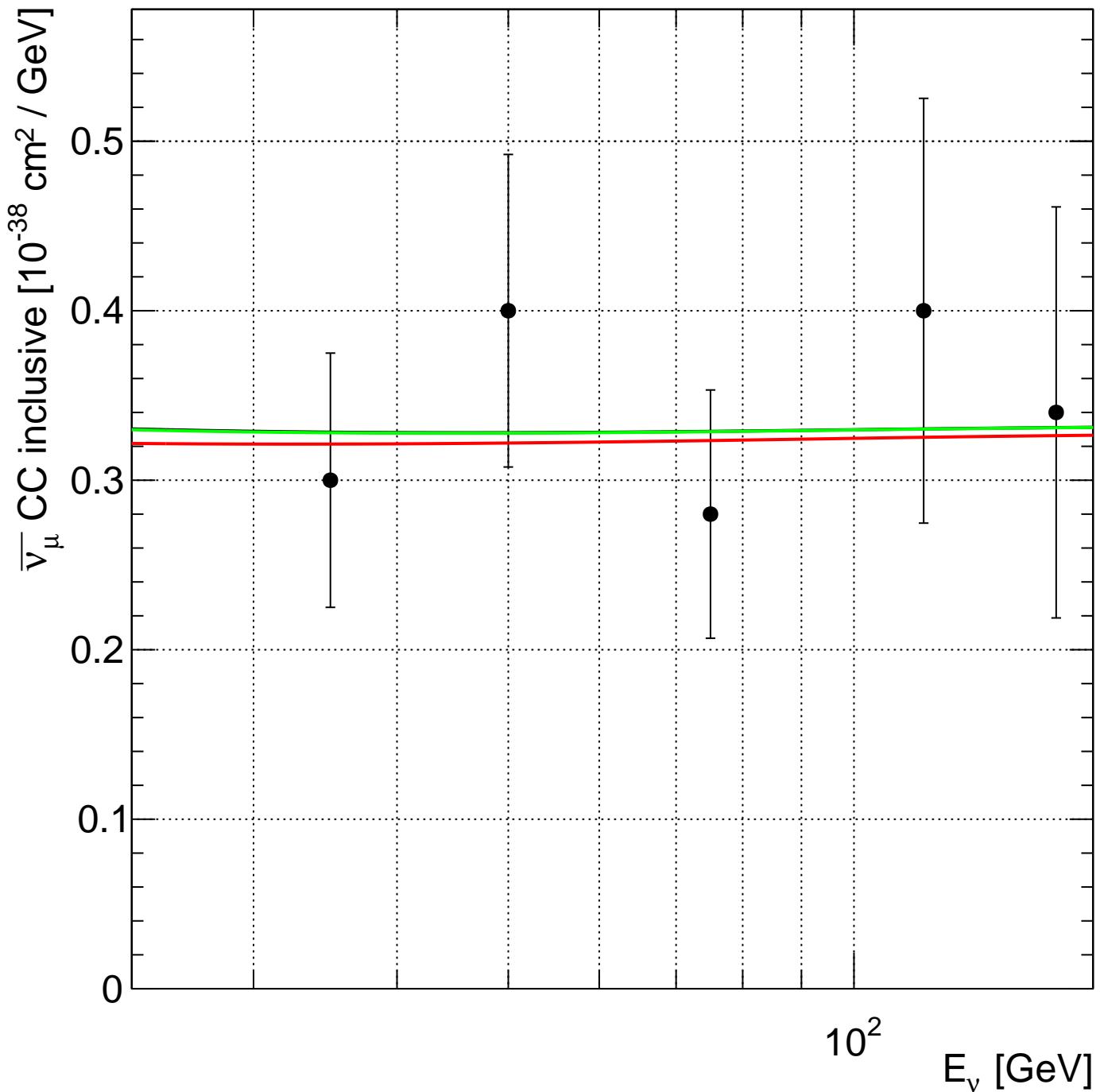


v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.142/1 \text{ DoF}$



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.0191/1 \text{ DoF}$

[GeV]

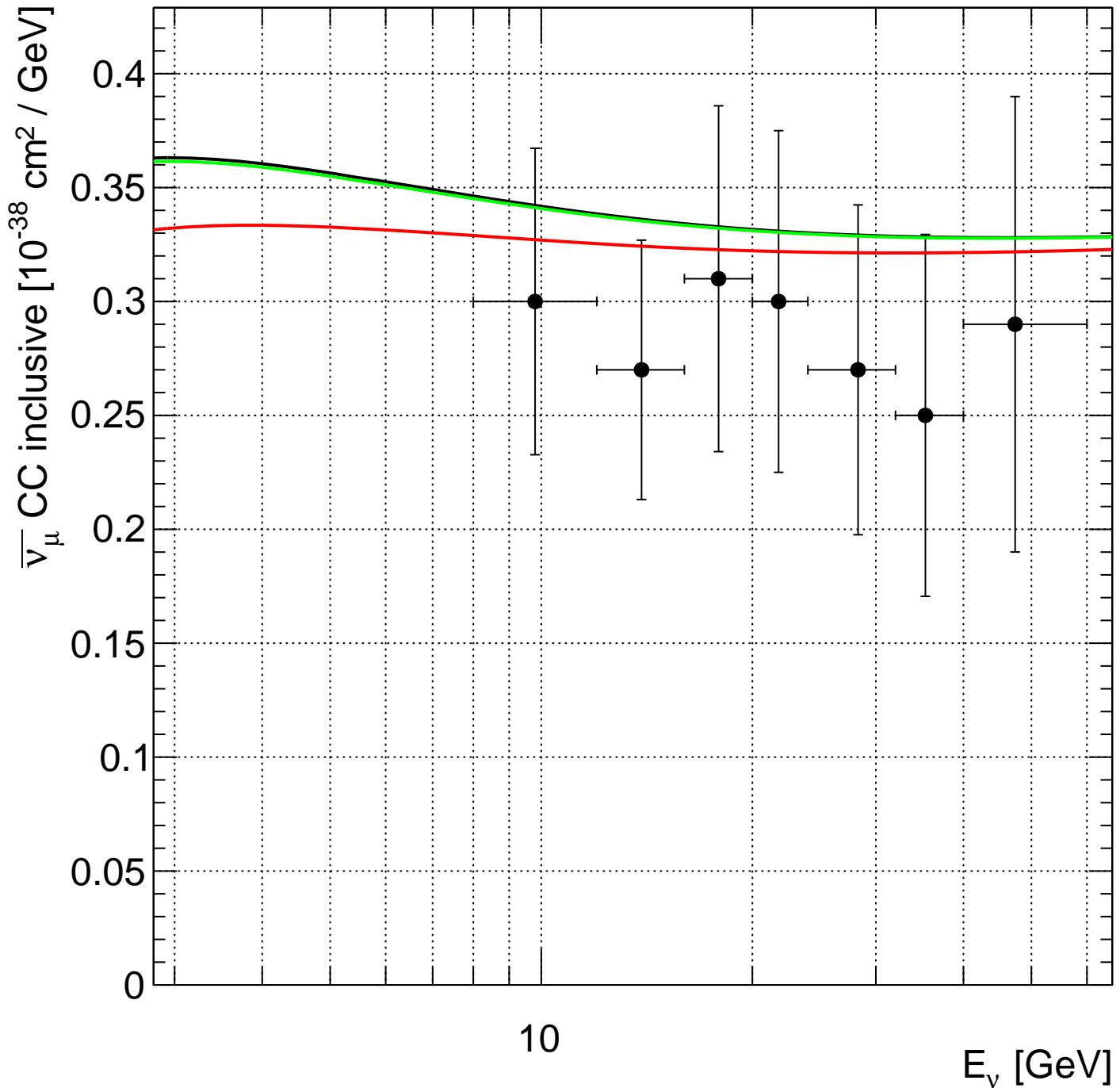


— FNAL_15FT,4 [Taylor et al., Phys.Rev.Lett.51:739 (1983)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 2.32/5 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 2.26/5 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 2.31/5 \text{ DoF}$

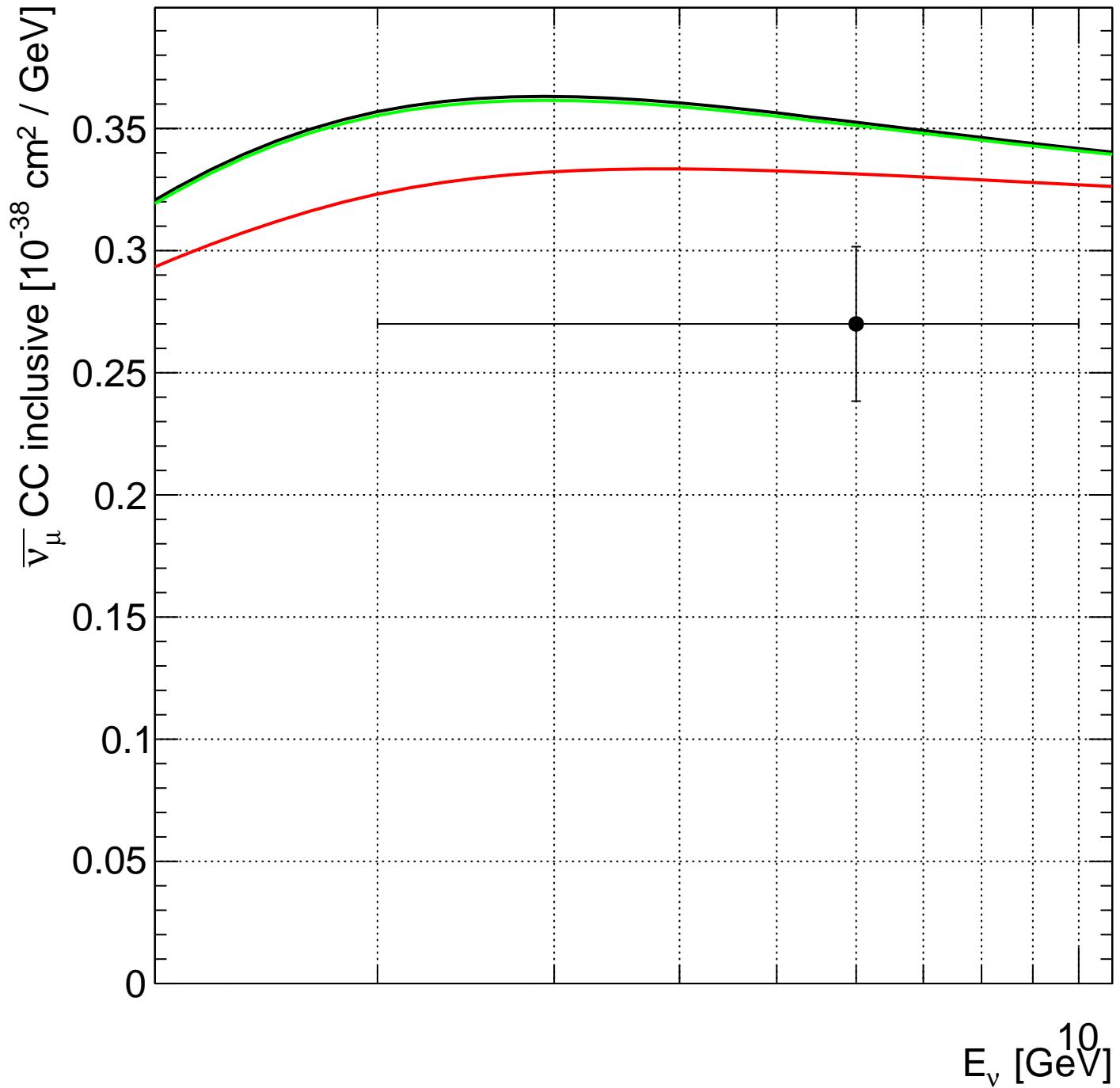


— FNAL_15FT,5 [Asratyan et al., Phys.Lett.B137:122 (1984)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 2.03/7$ DoF

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 1.61/7$ DoF

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 2/7$ DoF

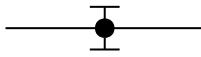
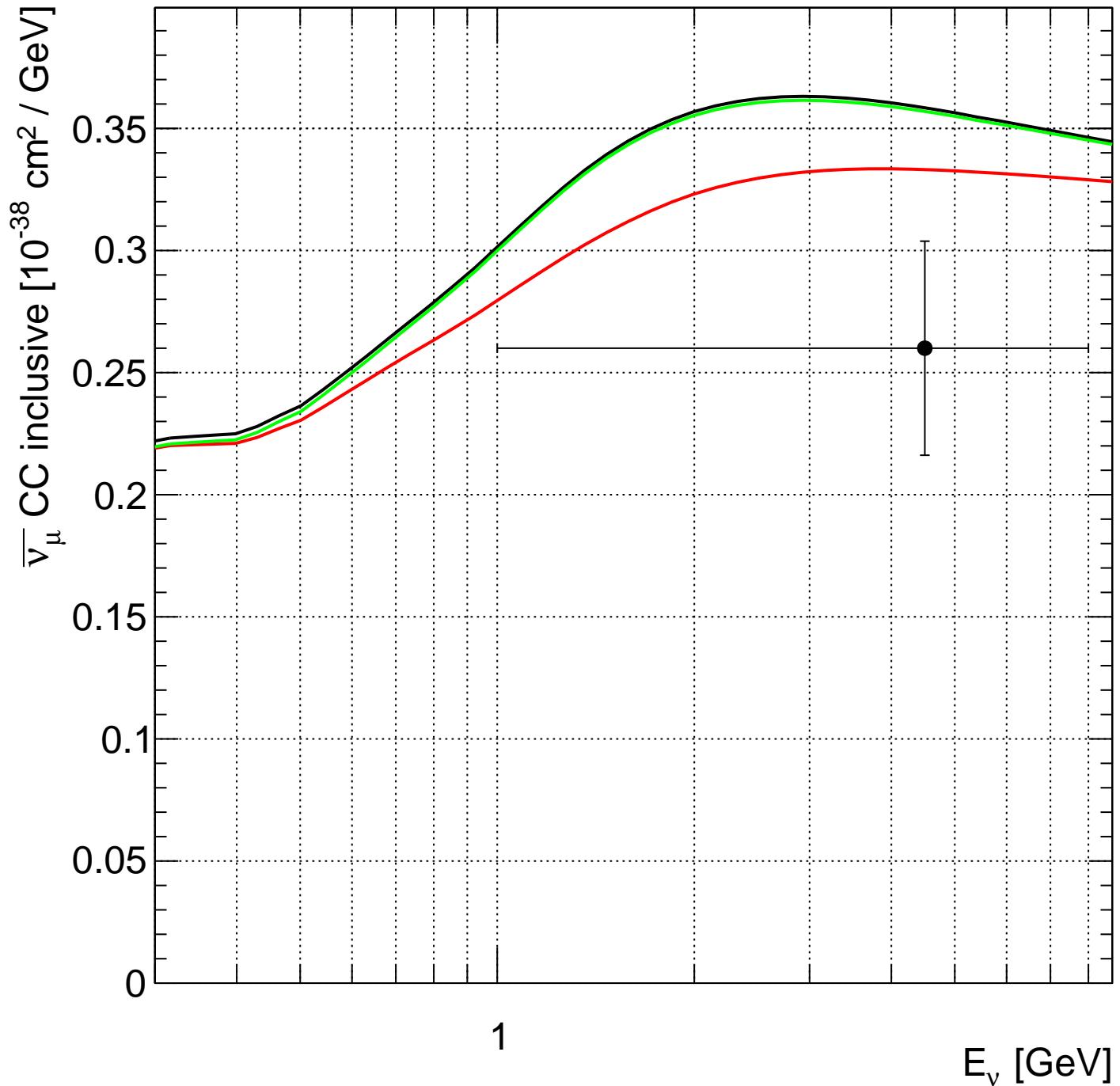


—●— Gargamelle,1 [Eichten et al., Phys.Lett.B46:274 (1973)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 7.41/1$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 3.71/1$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 7.17/1$ DoF



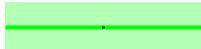
Gargamelle,11 [Erriquez et al., Phys.Lett.B80:309 (1979)]



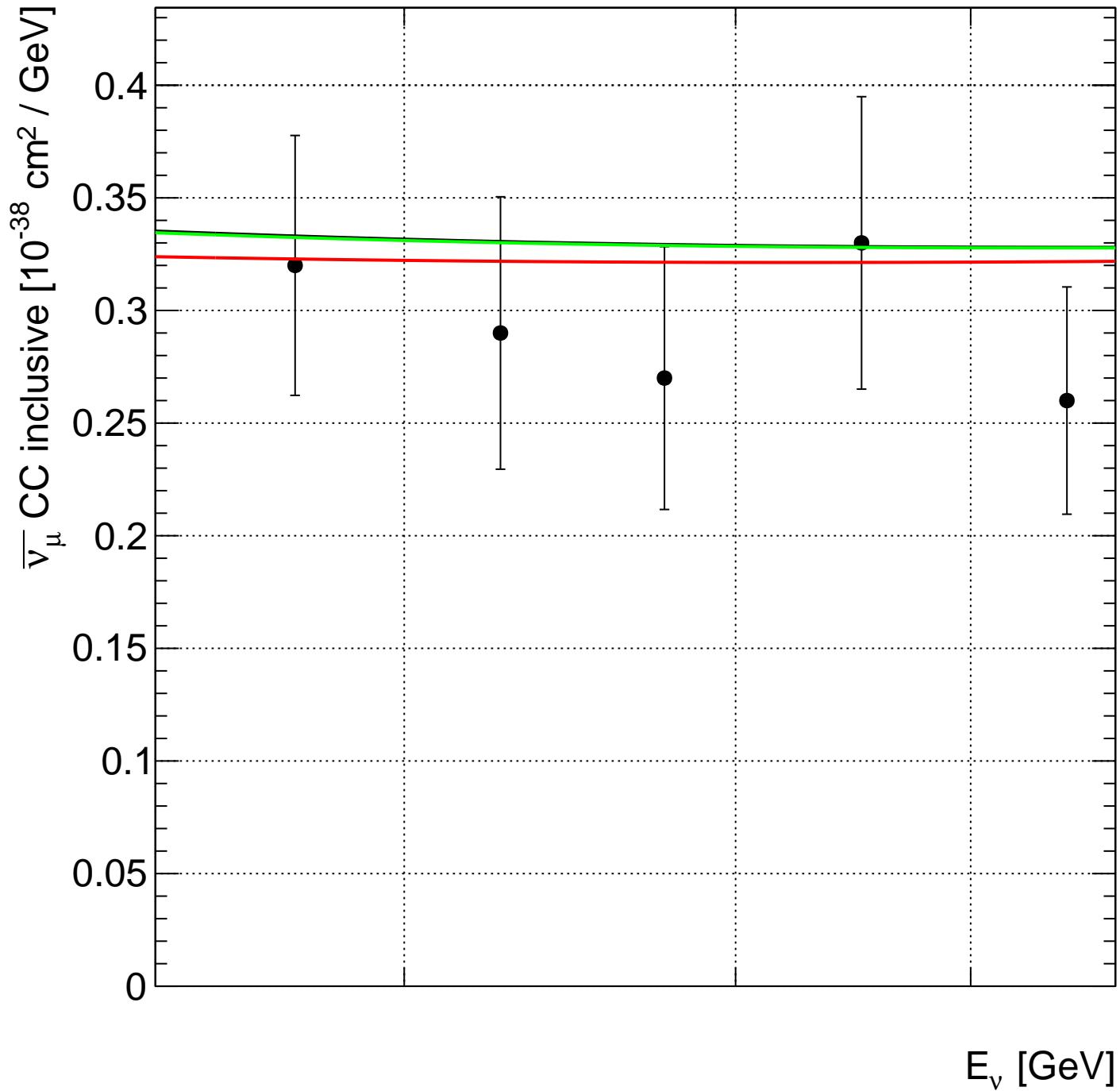
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 4.1/1 \text{ DoF}$



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 1.96/1 \text{ DoF}$



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 3.97/1 \text{ DoF}$

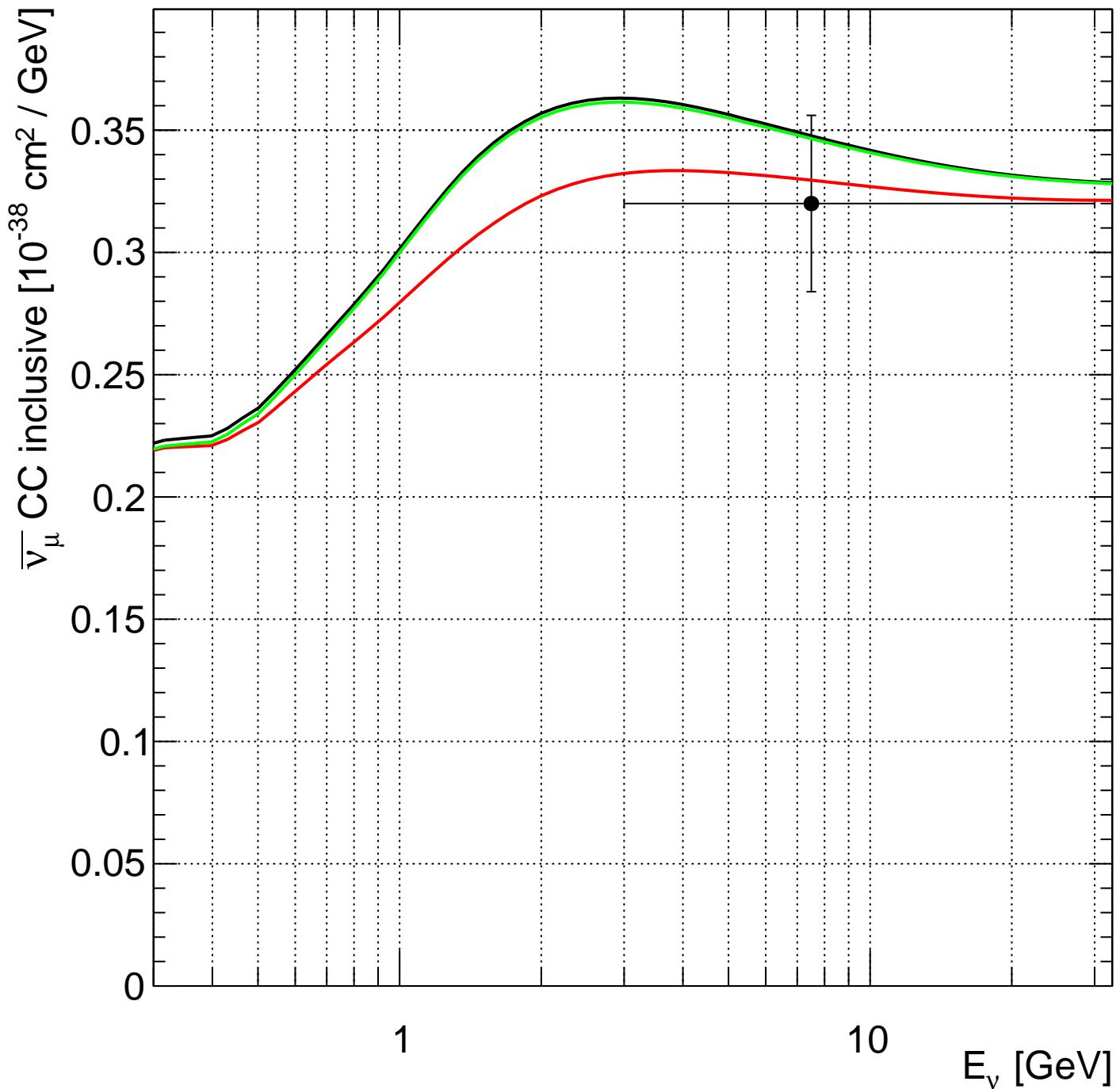


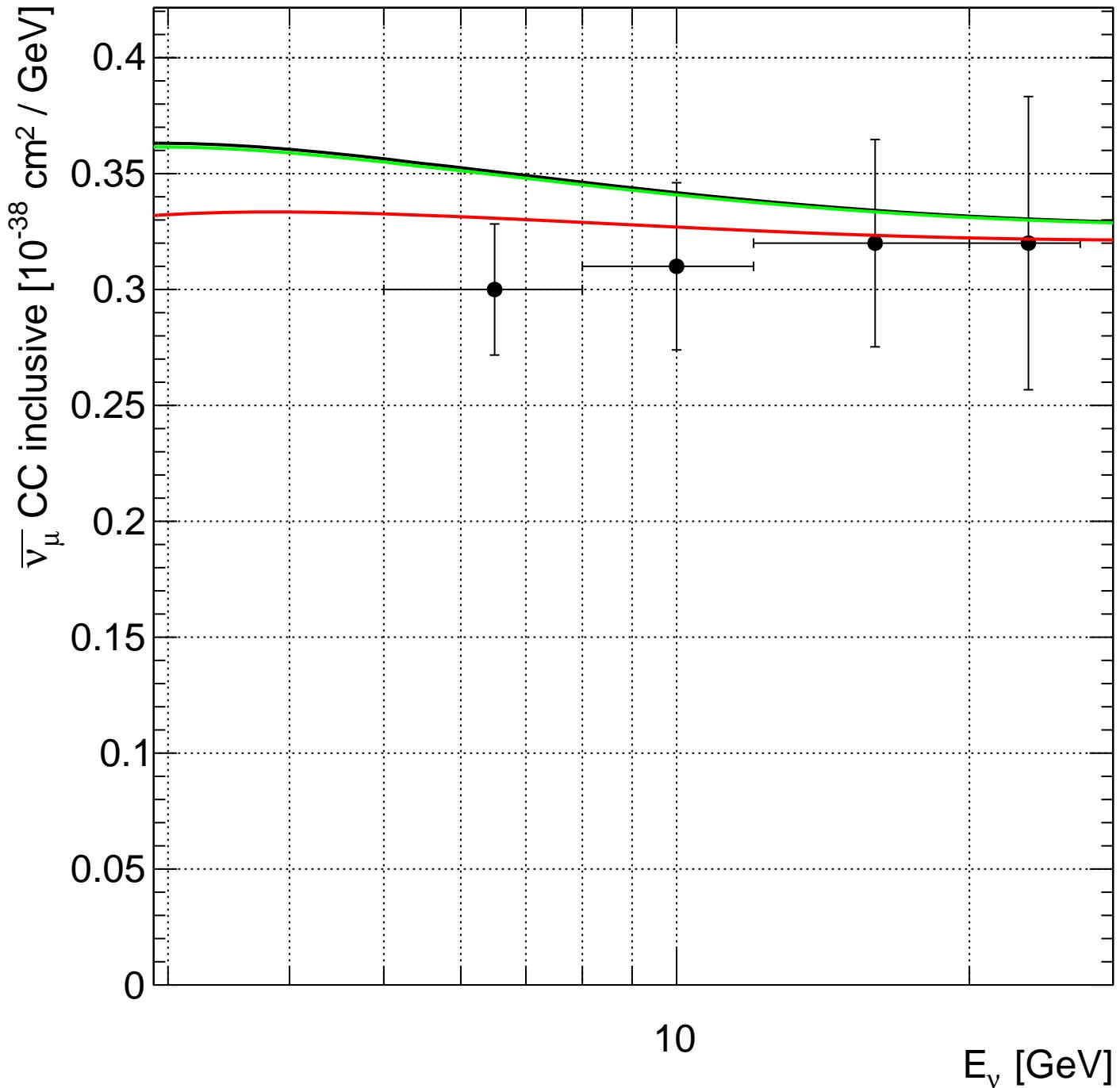
—●— Gargamelle,13 [Morfin et al., Phys.Lett.B104:235 (1981)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 3.87/5$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 3.66/5$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 3.86/5$ DoF



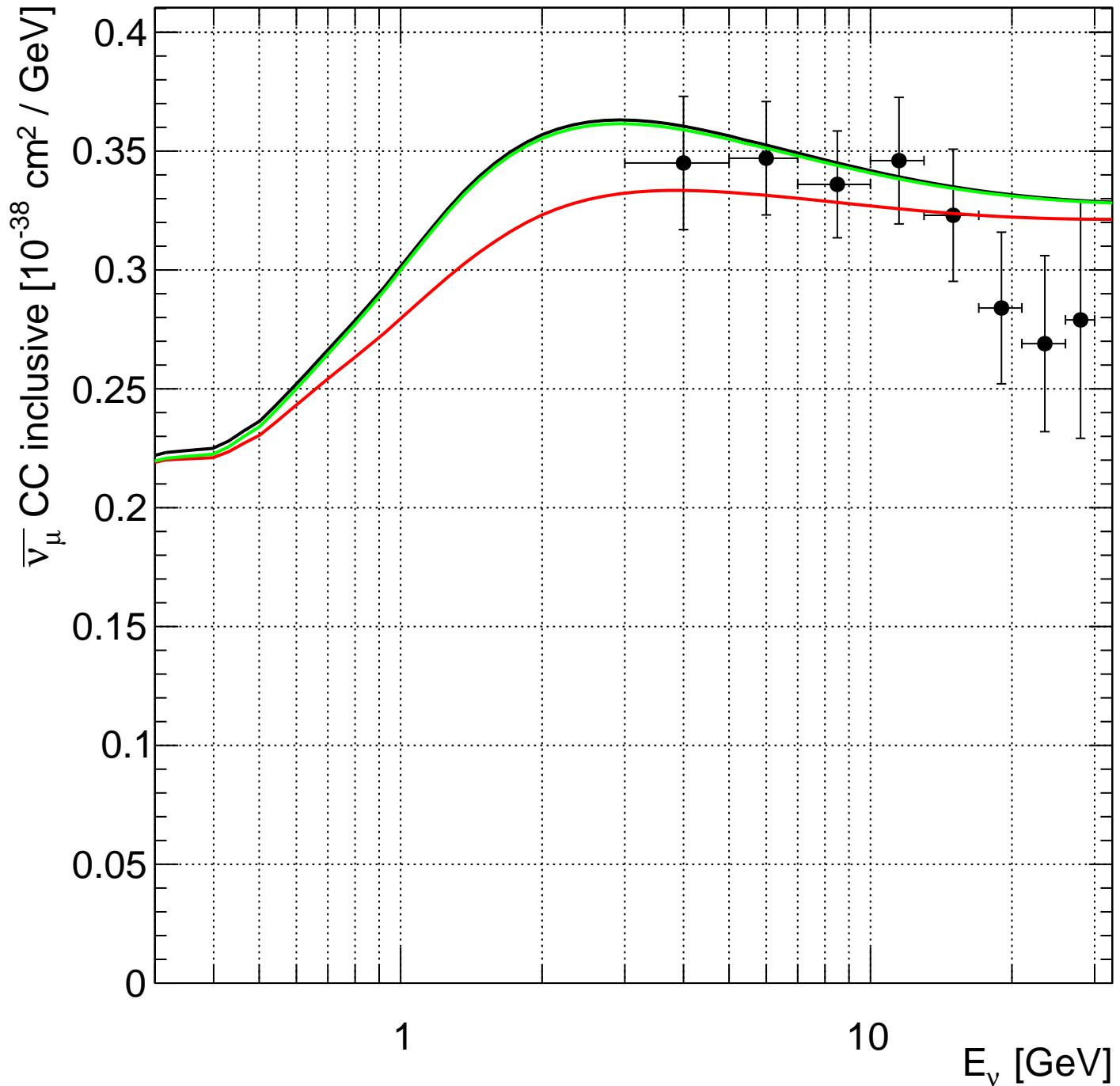


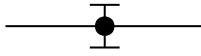
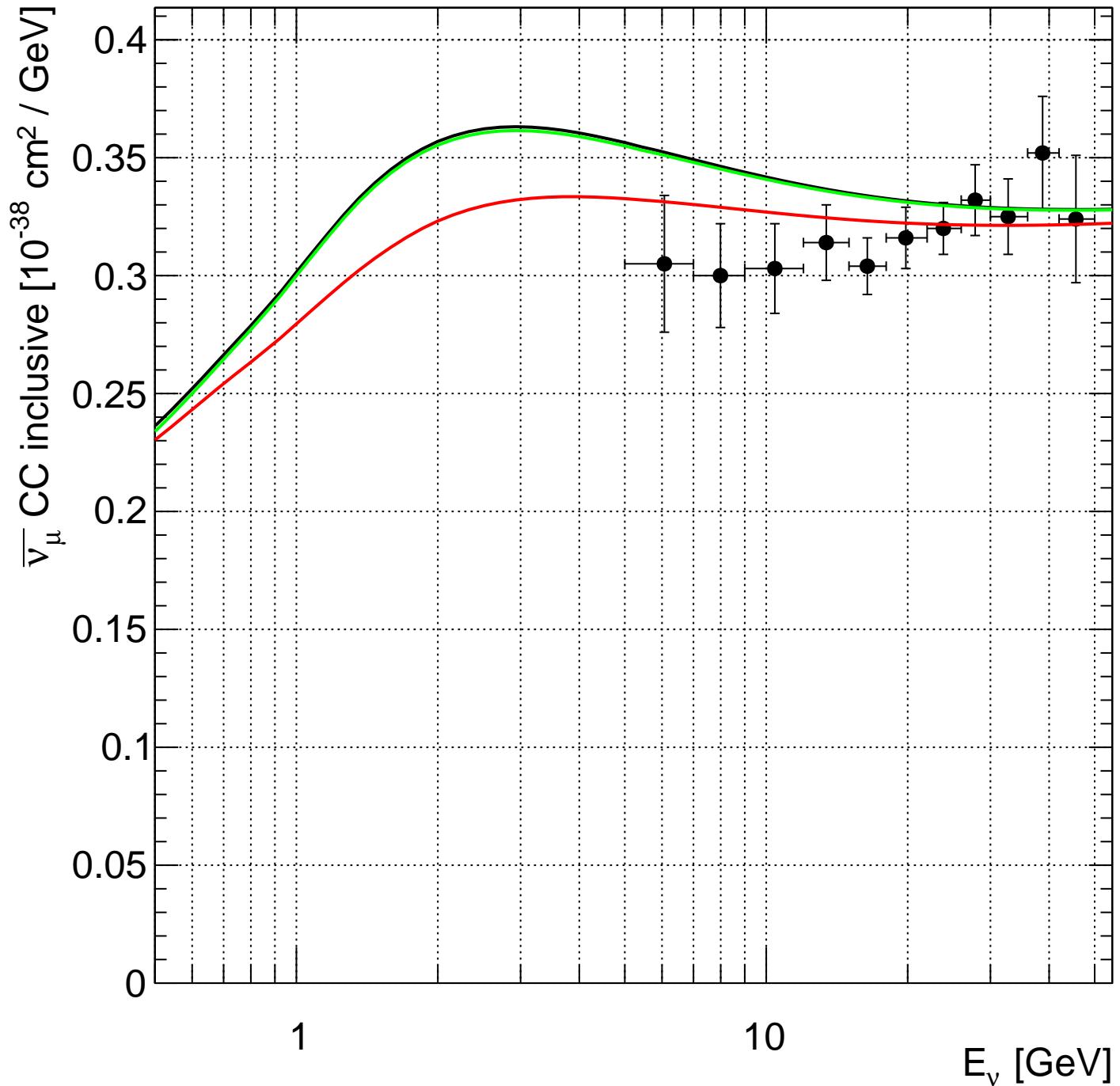
— IHEP_ITEP,3 [Vovenko et al., Sov.J.Nucl.Phys.30:528 (1979)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 4.21/4$ DoF

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 1.42/4$ DoF

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 3.99/4$ DoF





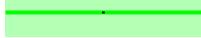
MINOS1 [Adamson et al., Phys.Rev.D81:072002 (2010)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 22.7/11 \text{ DoF}$



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 9.54/11 \text{ DoF}$



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 21.6/11 \text{ DoF}$

Dataset:
numuCCQE_all

Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 76.7 / 70$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 71 / 70$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 71 / 70$ DoF

Subsets:
ANL_12FT,1 [Mann et al., Phys.Rev.Lett.31:844 (1973)]
7 DoF, $\chi^2 = 6.07 \text{ 6.32 6.59}$

ANL_12FT,3 [Barish et al., Phys.Rev.D16:3103 (1977)]
8 DoF, $\chi^2 = 5.25 \text{ 5.31 4.53}$

BEBC,12 [Allasia et al., Nucl.Phys.B343:285 (1990)]
5 DoF, $\chi^2 = 9.44 \text{ 8.09 9.41}$

BNL_7FT,3 [Baker et al., Phys.Rev.D23:2499 (1981)]
4 DoF, $\chi^2 = 8.93 \text{ 7.12 6}$

FNAL_15FT,3 [Kitagaki et al., Phys.Rev.D28:436 (1983)]
2 DoF, $\chi^2 = 1.17 \text{ 1.2 0.87}$

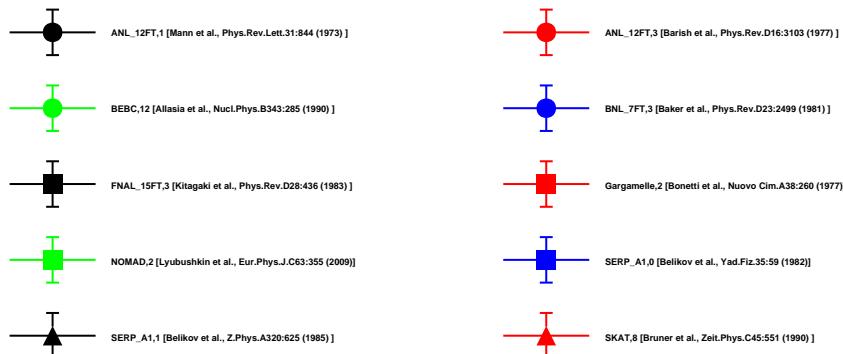
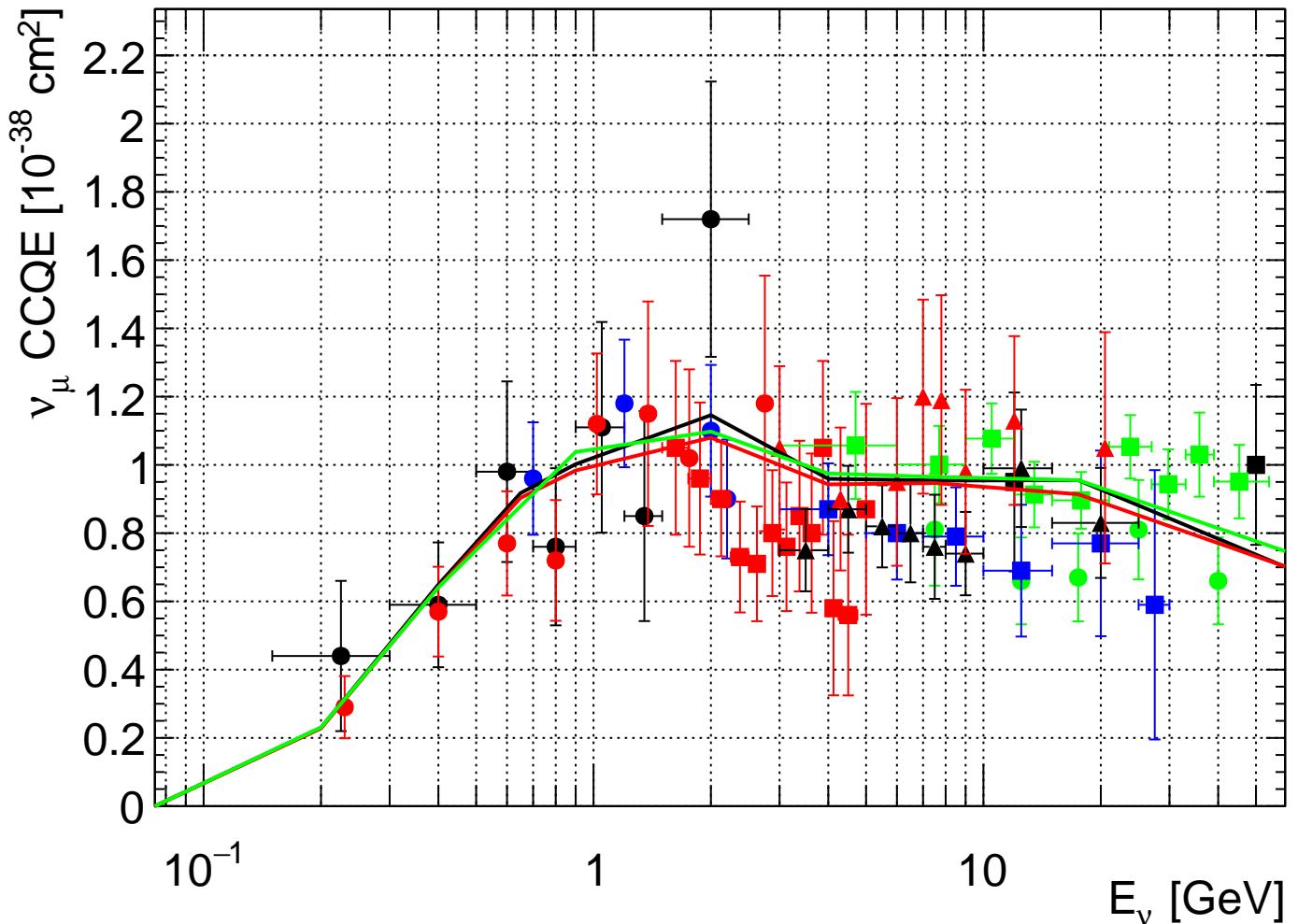
Gargamelle,2 [Bonetti et al., Nuovo Cim.A38:260 (1977)]
13 DoF, $\chi^2 = 15.3 \text{ 13 13.9}$

NOMAD,2 [Lyubushkin et al., Eur.Phys.J.C63:355 (2009)]
9 DoF, $\chi^2 = 9.45 \text{ 12.1 7.49}$

SERP_A1,0 [Belikov et al., Yad.Fiz.35:59 (1982)]
6 DoF, $\chi^2 = 5.95 \text{ 4.89 6.4}$

SERP_A1,1 [Belikov et al., Z.Phys.A320:625 (1985)]
8 DoF, $\chi^2 = 12.7 \text{ 10.5 13.5}$

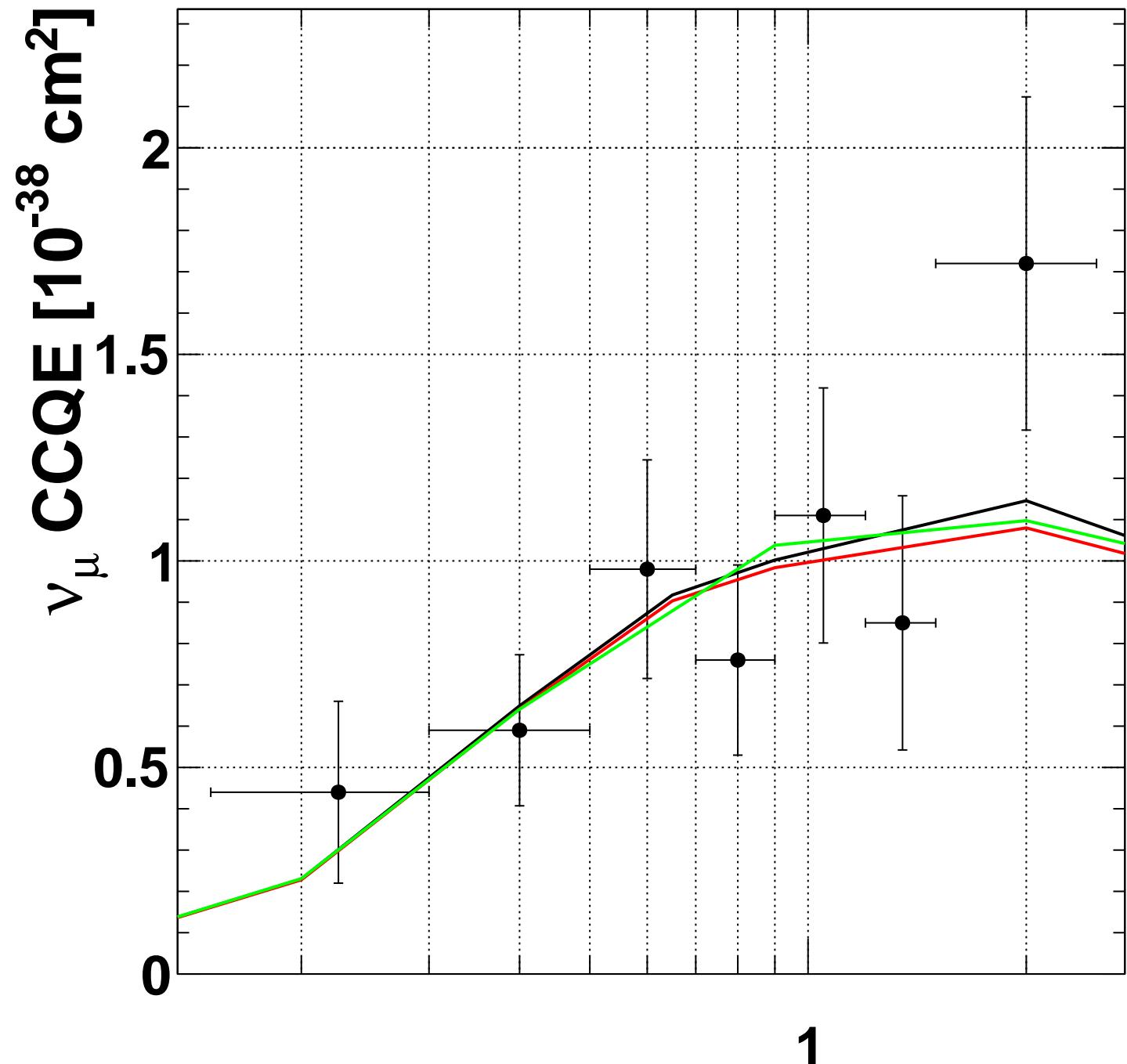
SKAT,8 [Bruner et al., Zeit.Phys.C45:551 (1990)]
8 DoF, $\chi^2 = 2.35 \text{ 2.31 2.33}$



v3.0.0:G18_02a_00_000:numu_freenuc

 v3.0.0:G18_02a_02_11a:numu_freenuc

 v3.0.0:G18_10j_00_000:numu_freenuc

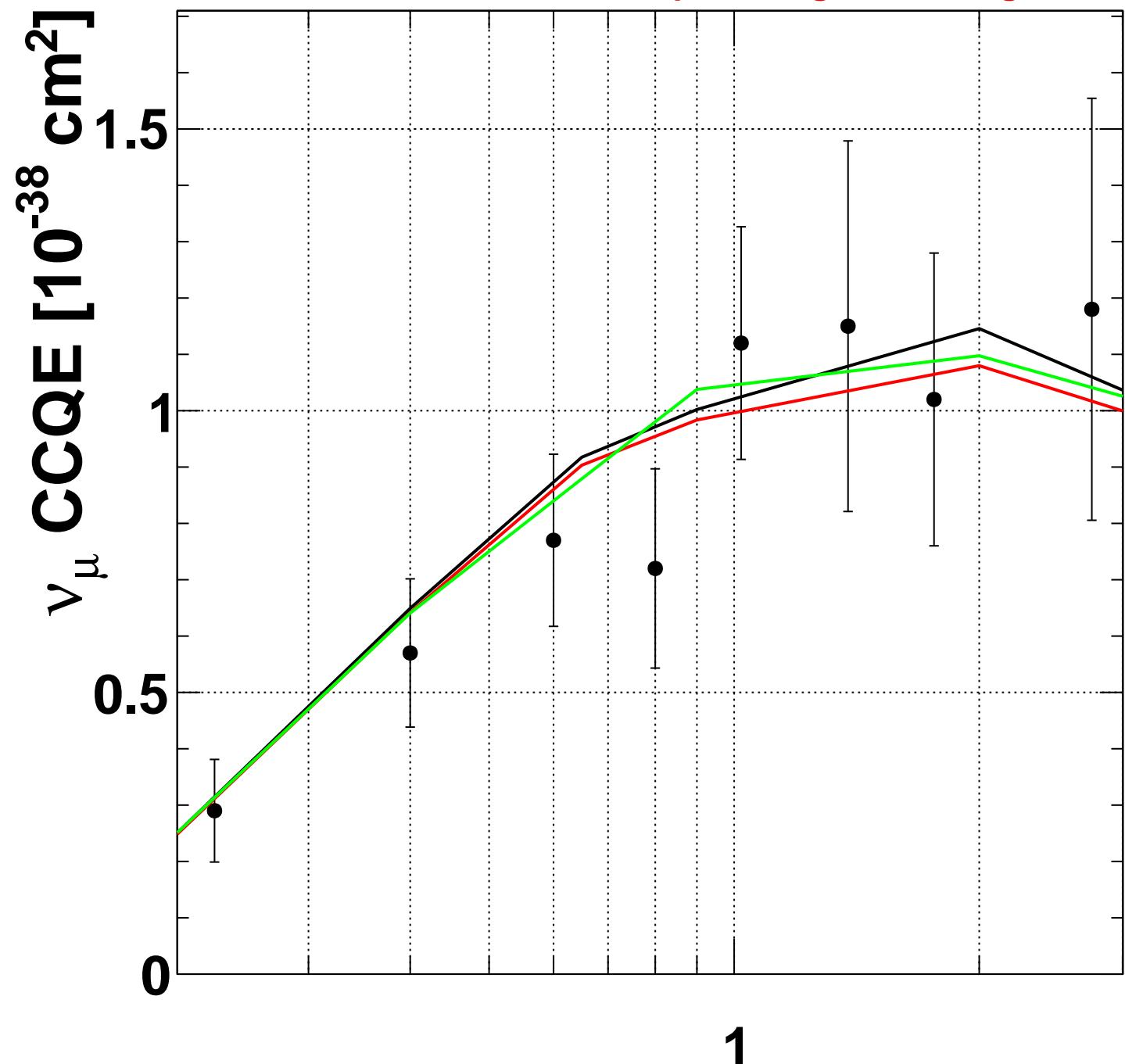


ANL_12FT,1 [Mann et al., Phys.Rev.Lett.31:844 (1973)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 6.07/7 \text{ DoF}$

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 6.32/7 \text{ DoF}$

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 6.59/7 \text{ DoF}$



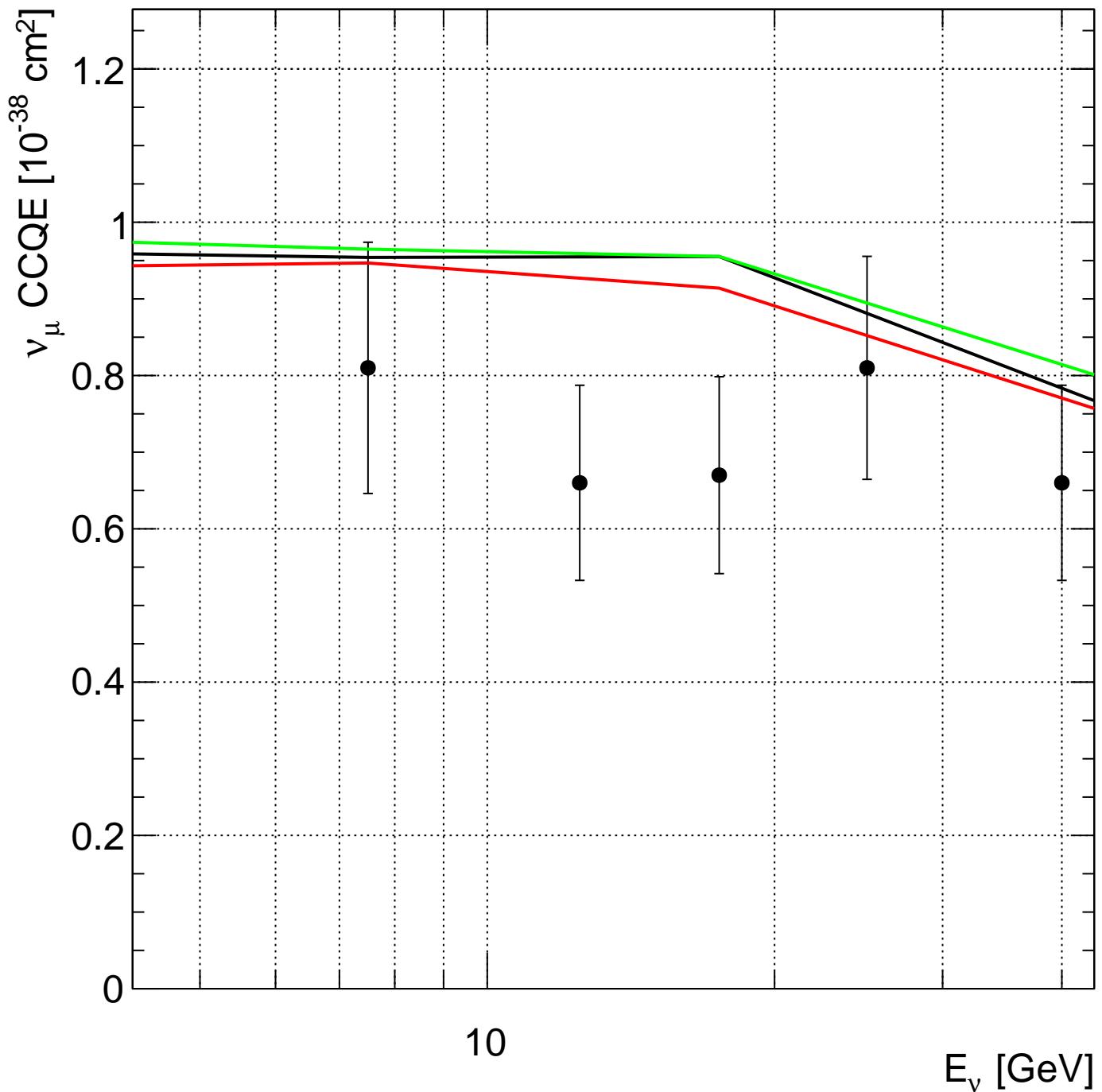
—●— ANL_12FT,3 [Barish et al., Phys.Rev.D16:3103 (1977)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 5.25/8 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 5.31/8 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 4.53/8 \text{ DoF}$

[GeV]

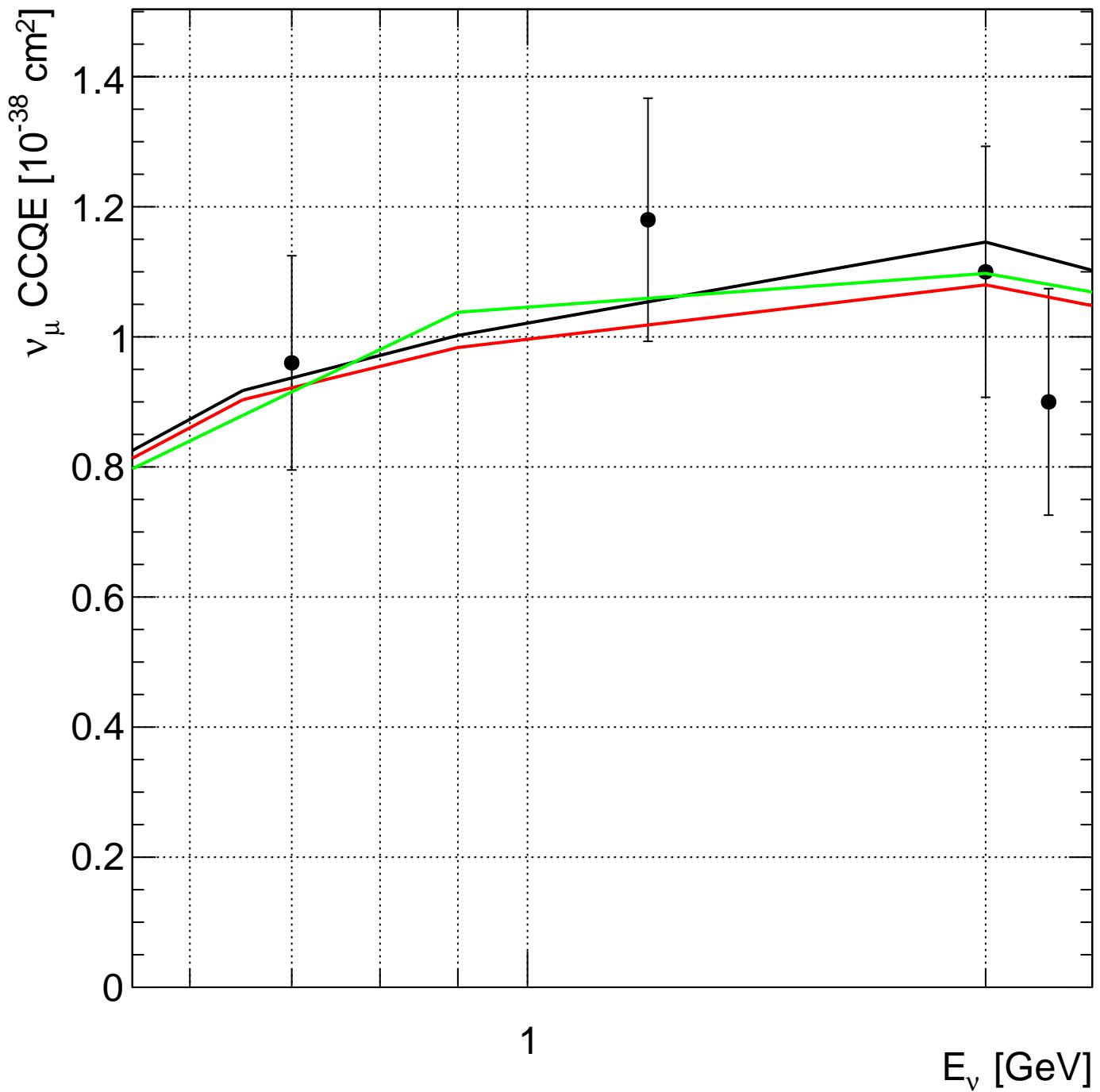


—●— BEBC,12 [Allasia et al., Nucl.Phys.B343:285 (1990)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 9.44/5$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 8.09/5$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 9.41/5$ DoF

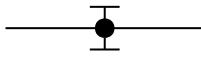
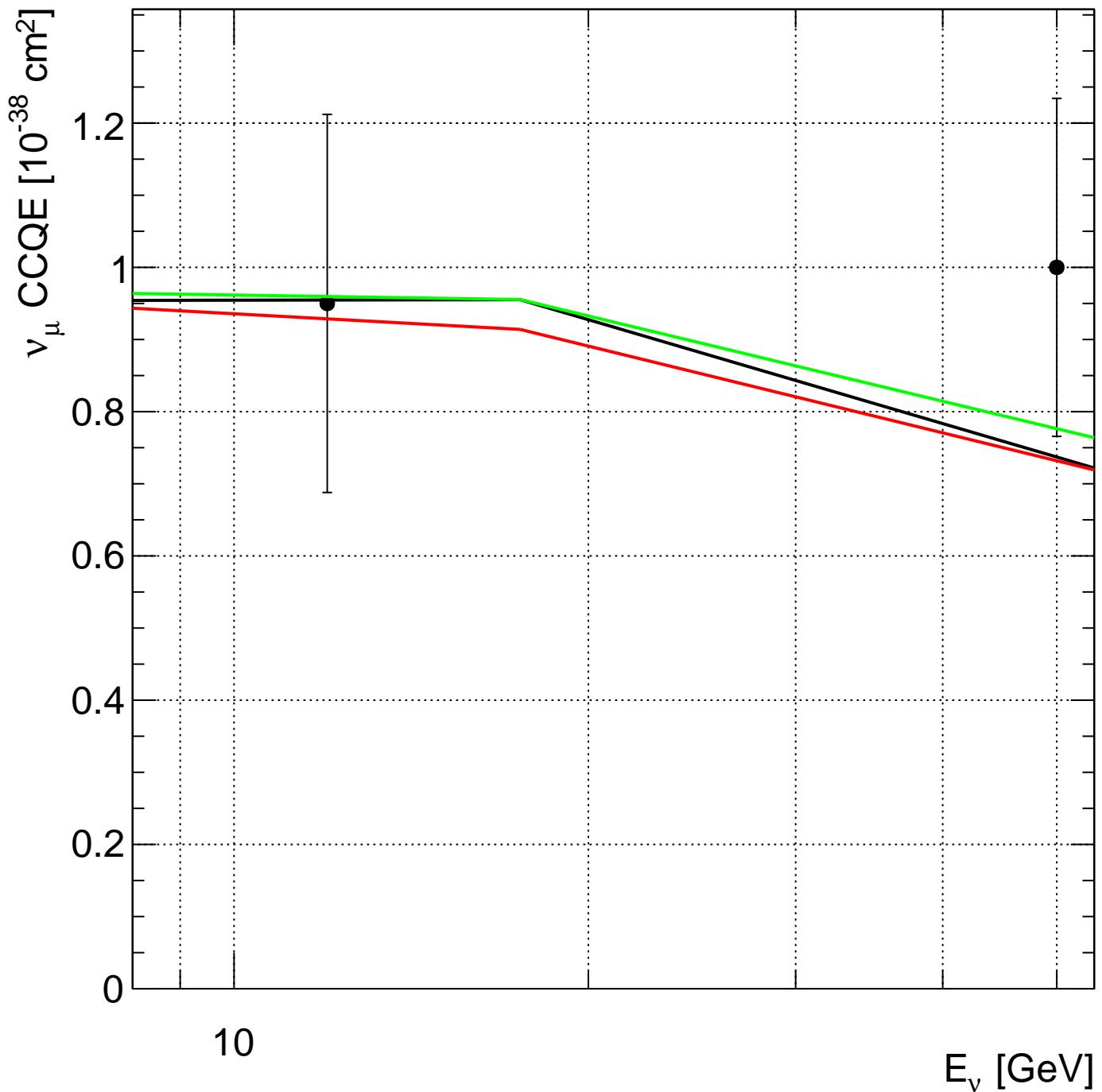


—●— BNL_7FT,3 [Baker et al., Phys.Rev.D23:2499 (1981)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 8.93/4 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 7.12/4 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 6/4 \text{ DoF}$



FNAL_15FT,3 [Kitagaki et al., Phys.Rev.D28:436 (1983)]



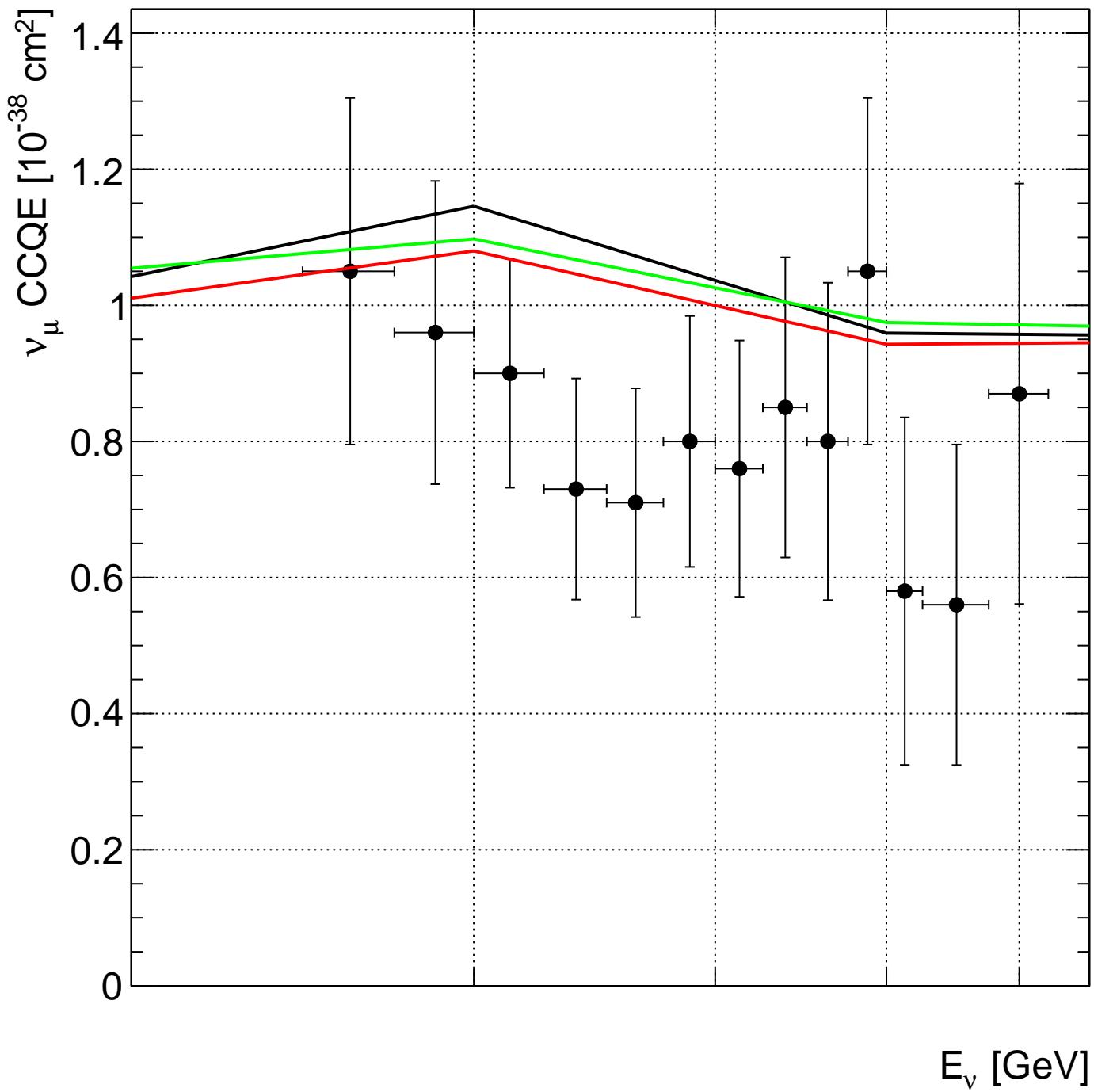
v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 1.17/2 \text{ DoF}$



v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 1.2/2 \text{ DoF}$



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 0.87/2 \text{ DoF}$

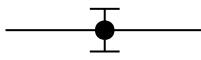
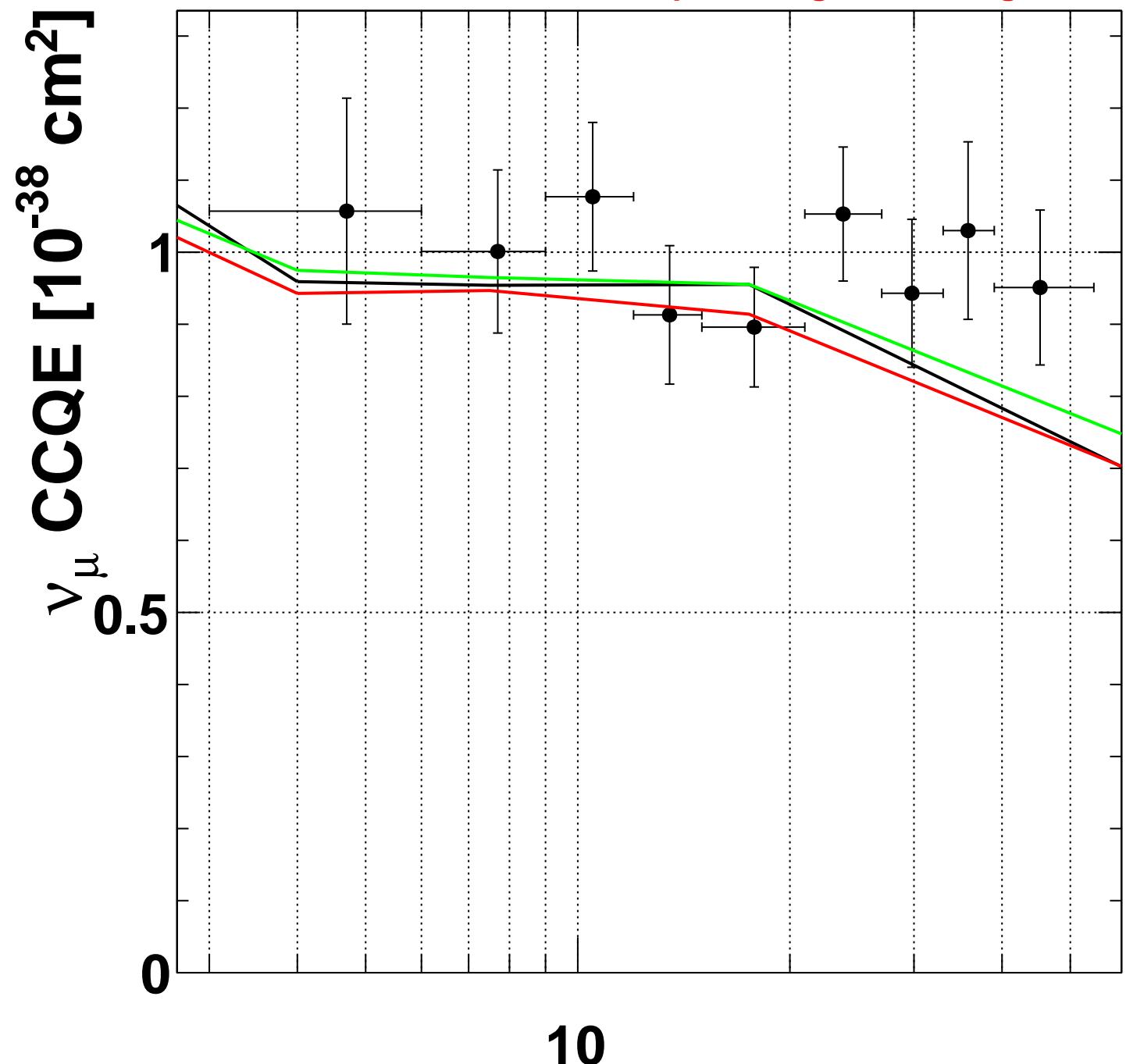


Gargamelle,2 [Bonetti et al., Nuovo Cim.A38:260 (1977)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 15.3/13 \text{ DoF}$

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 13/13 \text{ DoF}$

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 13.9/13 \text{ DoF}$



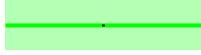
NOMAD,2 [Lyubushkin et al., Eur.Phys.J.C63:355 (2009)]



v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 9.45/9$ DoF

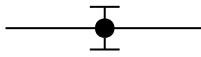
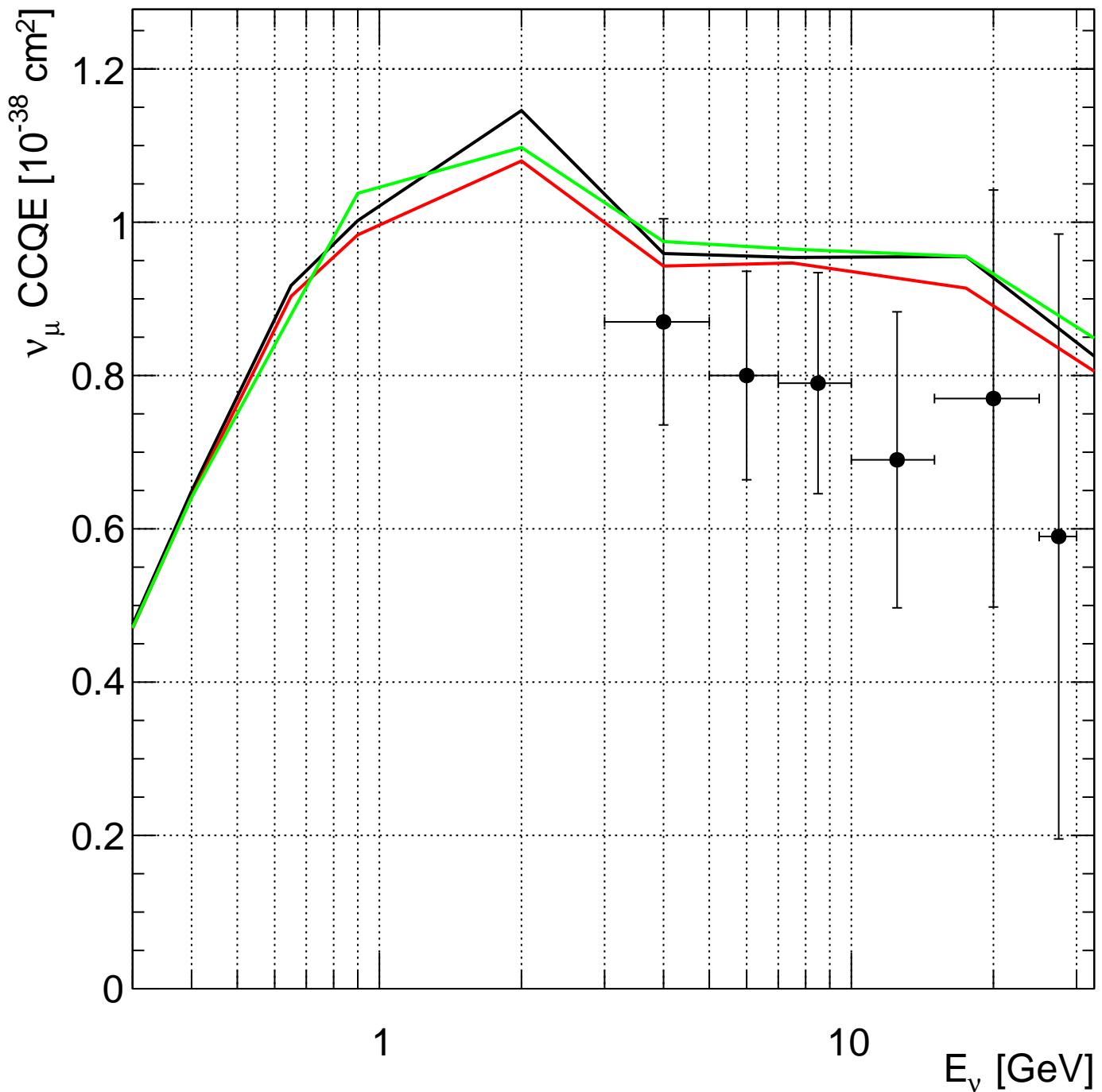


v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 12.1/9$ DoF



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 7.49/9$ DoF

[GeV]



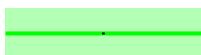
SERP_A1,0 [Belikov et al., Yad.Fiz.35:59 (1982)]



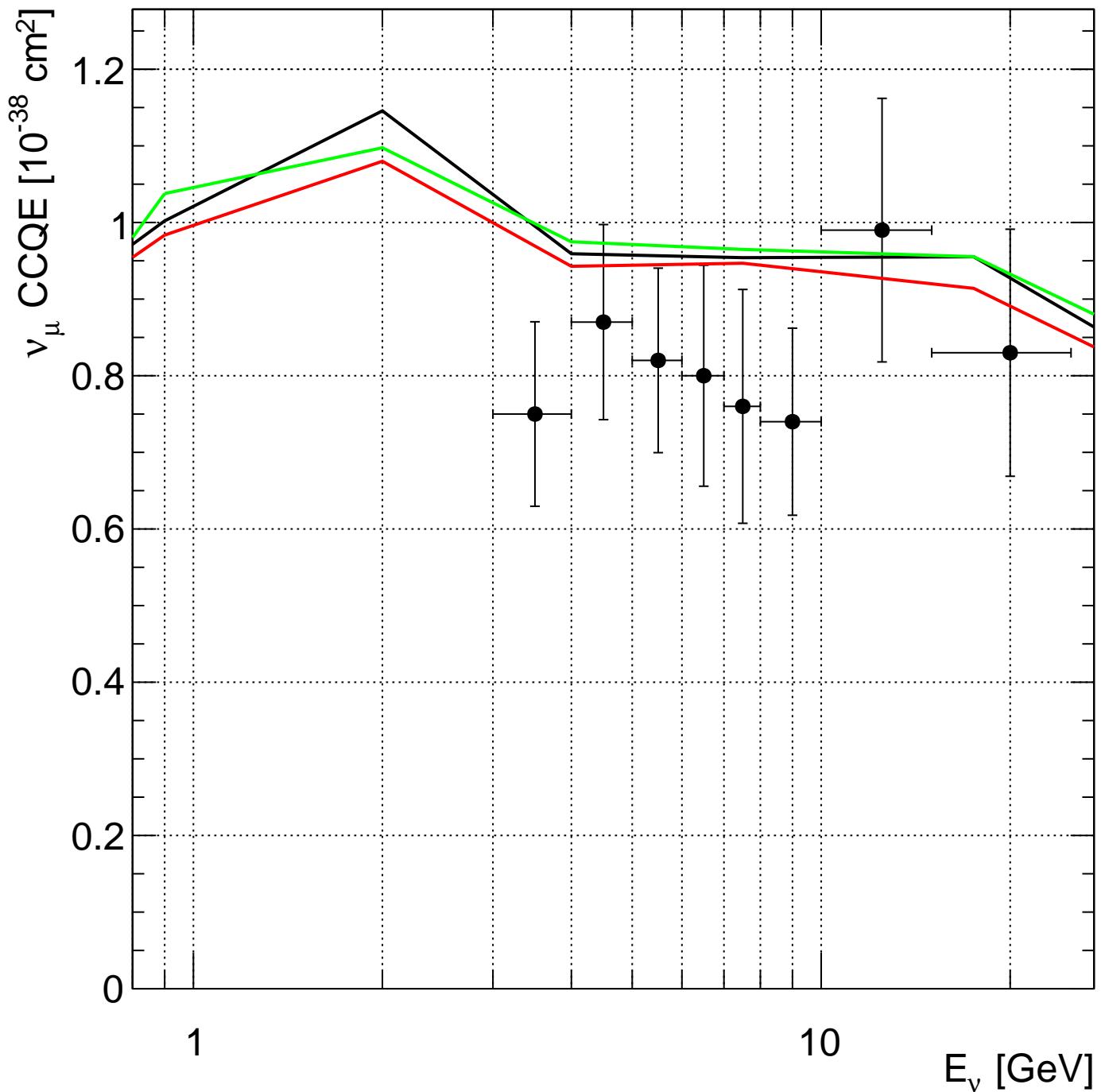
v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 5.95/6$ DoF



v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 4.89/6$ DoF



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 6.4/6$ DoF

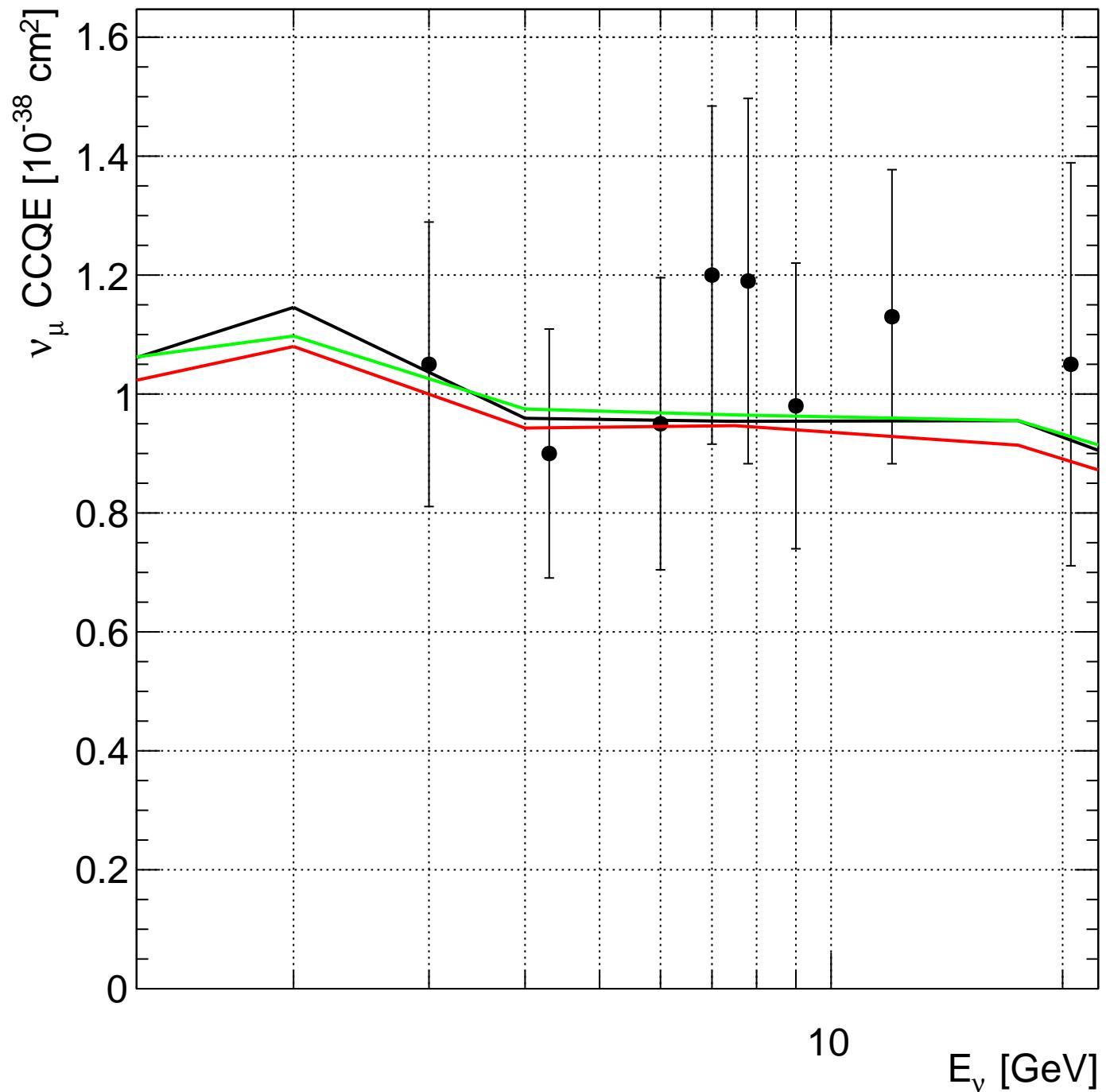


—●— SERP_A1,1 [Belikov et al., Z.Phys.A320:625 (1985)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 12.7/8$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 10.5/8$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 13.5/8$ DoF



— SKAT,8 [Bruner et al., Zeit.Phys.C45:551 (1990)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 2.35/8 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 2.31/8 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 2.33/8 \text{ DoF}$

Dataset:
numubarCCQE_all

Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 87.5 / 43$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 79 / 43$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 82 / 43$ DoF

Subsets:
BNL_7FT,2 [Fanourakis et al., Phys.Rev.D21:562 (1980)]
1 DoF, $\chi^2 = 0.0787$ **0.0748** **0.0728**

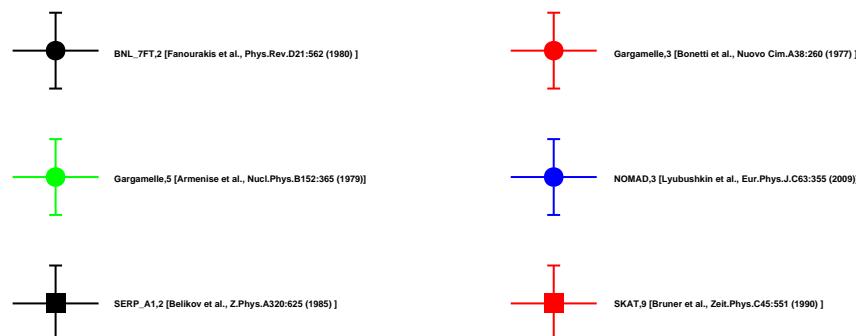
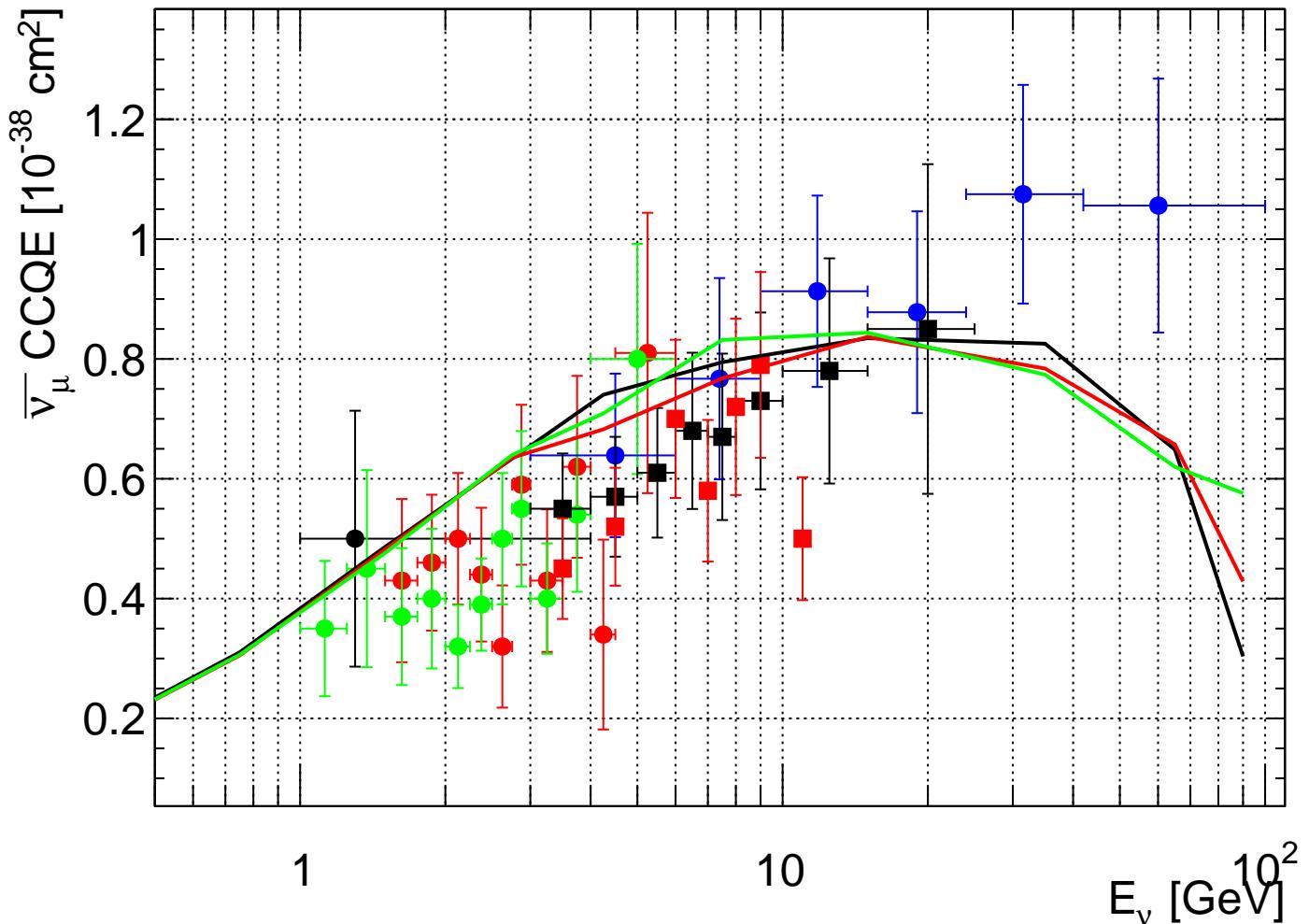
Gargamelle,3 [Bonetti et al., Nuovo Cim.A38:260 (1977)]
10 DoF, $\chi^2 = 18.4$ **17.2** **17.7**

Gargamelle,5 [Armenise et al., Nucl.Phys.B152:365 (1979)]
11 DoF, $\chi^2 = 25.1$ **26** **25.4**

NOMAD,3 [Lyubushkin et al., Eur.Phys.J.C63:355 (2009)]
6 DoF, $\chi^2 = 10.3$ **8.97** **7.86**

SERP_A1,2 [Belikov et al., Z.Phys.A320:625 (1985)]
8 DoF, $\chi^2 = 8.63$ **4.44** **8**

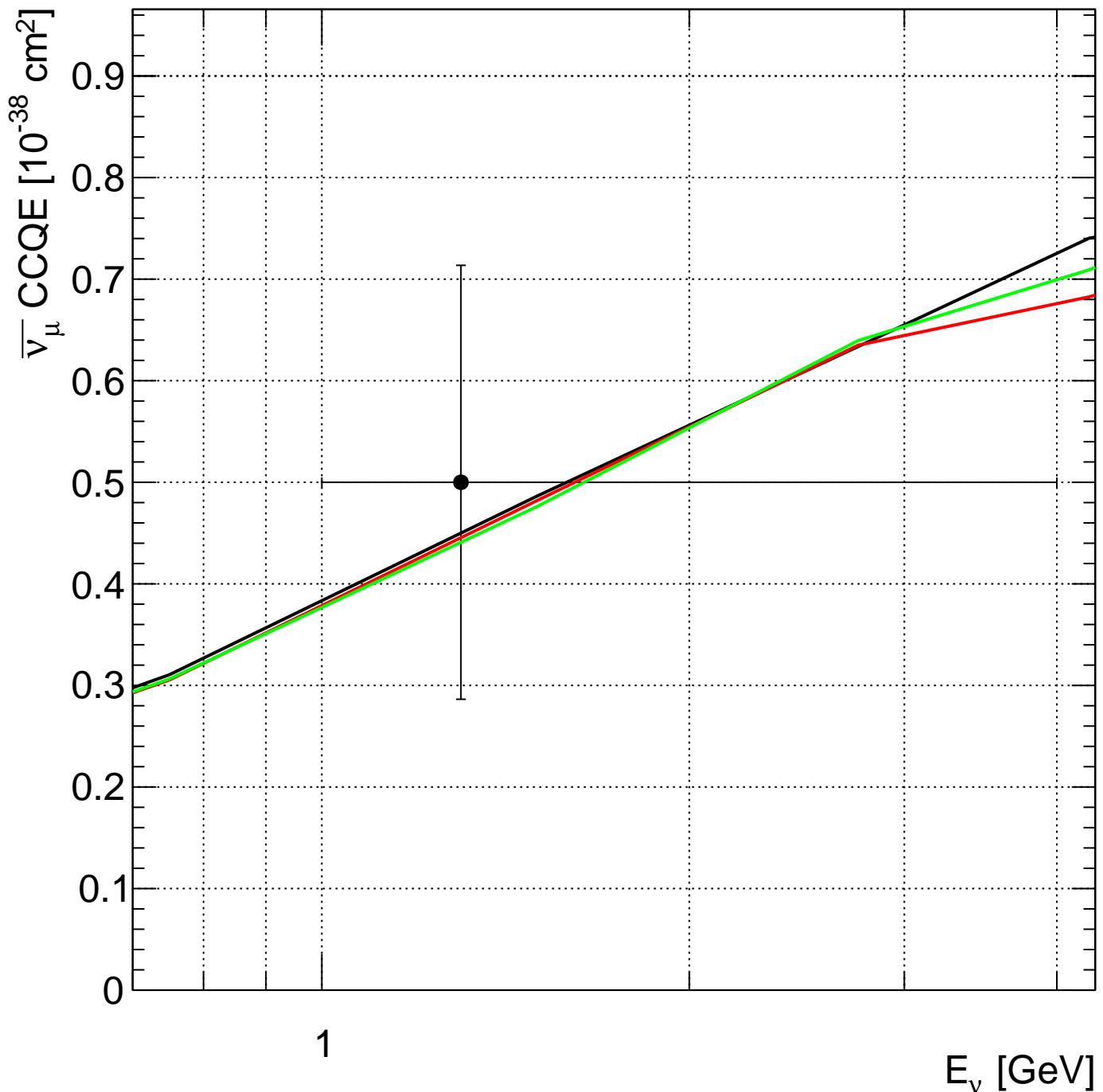
SKAT,9 [Bruner et al., Zeit.Phys.C45:551 (1990)]
7 DoF, $\chi^2 = 25$ **22.4** **23**



v3.0.0:G18_02a_00_000:numu_freenuc

v3.0.0:G18_02a_02_11a:numu_freenuc

v3.0.0:G18_10j_00_000:numu_freenuc

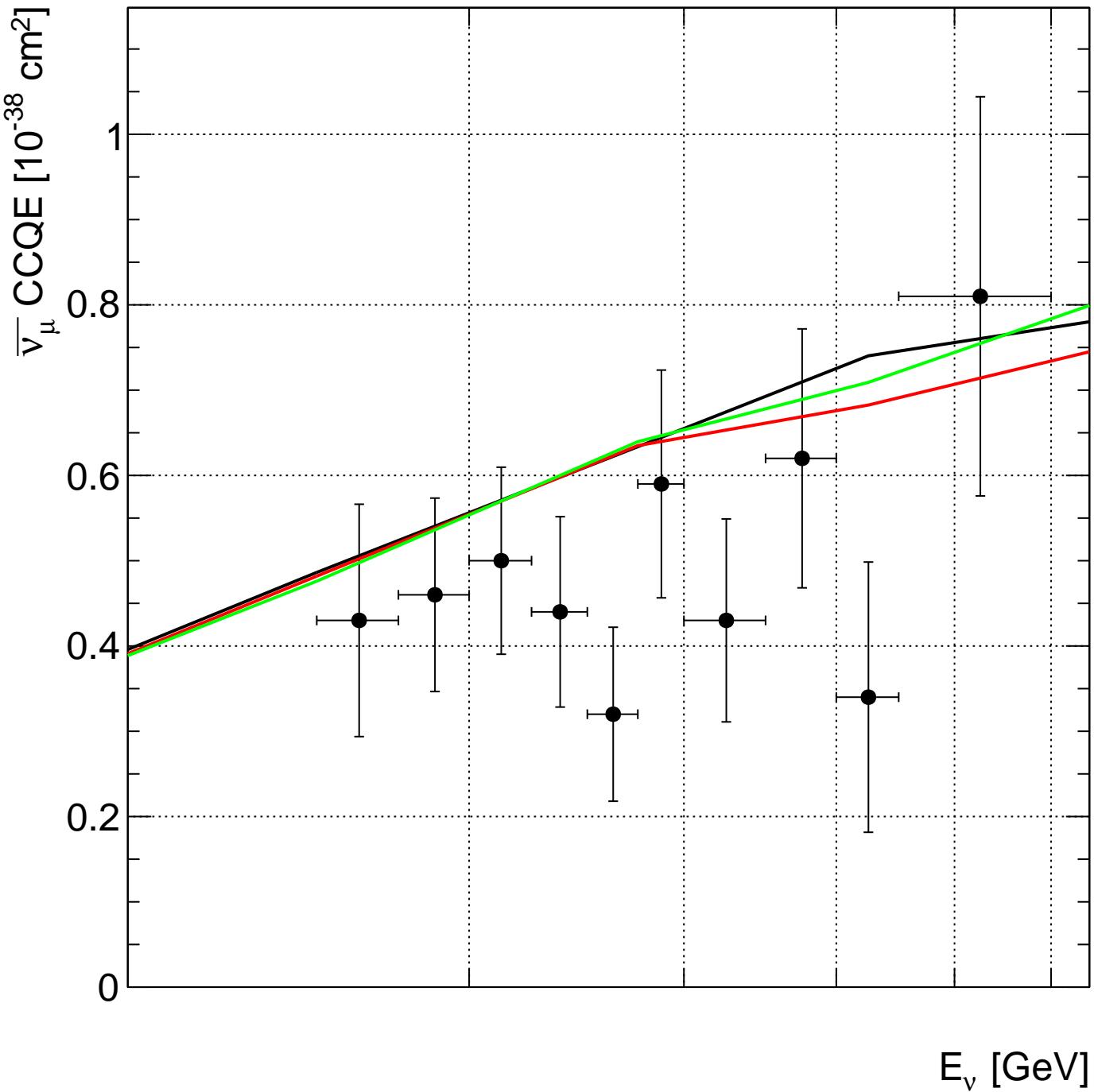


— ● — BNL_7FT,2 [Fanourakis et al., Phys.Rev.D21:562 (1980)]

— — v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 0.0787/1 \text{ DoF}$

— — v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.0748/1 \text{ DoF}$

— — v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 0.0728/1 \text{ DoF}$

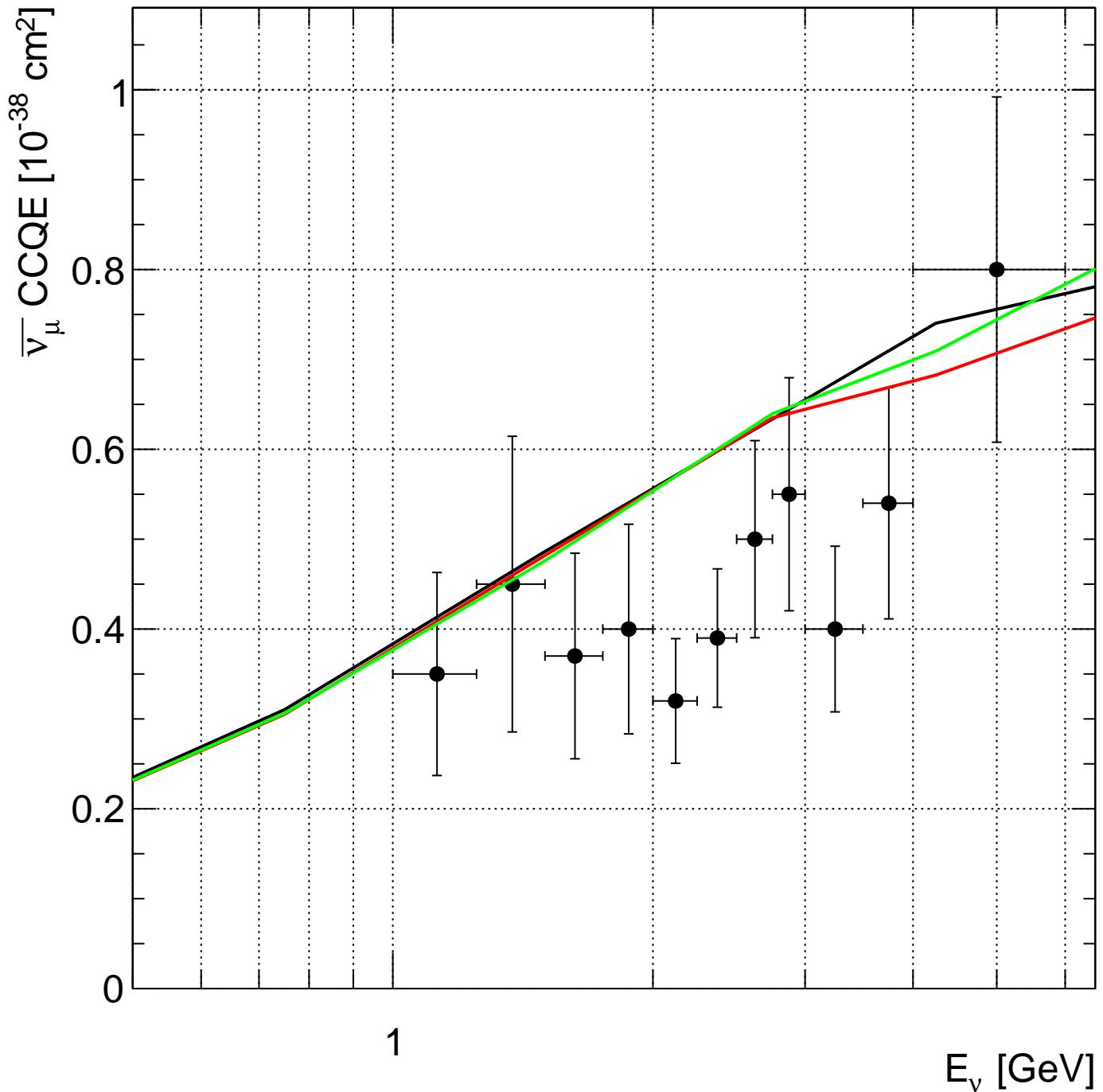


Gargamelle,3 [Bonetti et al., Nuovo Cim.A38:260 (1977)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 18.4/10$ DoF

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 17.2/10$ DoF

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 17.7/10$ DoF

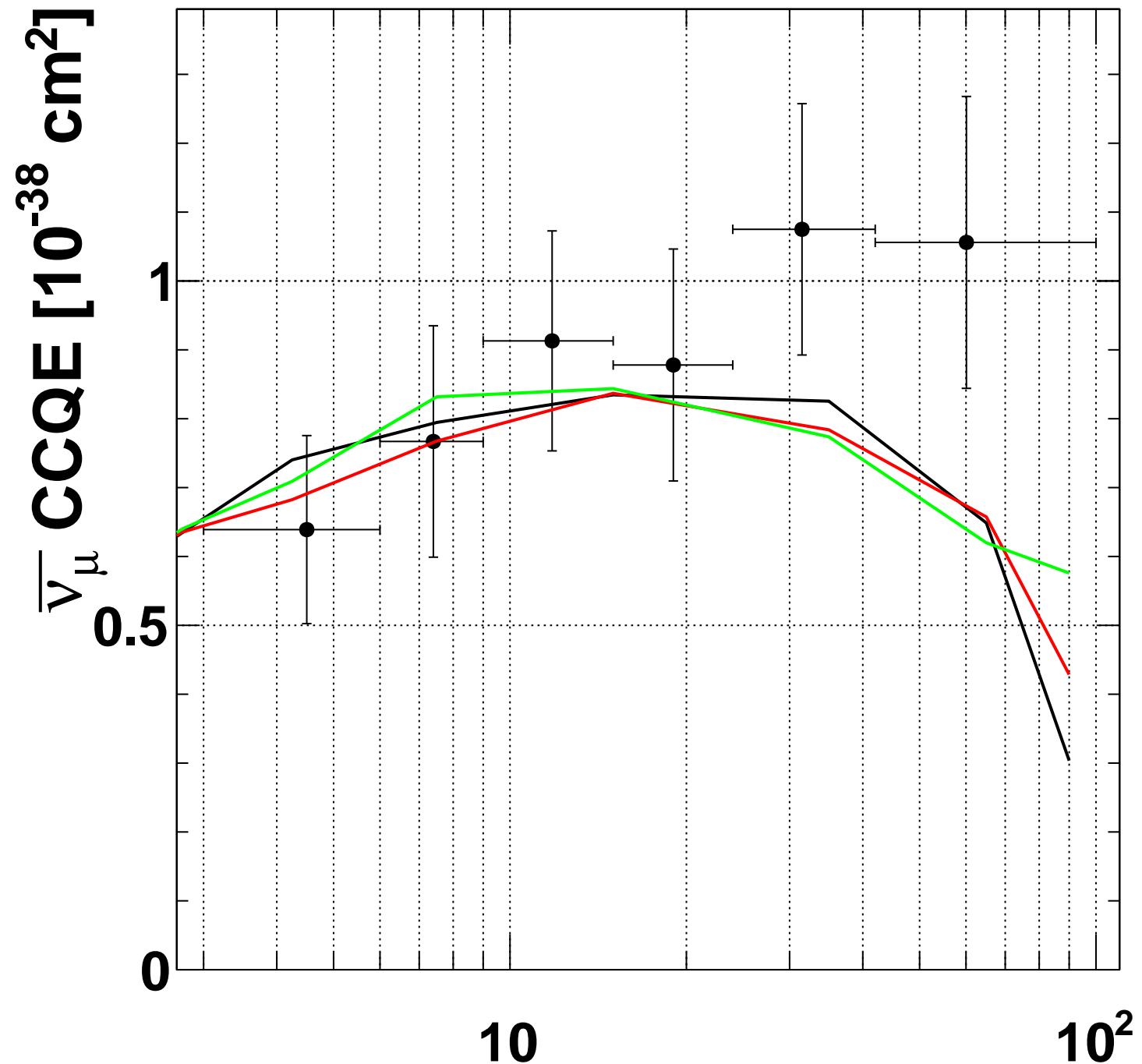


—●— Gargamelle,5 [Armenise et al., Nucl.Phys.B152:365 (1979)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 25.1/11$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 26/11$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 25.4/11$ DoF

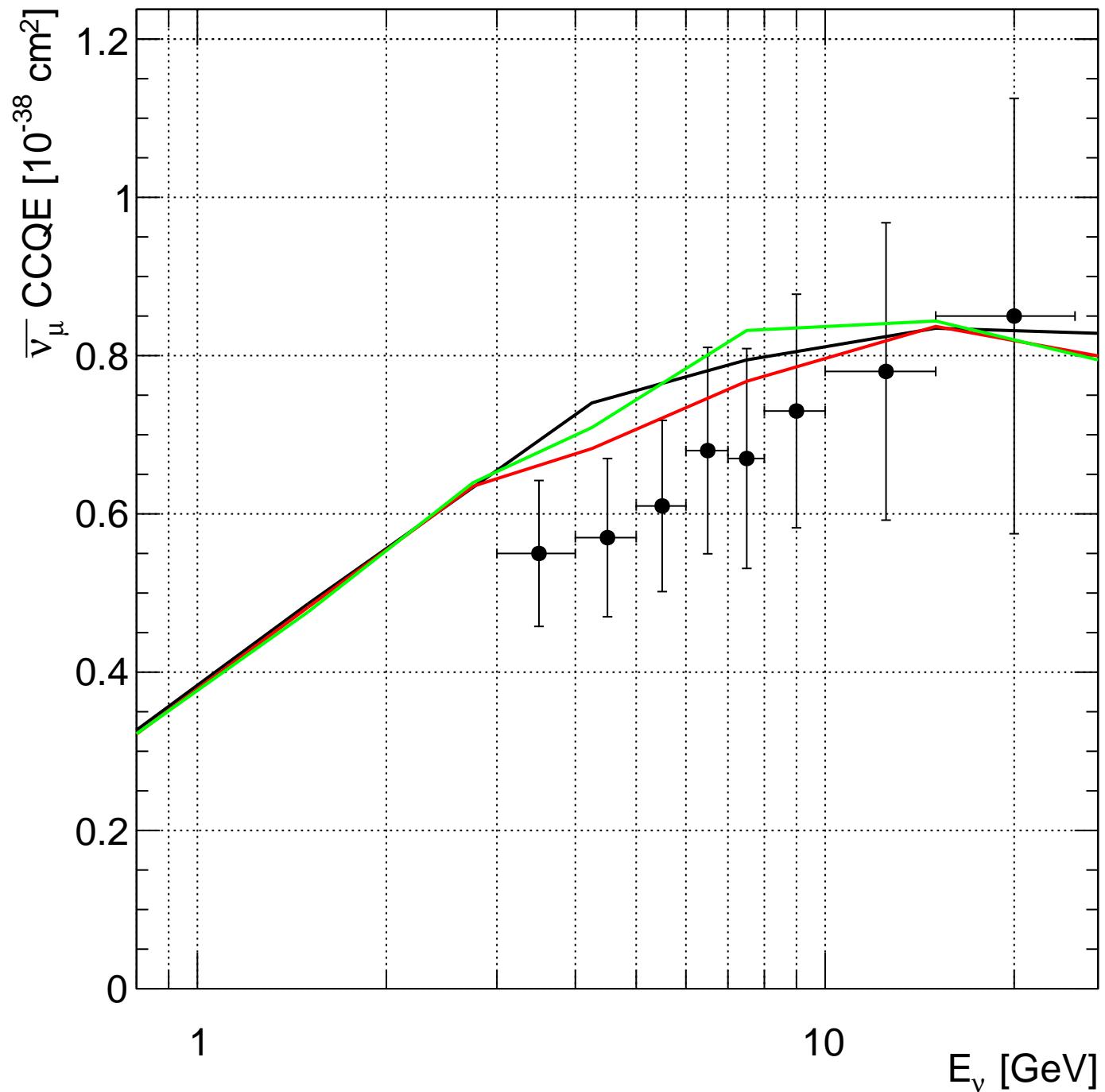


NOMAD,3 [Lyubushkin et al., Eur.Phys.J.C63:355 (2009)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 10.3/6$ DoF

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 8.97/6$ DoF

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 7.86/6$ DoF

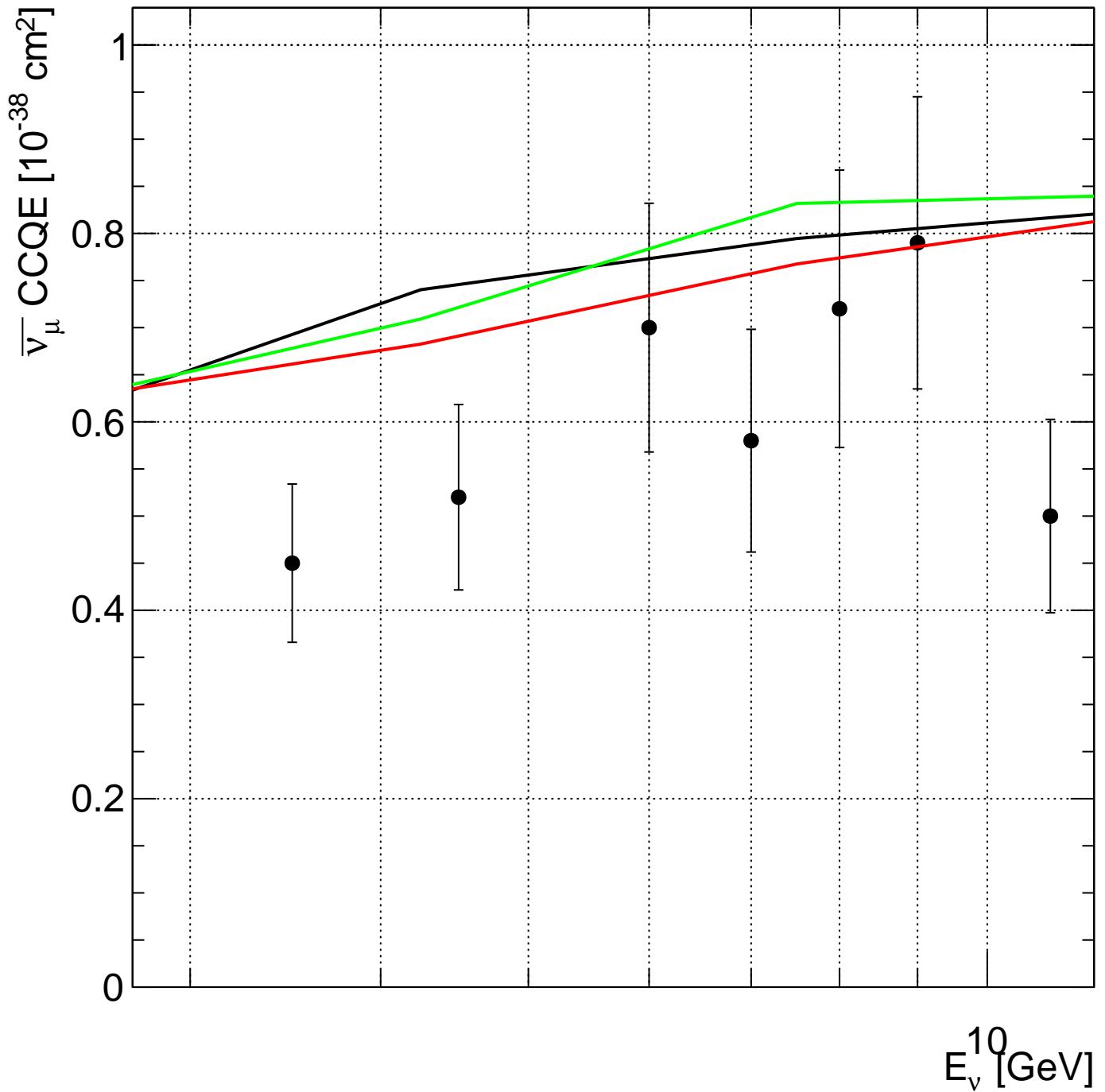


— SERP_A1,2 [Belikov et al., Z.Phys.A320:625 (1985)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 8.63/8$ DoF

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 4.44/8$ DoF

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 8/8$ DoF



— SKAT,9 [Bruner et al., Zeit.Phys.C45:551 (1990)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 25/7$ DoF

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 22.4/7$ DoF

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 23/7$ DoF

Dataset:
numuCCnpi+_noPCut

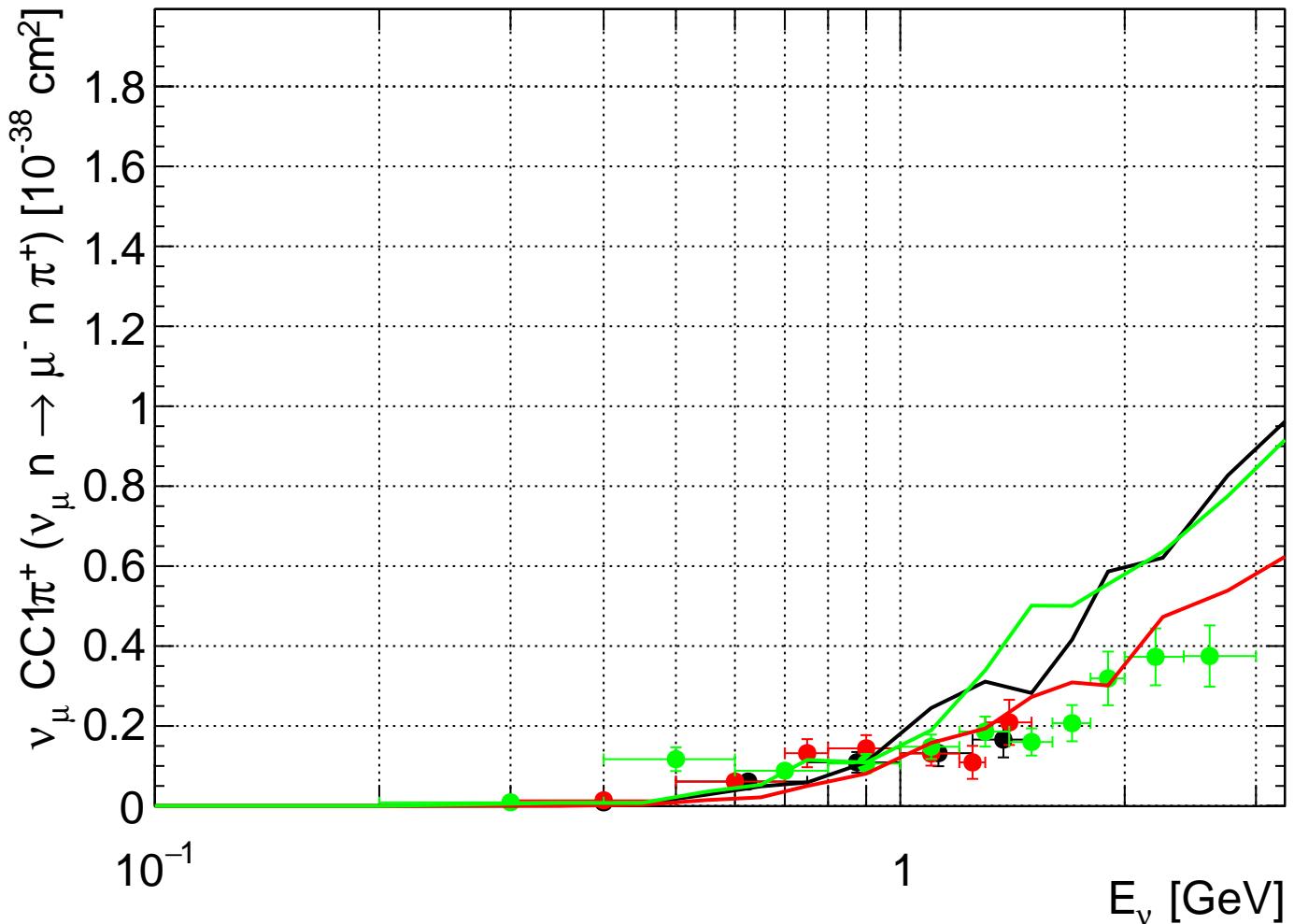
Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 184 / 23$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 99.9 / 23$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 110 / 23$ DoF

Subsets:
ANL_12FT,10 [Radecky et al., Phys.Rev.D25:1161 (1982)]
5 DoF, $\chi^2 = 26.3 \text{ 14.9 } 8.61$

ANL_12FT_ReAna,2 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]
7 DoF, $\chi^2 = 50.8 \text{ 28.7 } 32.7$

BNL_7FT_ReAna,2 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]
11 DoF, $\chi^2 = 106 \text{ 56.2 } 68.3$

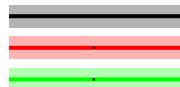
2018/11/01 20:54:27



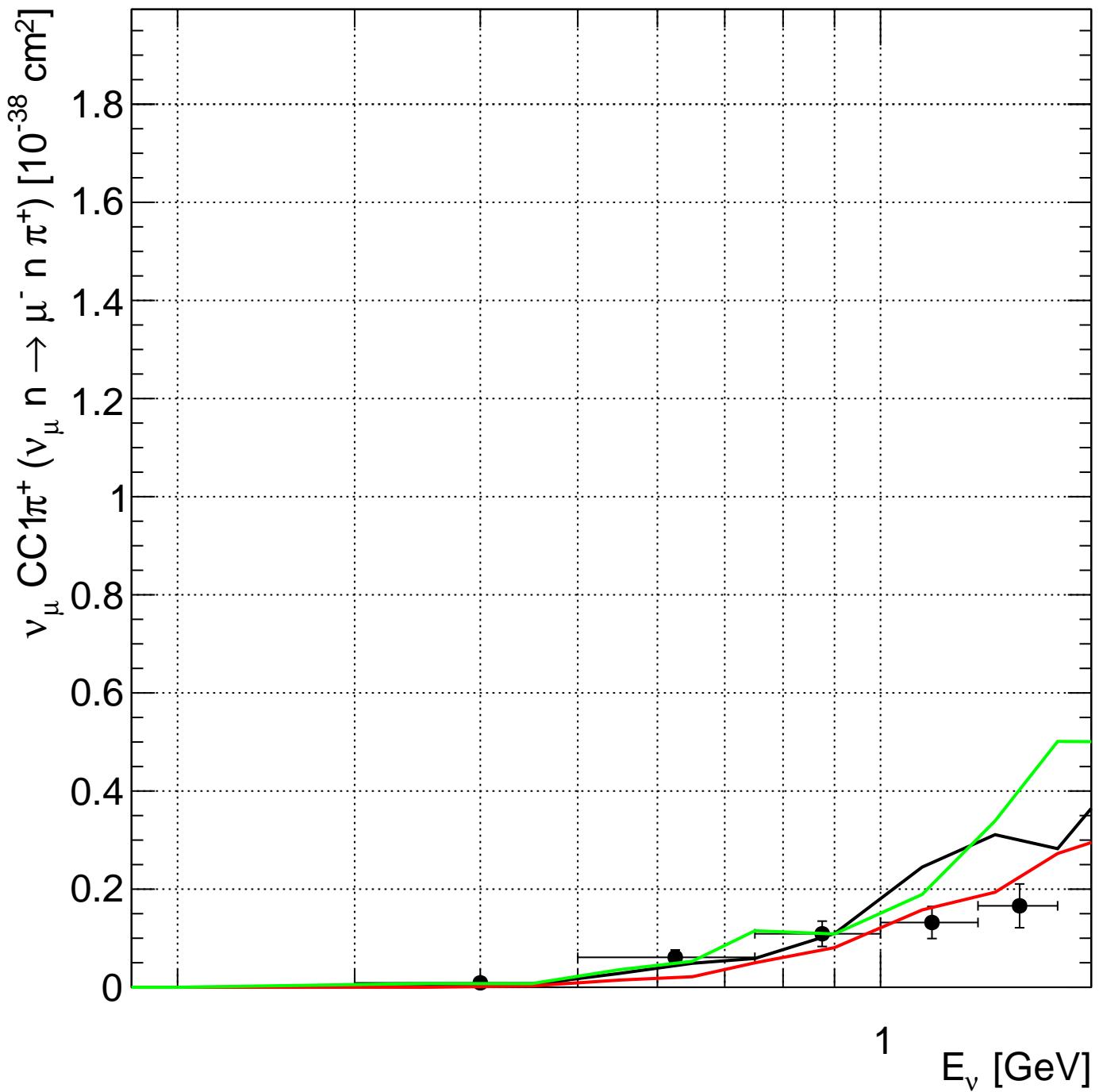
ANL_12FT,10 [Radecky et al., Phys.Rev.D25:1161 (1982)]

ANL_12FT_ReAna.2 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]

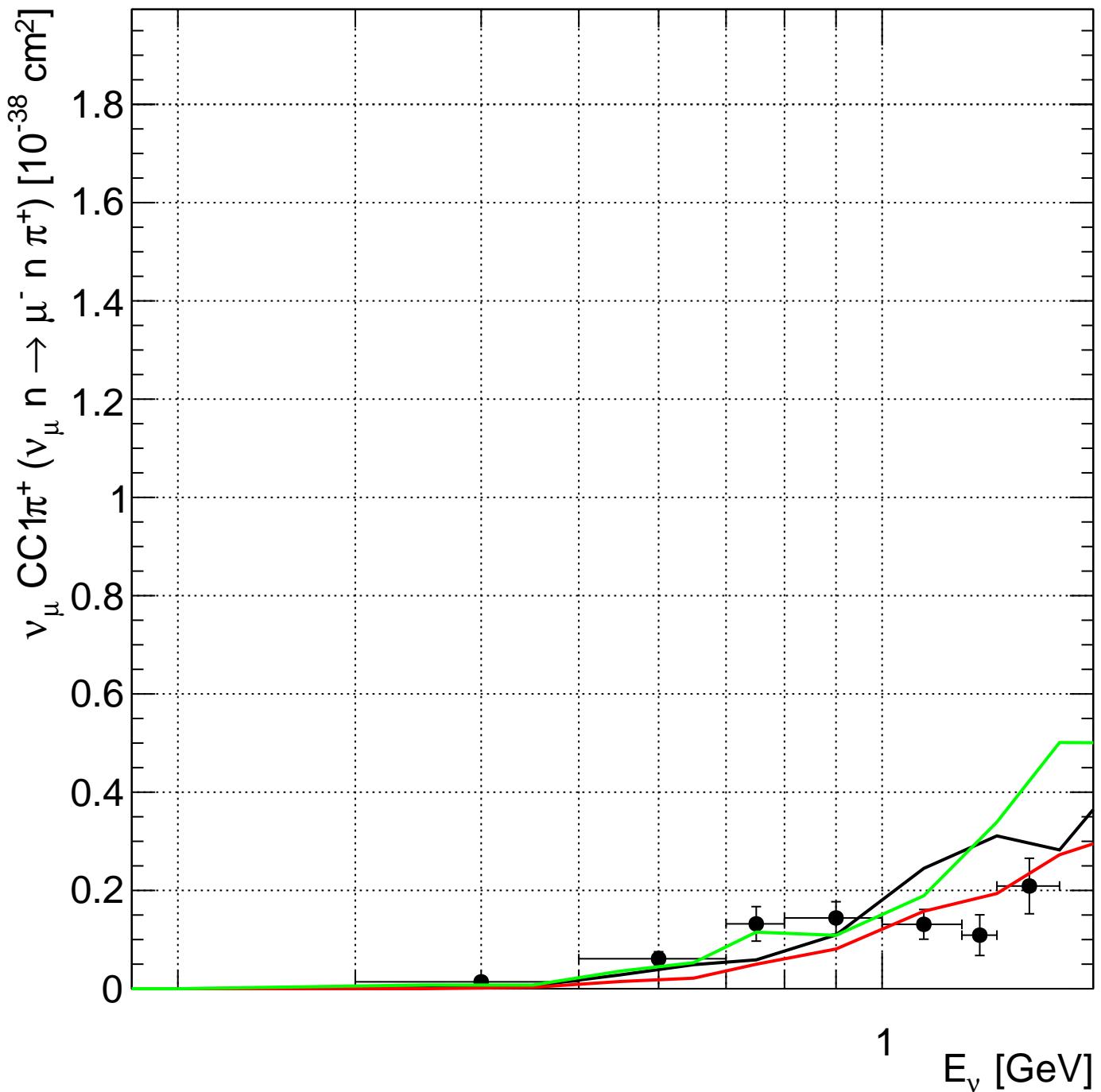
BNL_7FT_ReAna.2 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]



v3.0.0:G18_02a_00_000:numu_freenuc
 v3.0.0:G18_02a_02_11a:numu_freenuc
 v3.0.0:G18_10j_00_000:numu_freenuc



- ANL_12FT,10 [Radecky et al., Phys.Rev.D25:1161 (1982)]
- v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 26.3/5 \text{ DoF}$
- v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 14.9/5 \text{ DoF}$
- v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 8.61/5 \text{ DoF}$

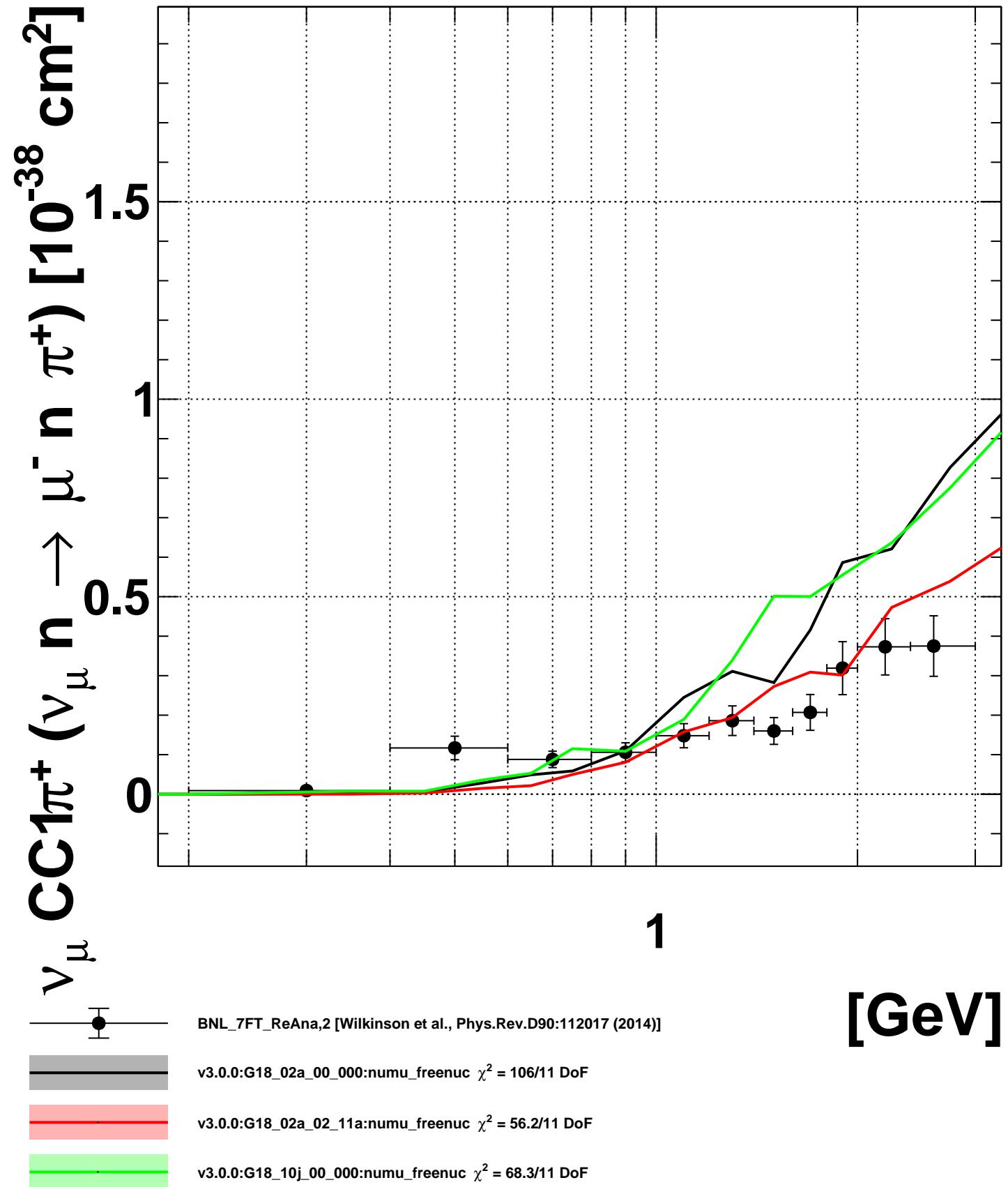


— ANL_12FT_ReAna,2 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]

— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 50.8/7 \text{ DoF}$

— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 28.7/7 \text{ DoF}$

— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 32.7/7 \text{ DoF}$



Dataset:

numuCCnpi+_SKAT,7

Grabosch et al., Zeit.Phys.C41:527 (1988)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 97.8 / 5 \text{ DoF}$

v3.0.0/G18_02a_02_11a $\chi^2 = 22 / 5 \text{ DoF}$

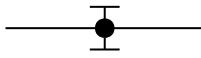
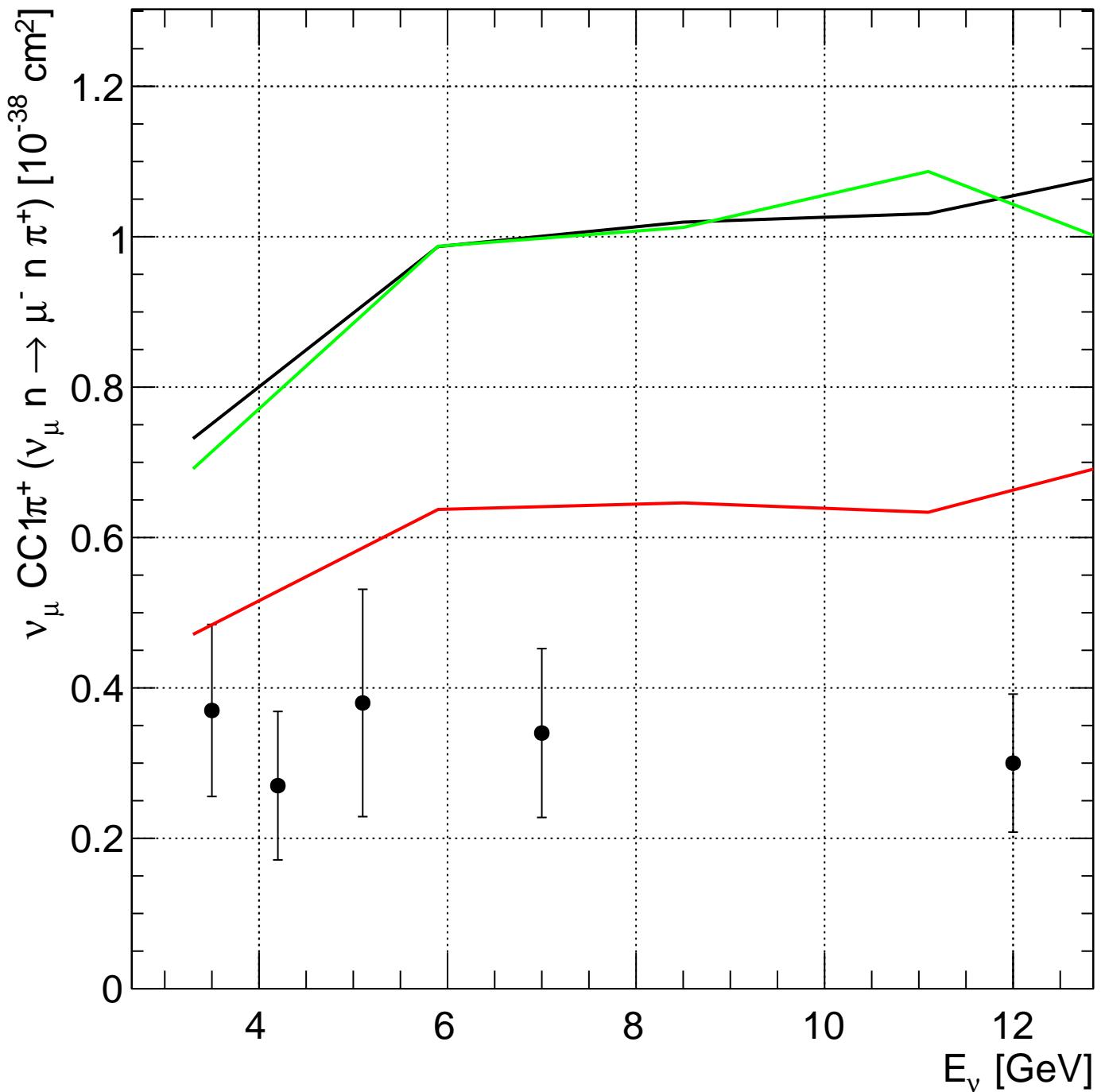
v3.0.0/G18_10j_00_000 $\chi^2 = 94.1 / 5 \text{ DoF}$

Subset:

numuCCnpi+_SKAT,7 [Grabosch et al., Zeit.Phys.C41:527 (1988)]

5 DoF, $\chi^2 = 97.8 \text{ } \color{red}{22} \text{ } \color{green}{94.1}$

2018/11/01 20:54:27



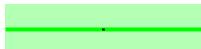
numuCCnpi+_SKAT,7 [Grabosch et al., Zeit.Phys.C41:527 (1988)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 97.8/5$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 22/5$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 94.1/5$ DoF

Dataset:
numuCCppi+_noWcut

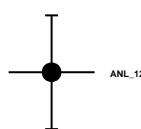
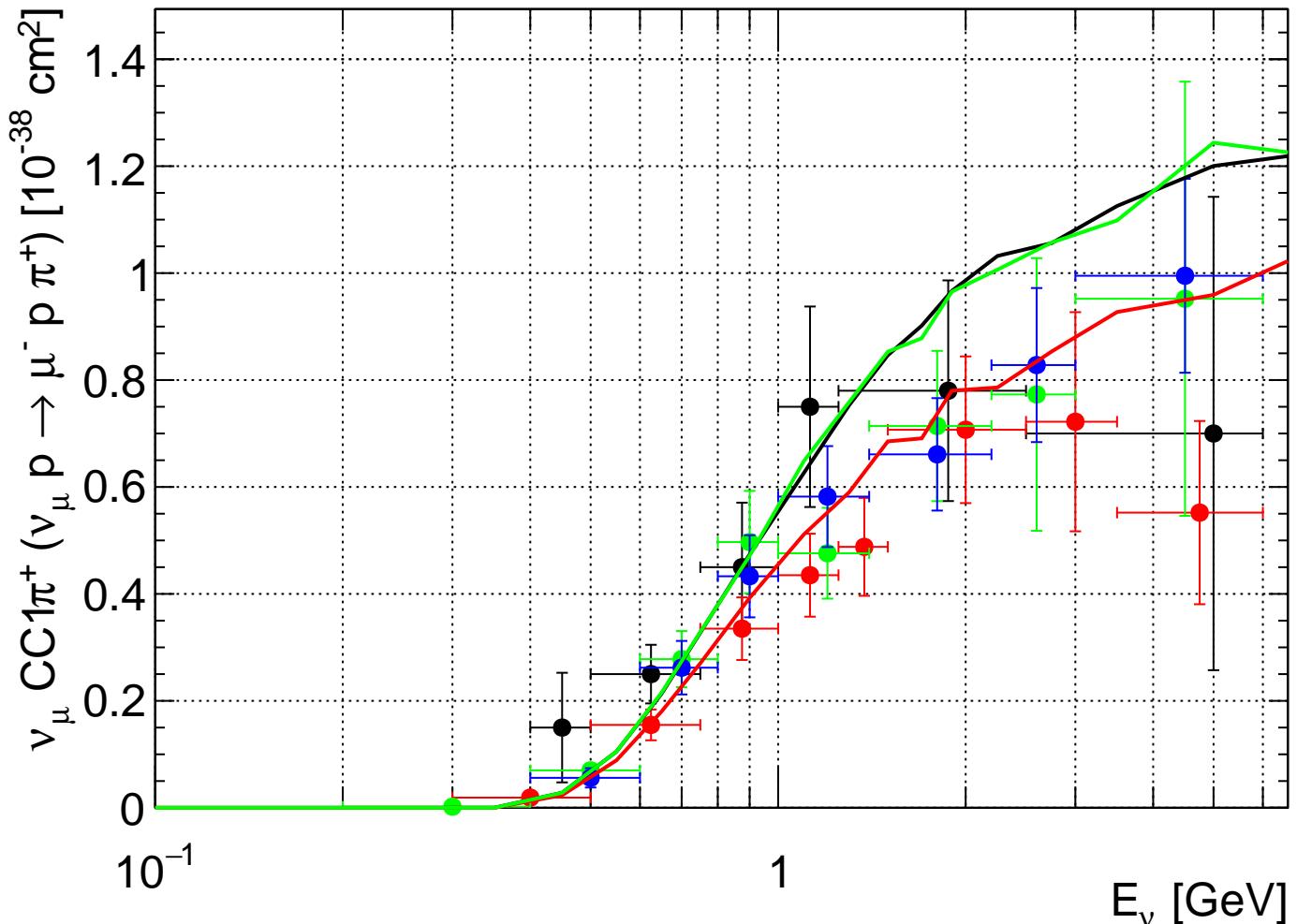
Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 71.3 / 29$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 37.1 / 29$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 70.5 / 29$ DoF

Subsets:
ANL_12FT,0 [Campbell et al., Phys.Rev.Lett.30:335(1973)]
6 DoF, $\chi^2 = 7.06 \text{ 6.66 6.84}$

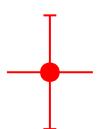
ANL_12FT,8 [Radecky et al., Phys.Rev.D25:1161 (1982)]
8 DoF, $\chi^2 = 30.4 \text{ 14.8 31.7}$

ANL_12FT_ReAna,0 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]
8 DoF, $\chi^2 = 19.4 \text{ 9.85 20.6}$

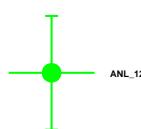
BNL_7FT_ReAna,0 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]
7 DoF, $\chi^2 = 14.4 \text{ 5.73 11.4}$



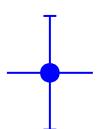
ANL_12FT,0 [Campbell et al., Phys.Rev.Lett.30:335(1973)]



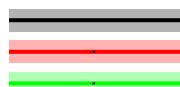
ANL_12FT,8 [Radecky et al., Phys.Rev.D25:1161 (1982)]



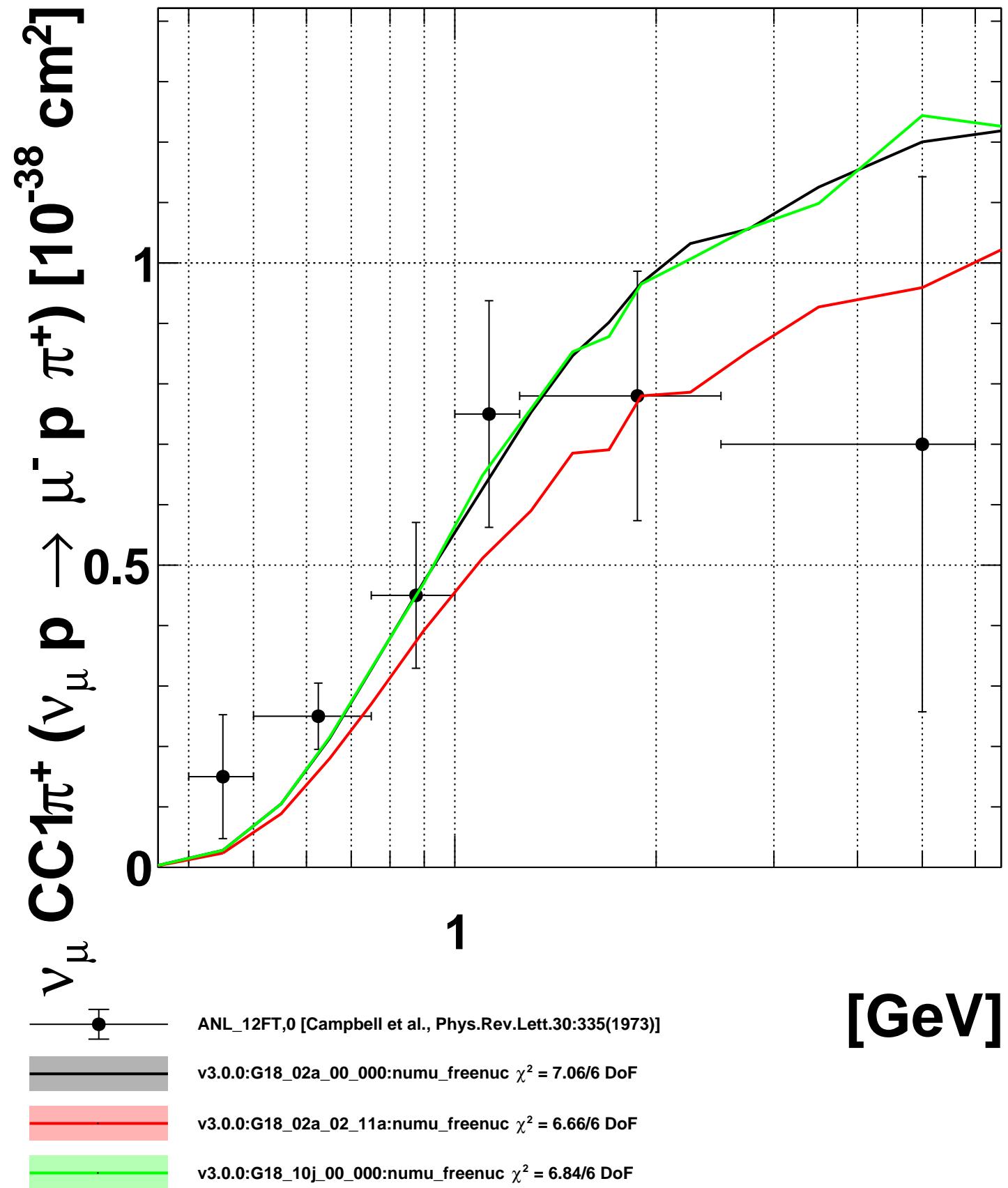
ANL_12FT_ReAna,0 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]

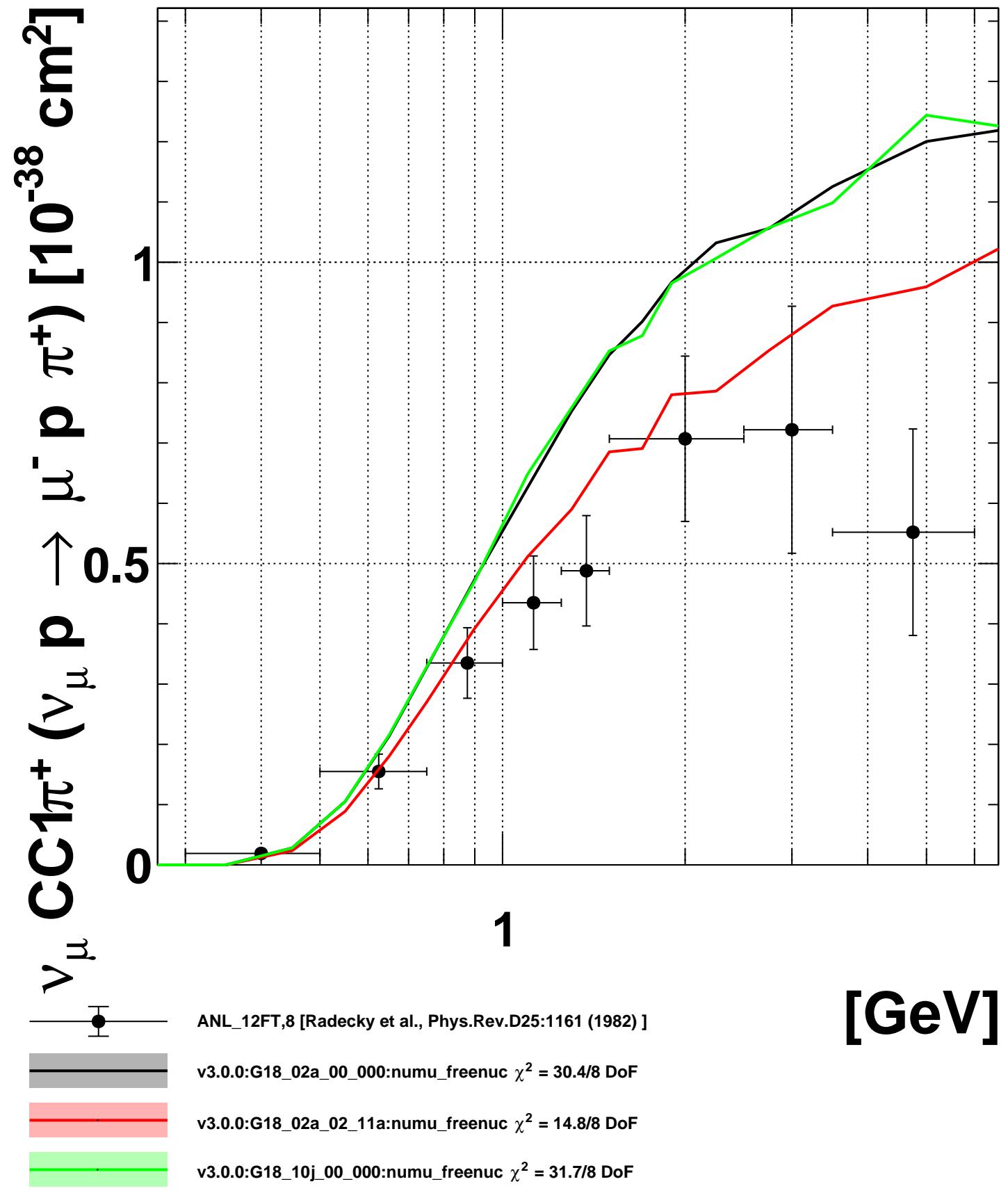


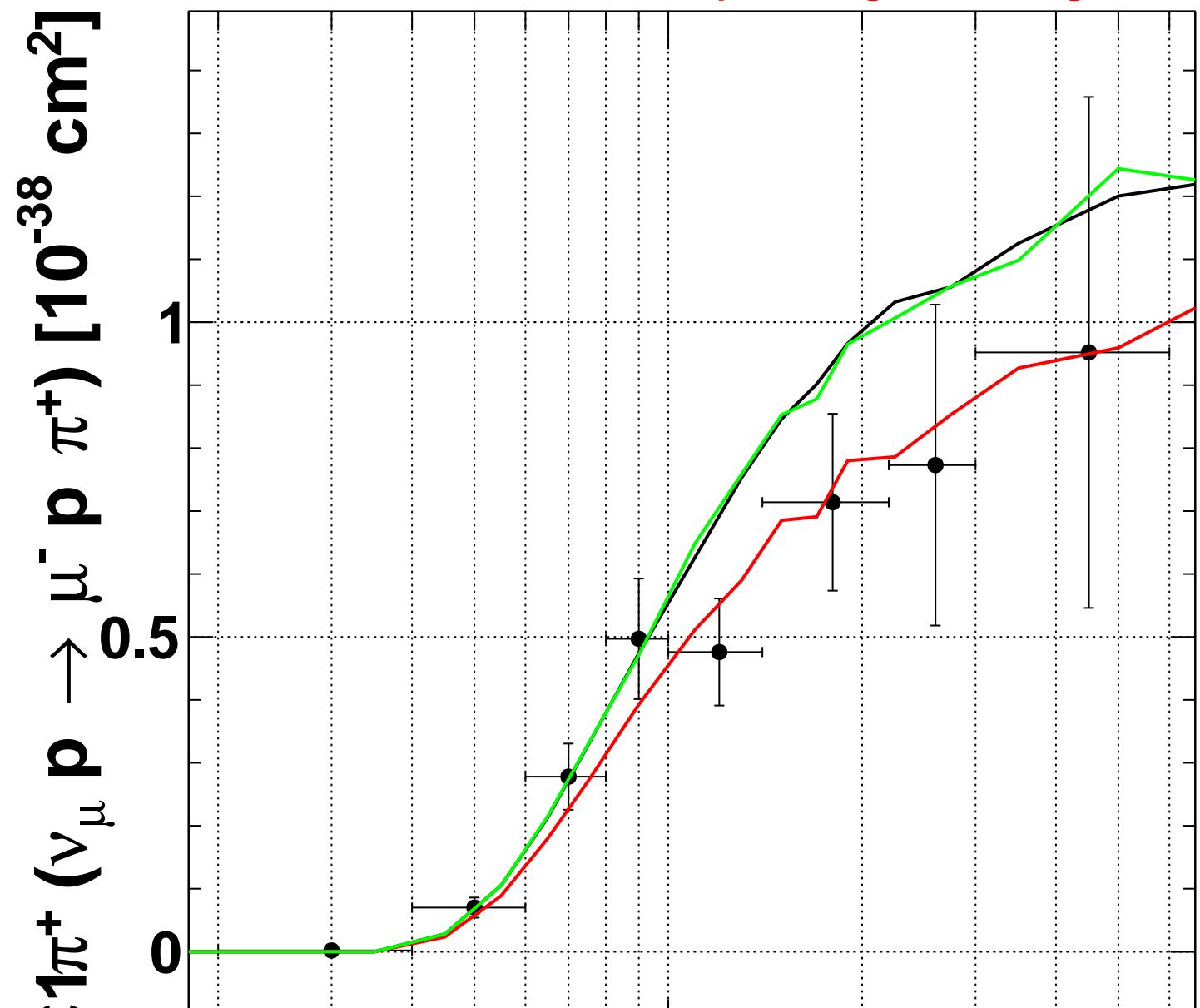
BNL_7FT_ReAna,0 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]



- v3.0.0:G18_02a_00_000:numu_freenuc
- v3.0.0:G18_02a_02_11a:numu_freenuc
- v3.0.0:G18_10j_00_000:numu_freenuc







ANL_12FT_ReAna,0 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]



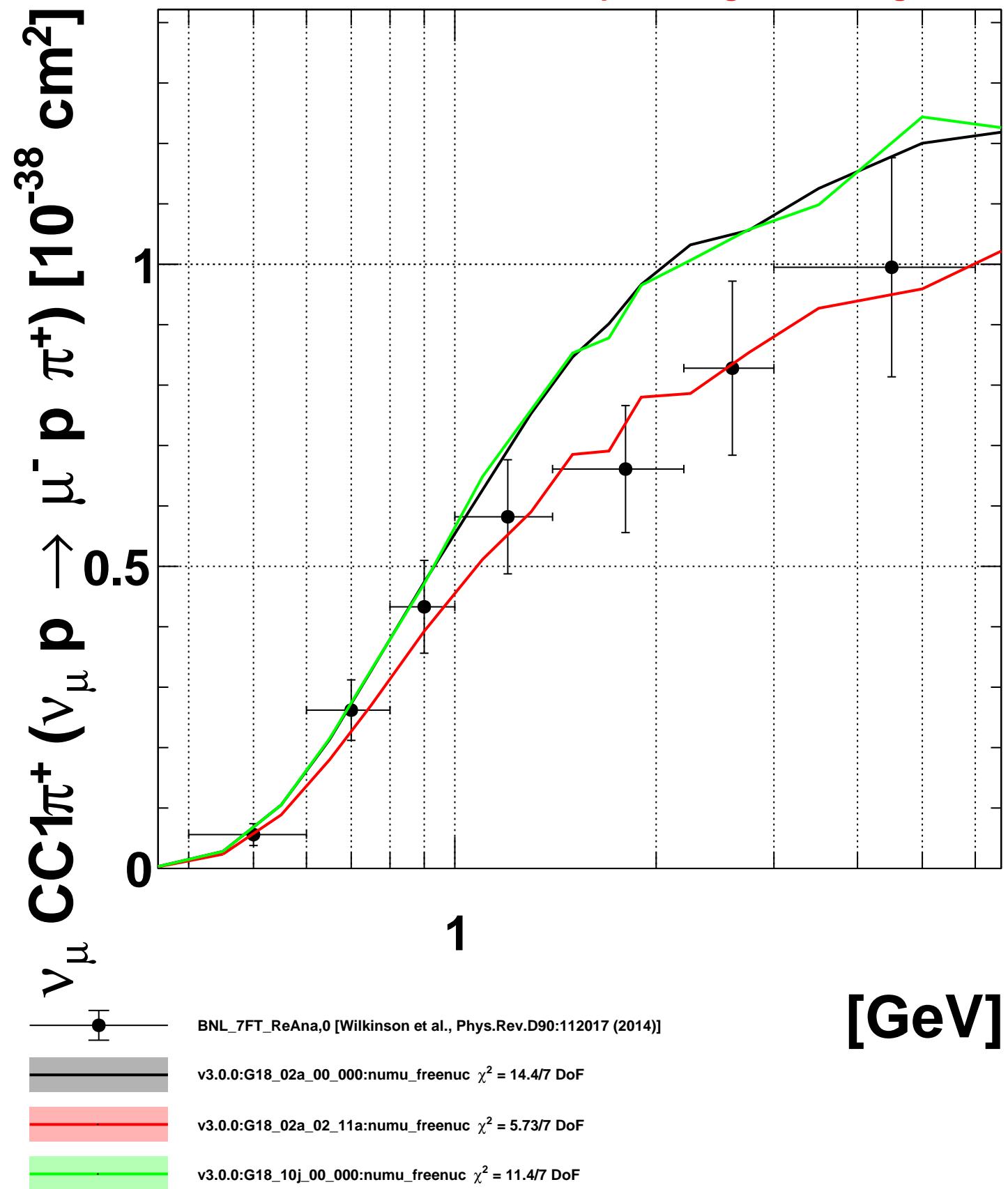
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 19.4/8$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 9.85/8$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 20.6/8$ DoF



Dataset:
numuCCppi+_Wcut1.4

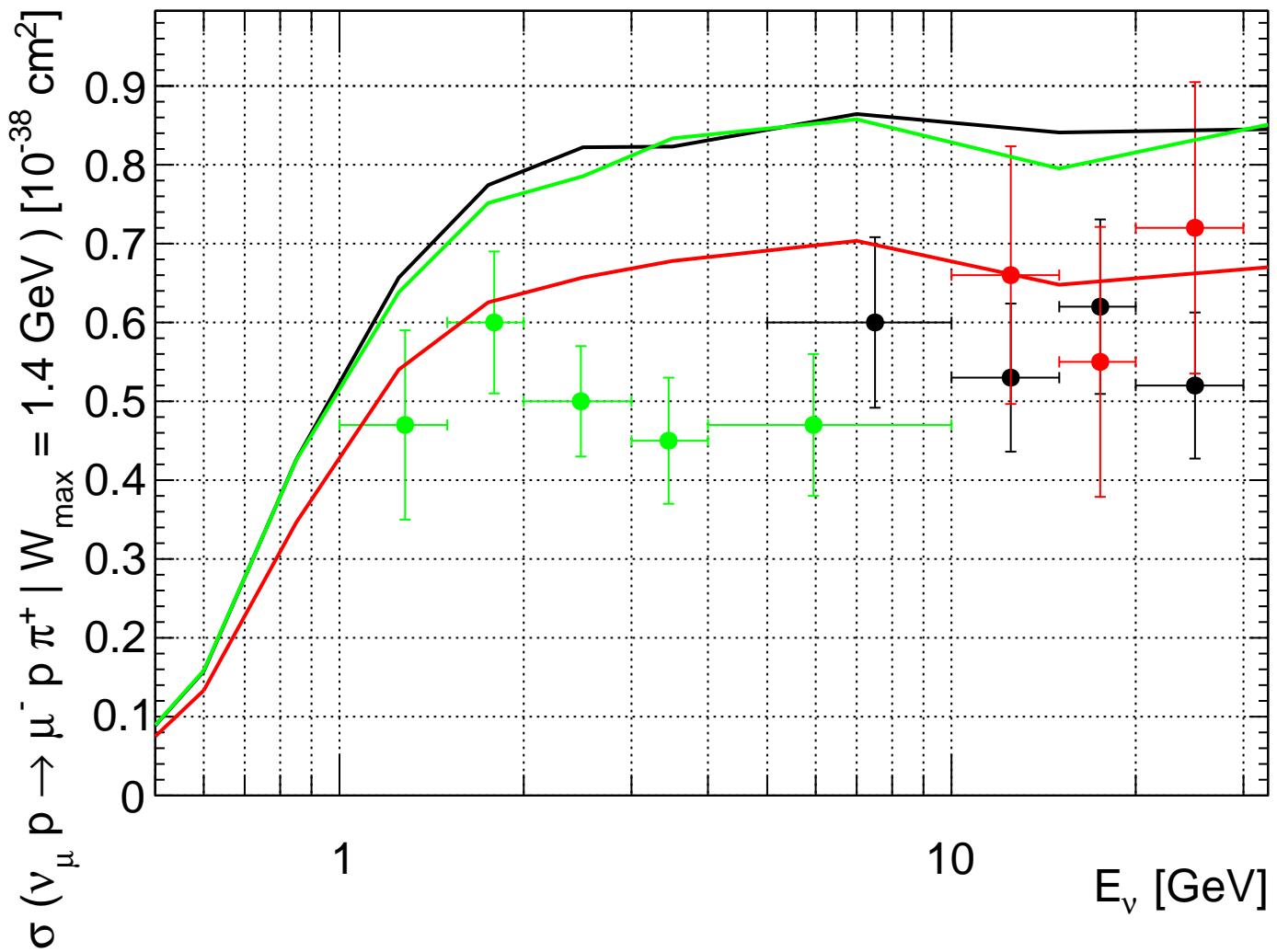
Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 84.1 / 12 \text{ DoF}$
v3.0.0/G18_02a_02_11a $\chi^2 = 24.8 / 12 \text{ DoF}$
v3.0.0/G18_10j_00_000 $\chi^2 = 67.1 / 12 \text{ DoF}$

Subsets:
BEBC,4 [Allen et al., Nucl.Phys.B176:269 (1980)]
4 DoF, $\chi^2 = 15.5 \quad 4.72 \quad 13.8$

FNAL_15FT,0 [Bell et al., Phys.Rev.Lett.41:1008 (1978)]
3 DoF, $\chi^2 = 3.34 \quad 0.58 \quad 2.28$

Gargamelle,4 [Lerche et al., Phys.Lett.B78:510 (1978)]
5 DoF, $\chi^2 = 65.3 \quad 19.5 \quad 51$

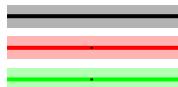
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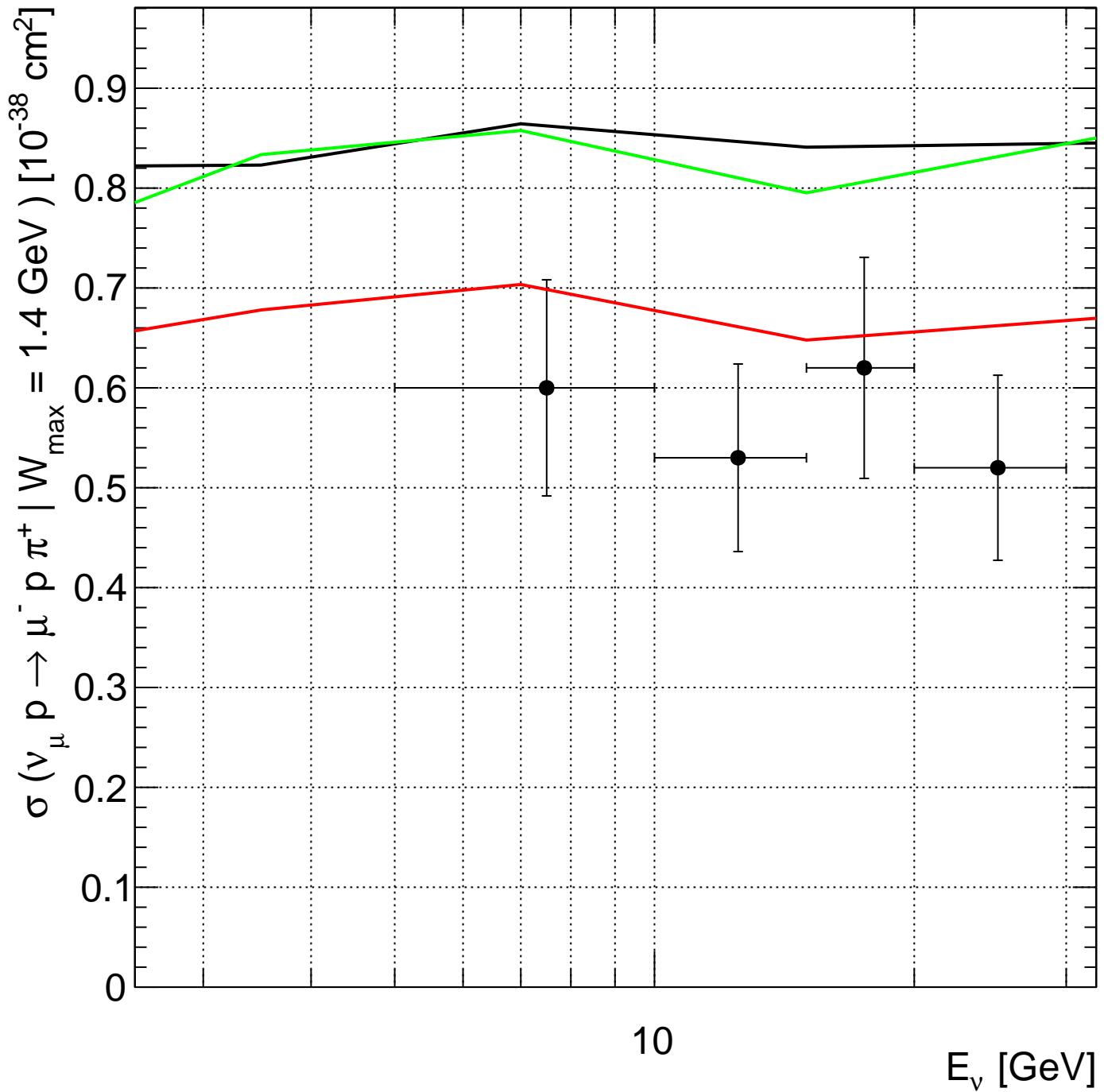
BEBC,4 [Allen et al., Nucl.Phys.B176:269 (1980)]

FNAL_15FT,0 [Bell et al., Phys.Rev.Lett.41:1008 (1978)]

Gargamelle,4 [Lerche et al., Phys.Lett.B78:510 (1978)]



- v3.0.0:G18_02a_00_000:numu_freenuc
- v3.0.0:G18_02a_02_11a:numu_freenuc
- v3.0.0:G18_10j_00_000:numu_freenuc

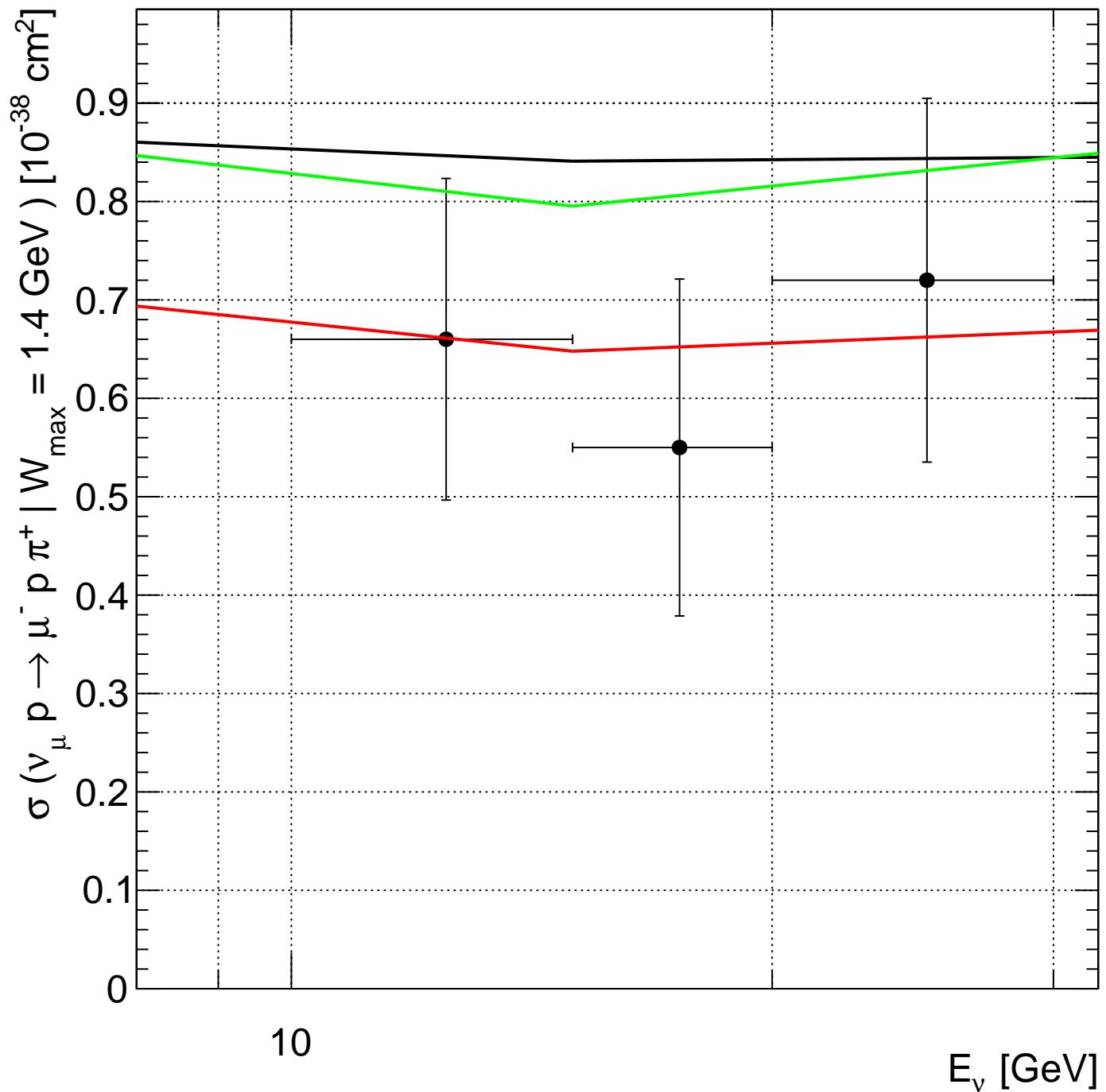


—●— BEBC,4 [Allen et al., Nucl.Phys.B176:269 (1980)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 15.5/4 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 4.72/4 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 13.8/4 \text{ DoF}$

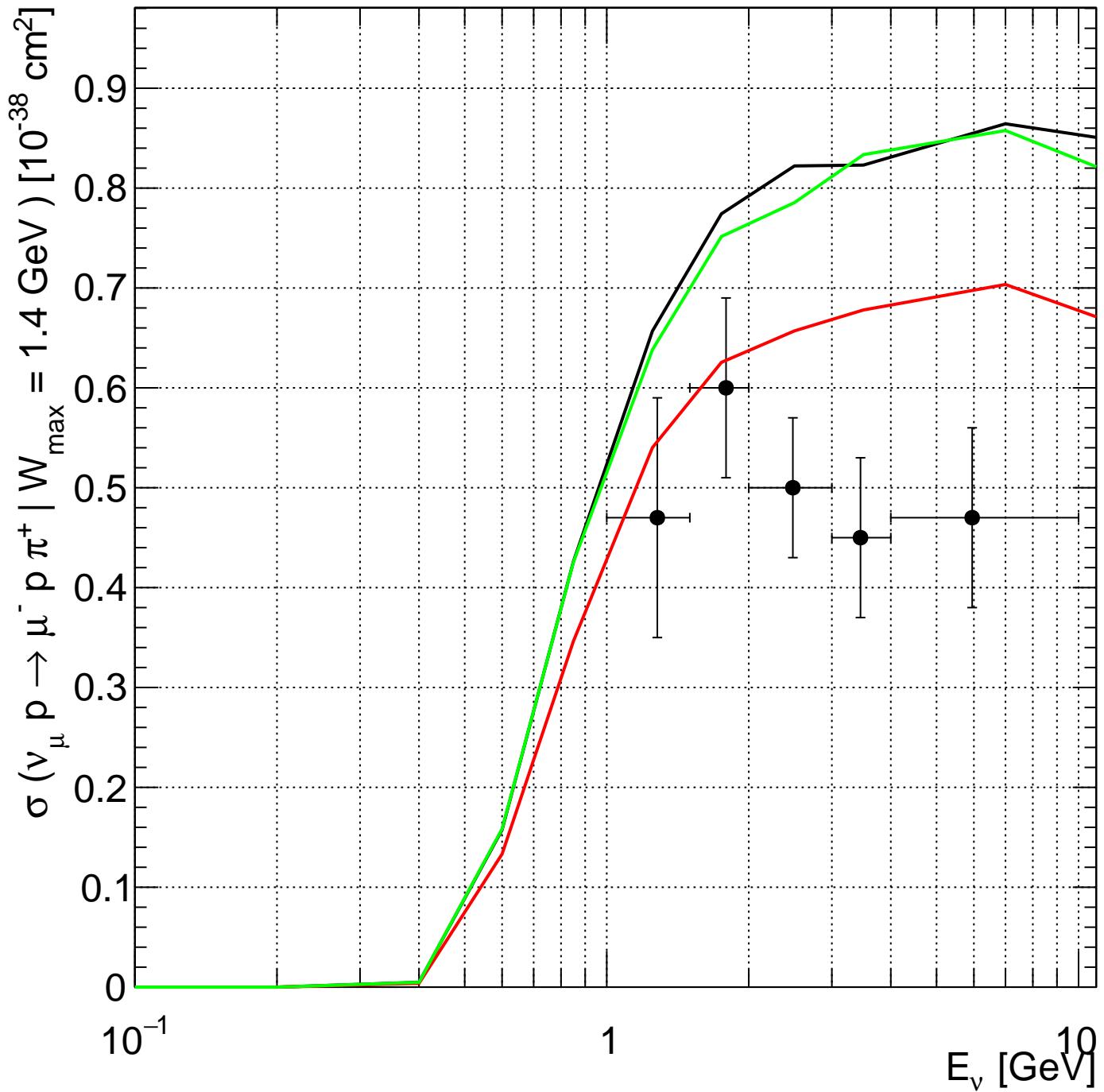


FNAL_15FT,0 [Bell et al., Phys.Rev.Lett.41:1008 (1978)]

v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 3.34/3 \text{ DoF}$

v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 0.58/3 \text{ DoF}$

v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 2.28/3 \text{ DoF}$



—●— Gargamelle,4 [Lerche et al., Phys.Lett.B78:510 (1978)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 65.3/5$ DoF

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 19.5/5$ DoF

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 51/5$ DoF

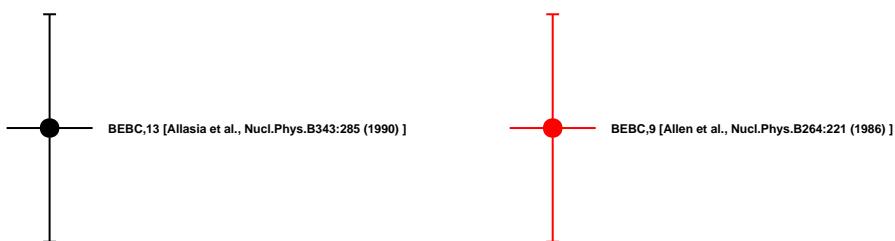
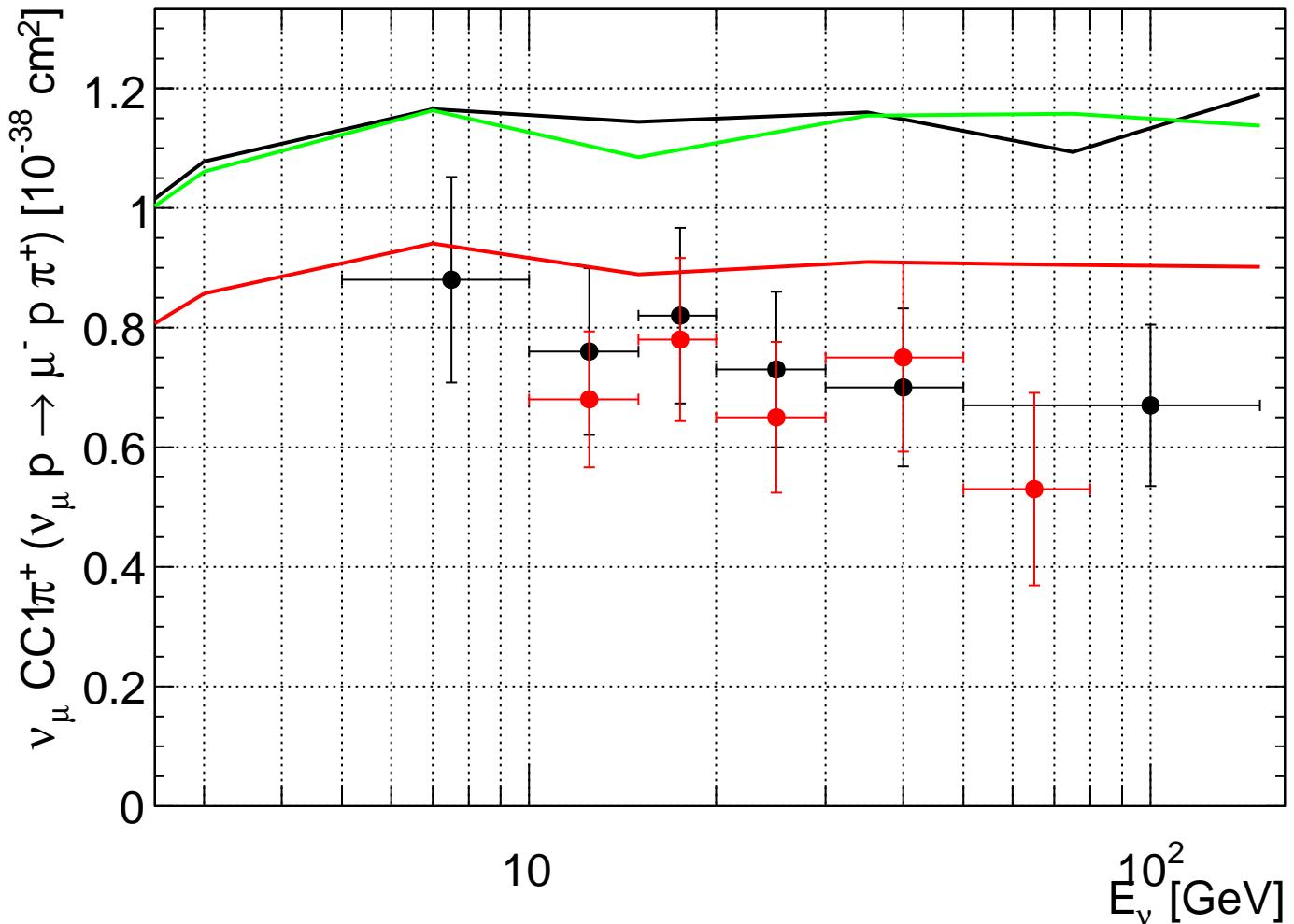
Dataset:
numuCCppi+_Wcut2

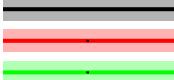
Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 41.6 / 11$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 15.6 / 11$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 41.7 / 11$ DoF

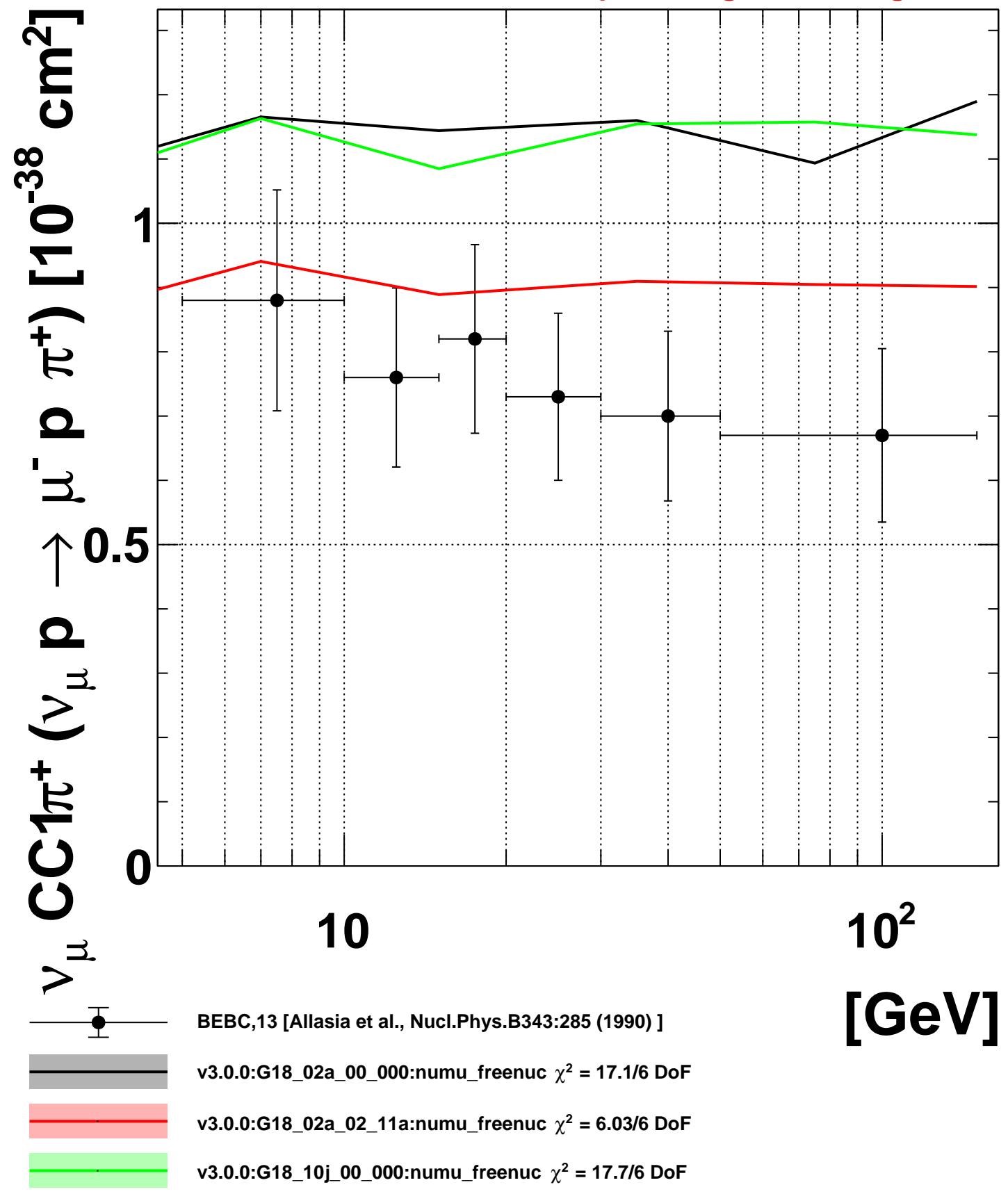
Subsets:
BEBC,13 [Allasia et al., Nucl.Phys.B343:285 (1990)]
6 DoF, $\chi^2 = 17.1$ **6.03 **17.7****

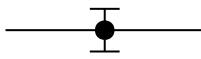
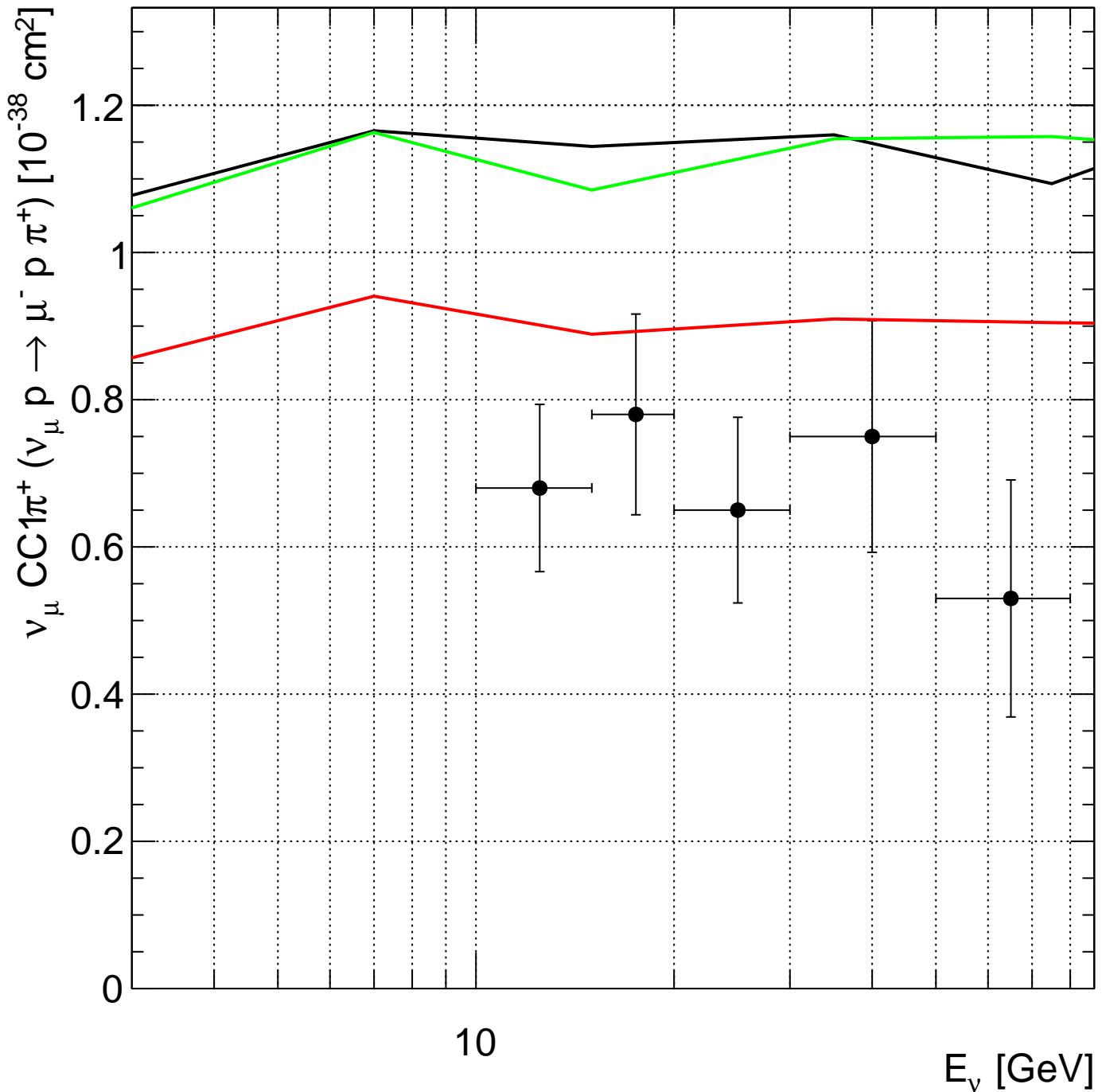
BEBC,9 [Allen et al., Nucl.Phys.B264:221 (1986)]
5 DoF, $\chi^2 = 24.5$ **9.55 **24****

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 v3.0.0:G18_02a_00_000:numu_freenuc
 v3.0.0:G18_02a_02_11a:numu_freenuc
 v3.0.0:G18_10j_00_000:numu_freenuc





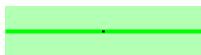
BEBC,9 [Allen et al., Nucl.Phys.B264:221 (1986)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 24.5/5 \text{ DoF}$



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 9.55/5 \text{ DoF}$



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 24/5 \text{ DoF}$

E_ν [GeV]

Dataset:

numuCCppi+_SKAT,4

Ammosov et al., Sov.J.Nucl.Phys.50:67 (1988)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 10.1 / 5$ DoF

v3.0.0/G18_02a_02_11a $\chi^2 = 4.7 / 5$ DoF

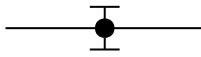
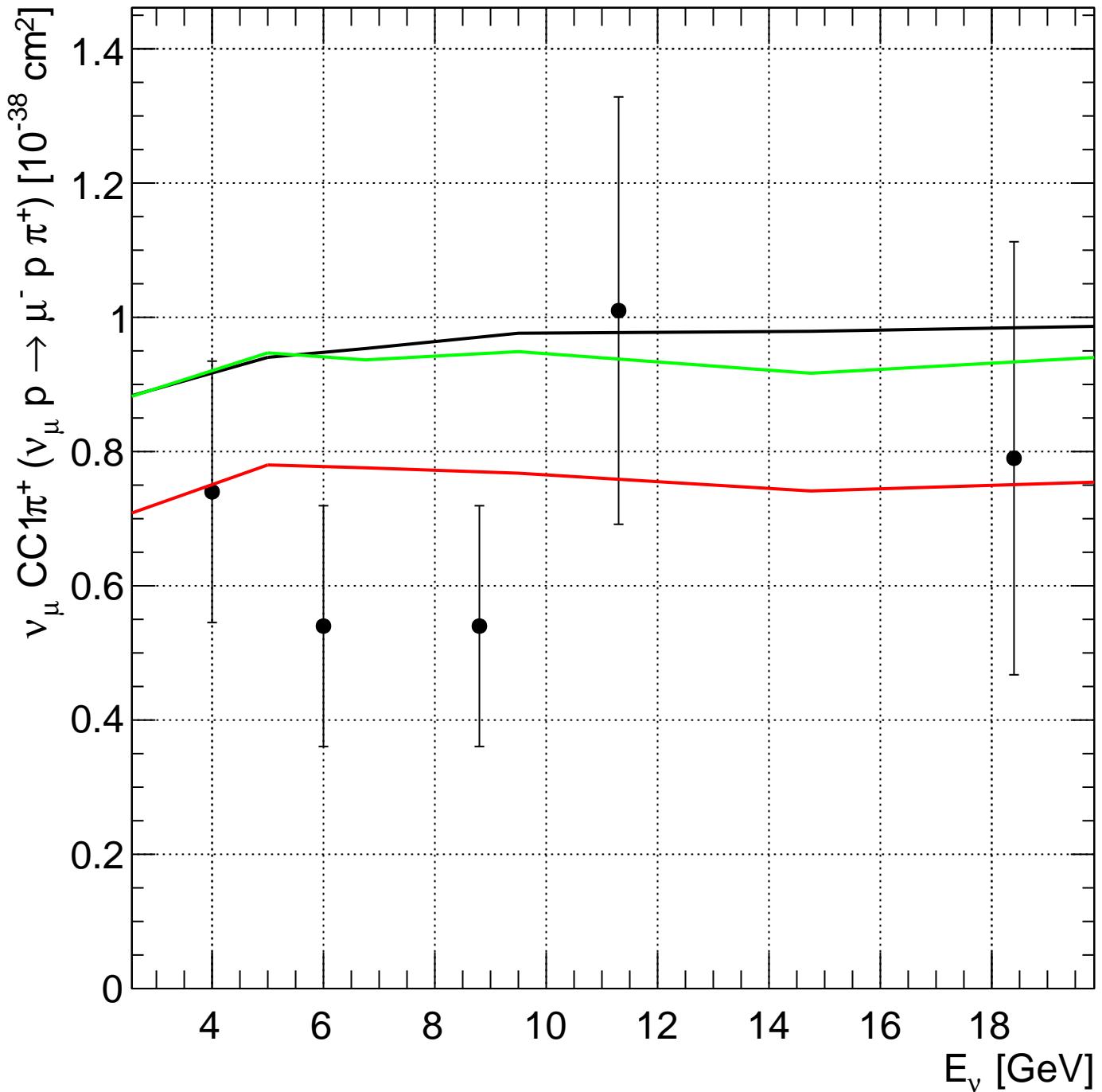
v3.0.0/G18_10j_00_000 $\chi^2 = 9.59 / 5$ DoF

Subset:

numuCCppi+_SKAT,4 [Ammosov et al., Sov.J.Nucl.Phys.50:67 (1988)]

5 DoF, $\chi^2 = 10.1 \text{ } \color{red}{4.7} \text{ } \color{green}{9.59}$

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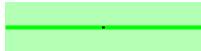
numuCCppi+_SKAT,4 [Ammosov et al., Sov.J.Nucl.Phys.50:67 (1988)]



v3.0.0:G18_02a_00_000:nu_μ_freenuc $\chi^2 = 10.1/5$ DoF



v3.0.0:G18_02a_02_11a:nu_μ_freenuc $\chi^2 = 4.7/5$ DoF



v3.0.0:G18_10j_00_000:nu_μ_freenuc $\chi^2 = 9.59/5$ DoF

Dataset:

numuCCppi+_SKAT,5

Grabosch et al., Zeit.Phys.C41:527 (1988)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 10.9 / 5$ DoF

v3.0.0/G18_02a_02_11a $\chi^2 = 4.25 / 5$ DoF

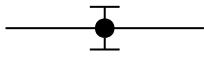
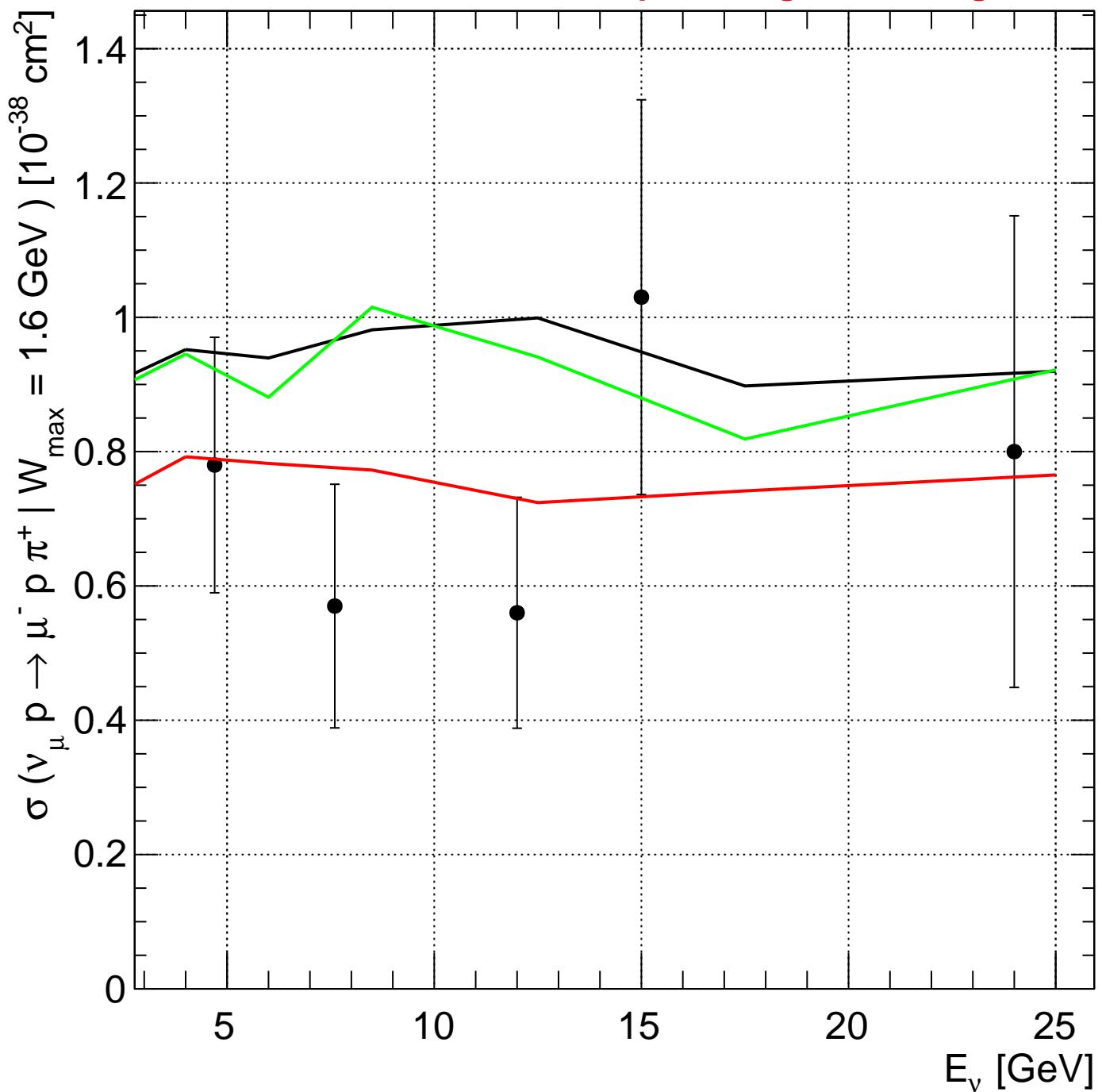
v3.0.0/G18_10j_00_000 $\chi^2 = 10.4 / 5$ DoF

Subset:

numuCCppi+_SKAT,5 [Grabosch et al., Zeit.Phys.C41:527 (1988)]

5 DoF, $\chi^2 = 10.9 \quad 4.25 \quad 10.4$

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numuCCppi+_SKAT,5 [Grabosch et al., Zeit.Phys.C41:527 (1988)]



v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 10.9/5$ DoF



v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 4.25/5$ DoF



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 10.4/5$ DoF

Dataset:
numuCCppi0_noPCut

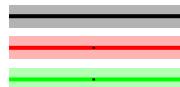
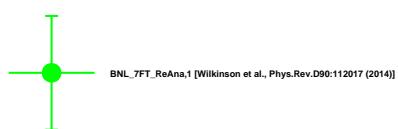
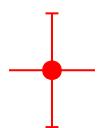
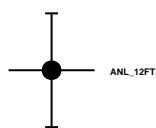
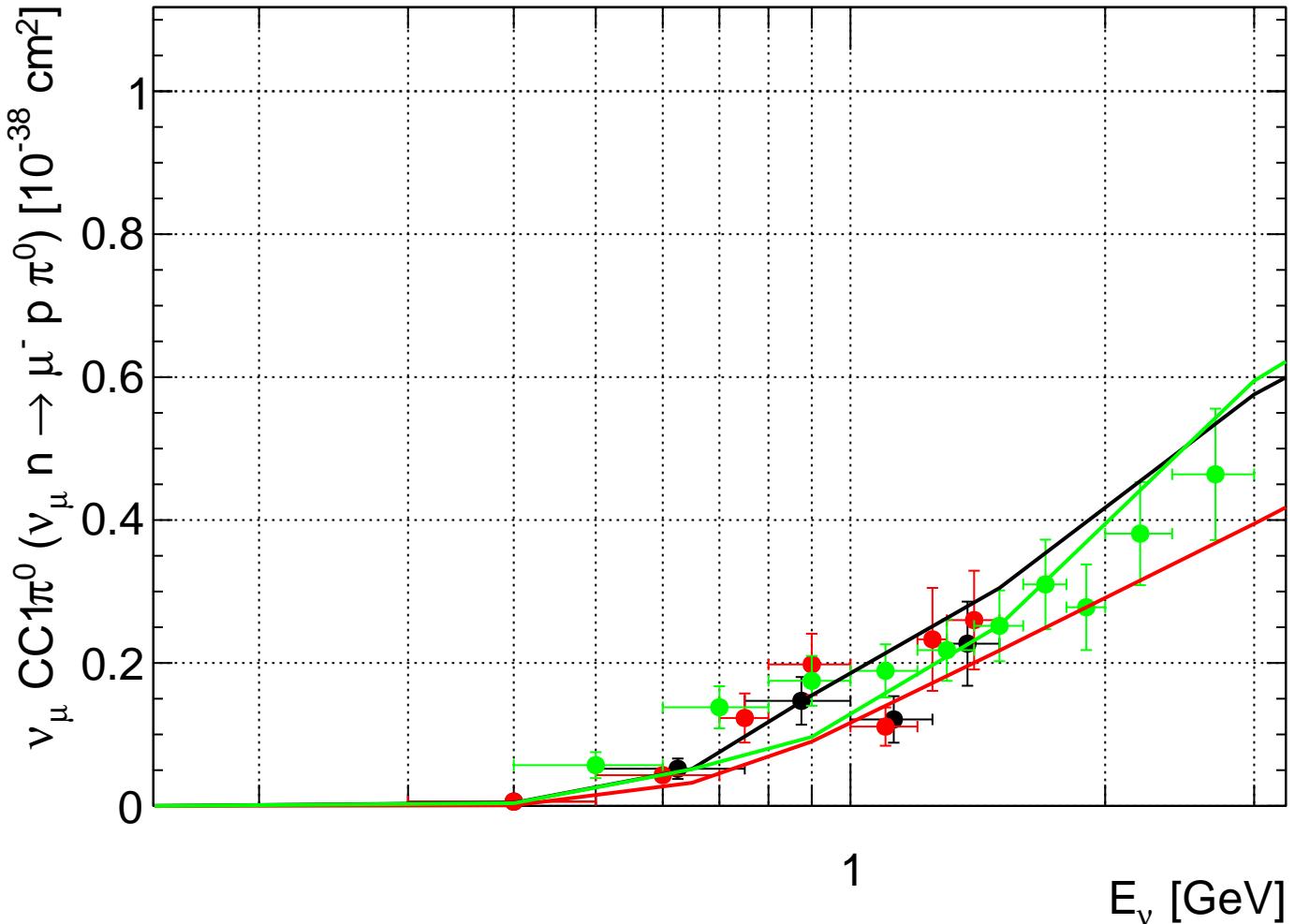
Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 69.6 / 22$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 46.2 / 22$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 47.2 / 22$ DoF

Subsets:
ANL_12FT,9 [Radecky et al., Phys.Rev.D25:1161 (1982)]
5 DoF, $\chi^2 = 9.08 \text{ red} \text{ green}$

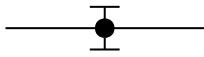
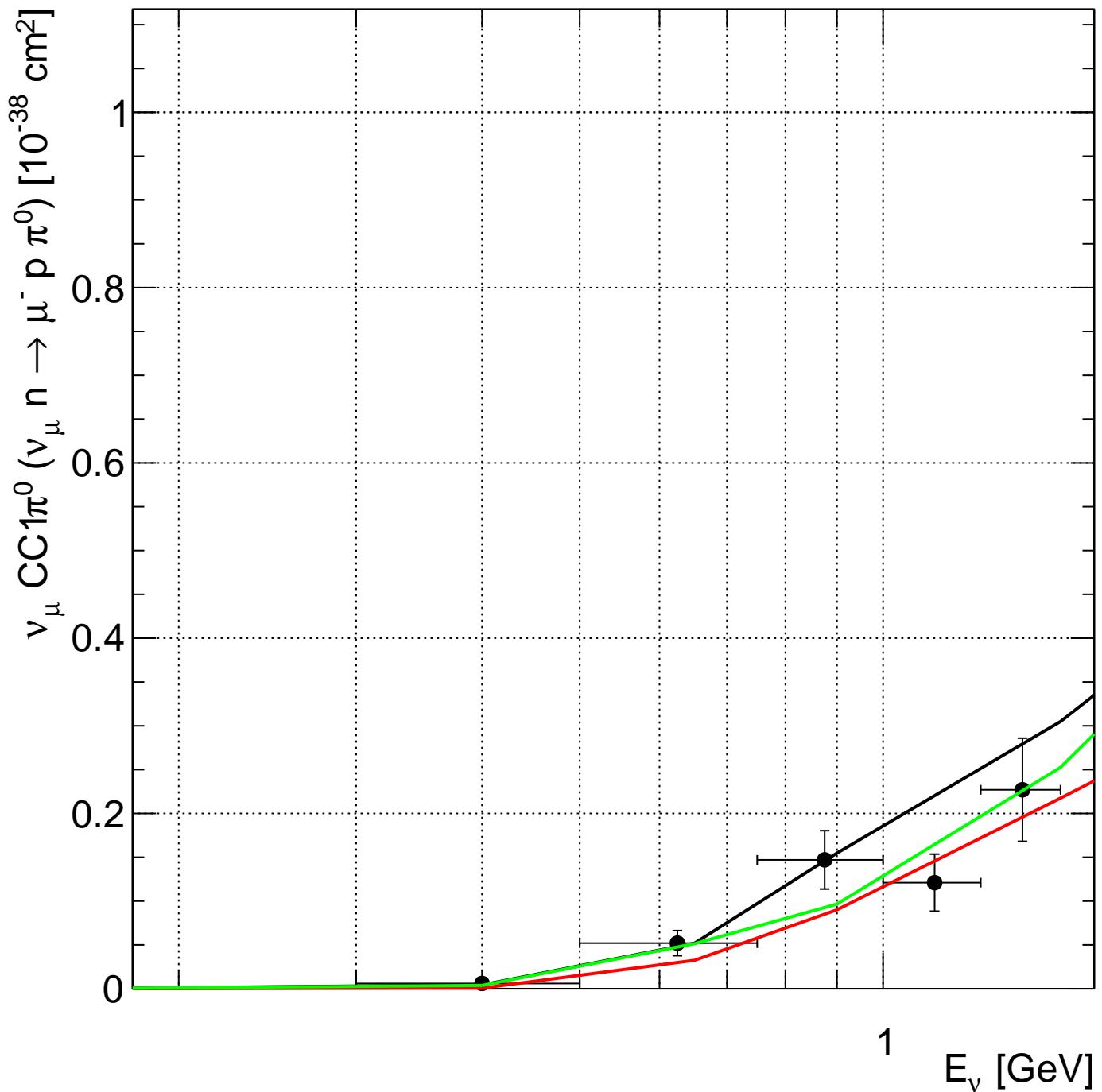
ANL_12FT_ReAna,1 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]
7 DoF, $\chi^2 = 21.8 \text{ red} \text{ green}$

BNL_7FT_ReAna,1 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]
10 DoF, $\chi^2 = 38.7 \text{ red} \text{ green}$

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v3.0.0:G18_02a_00_000:numu_freenuc
 v3.0.0:G18_02a_02_11a:numu_freenuc
 v3.0.0:G18_10j_00_000:numu_freenuc



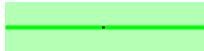
ANL_12FT,9 [Radecky et al., Phys.Rev.D25:1161 (1982)]



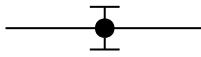
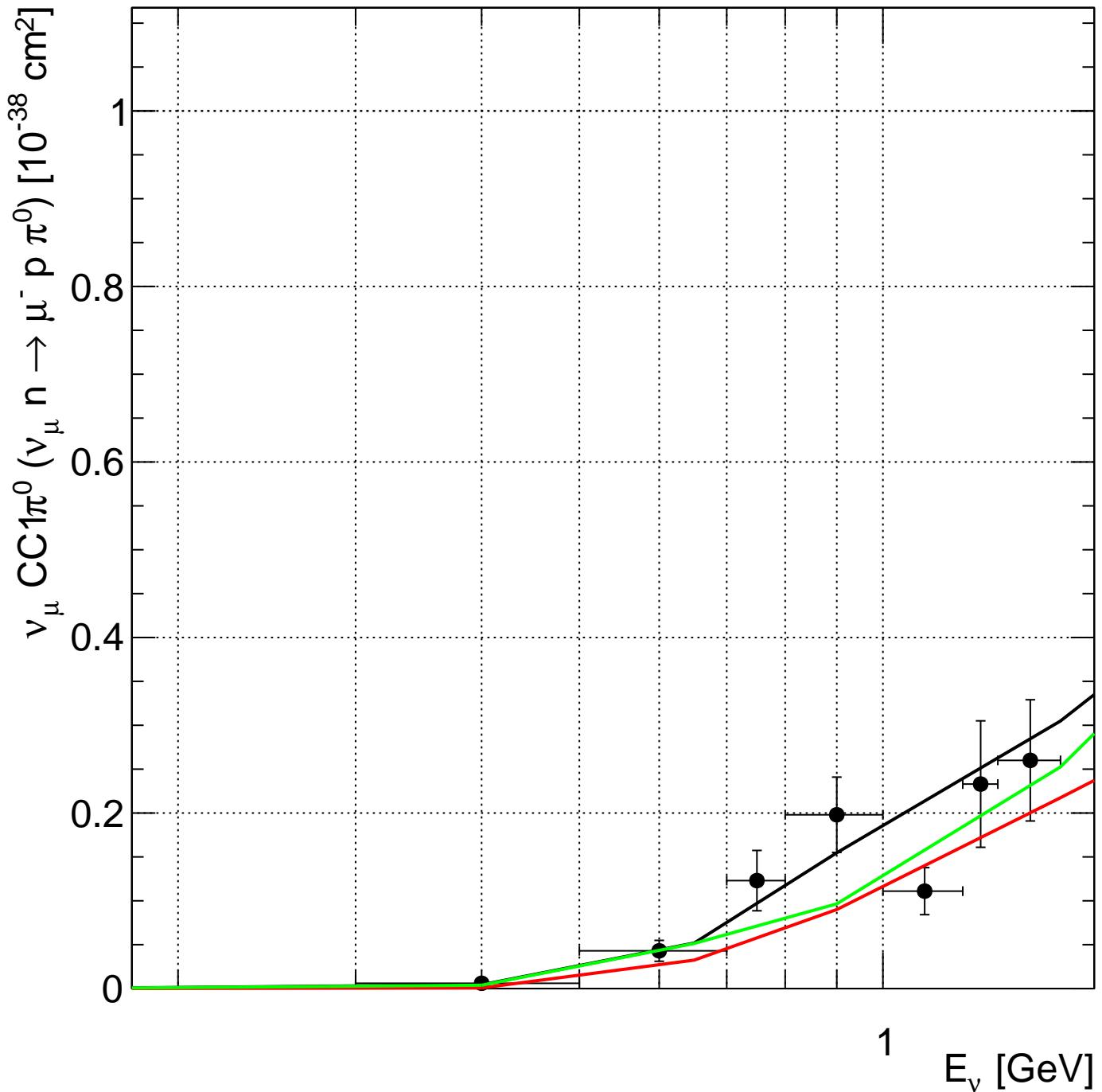
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 9.08/5$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 6.19/5$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 3.27/5$ DoF



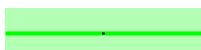
ANL_12FT_ReAna,1 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]



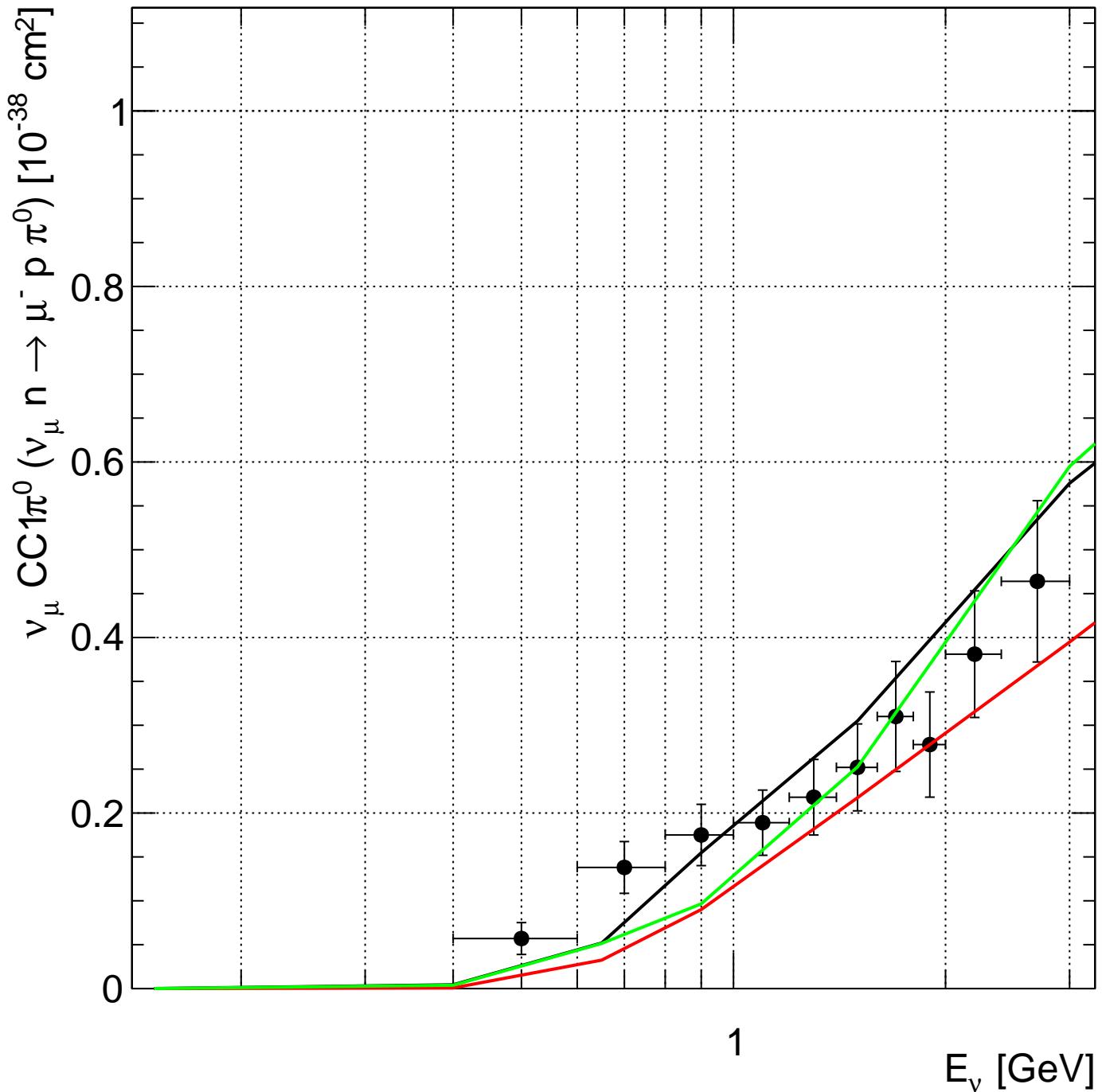
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 21.8/7$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 14.2/7$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 12/7$ DoF



BNL_7FT_ReAna,1 [Wilkinson et al., Phys.Rev.D90:112017 (2014)]

v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 38.7/10 \text{ DoF}$

v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 25.8/10 \text{ DoF}$

v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 32/10 \text{ DoF}$

Dataset:

numuCCppi0_SKAT,6

Grabosch et al., Zeit.Phys.C41:527 (1988)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 55.9 / 6$ DoF

v3.0.0/G18_02a_02_11a $\chi^2 = 15.9 / 6$ DoF

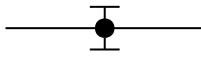
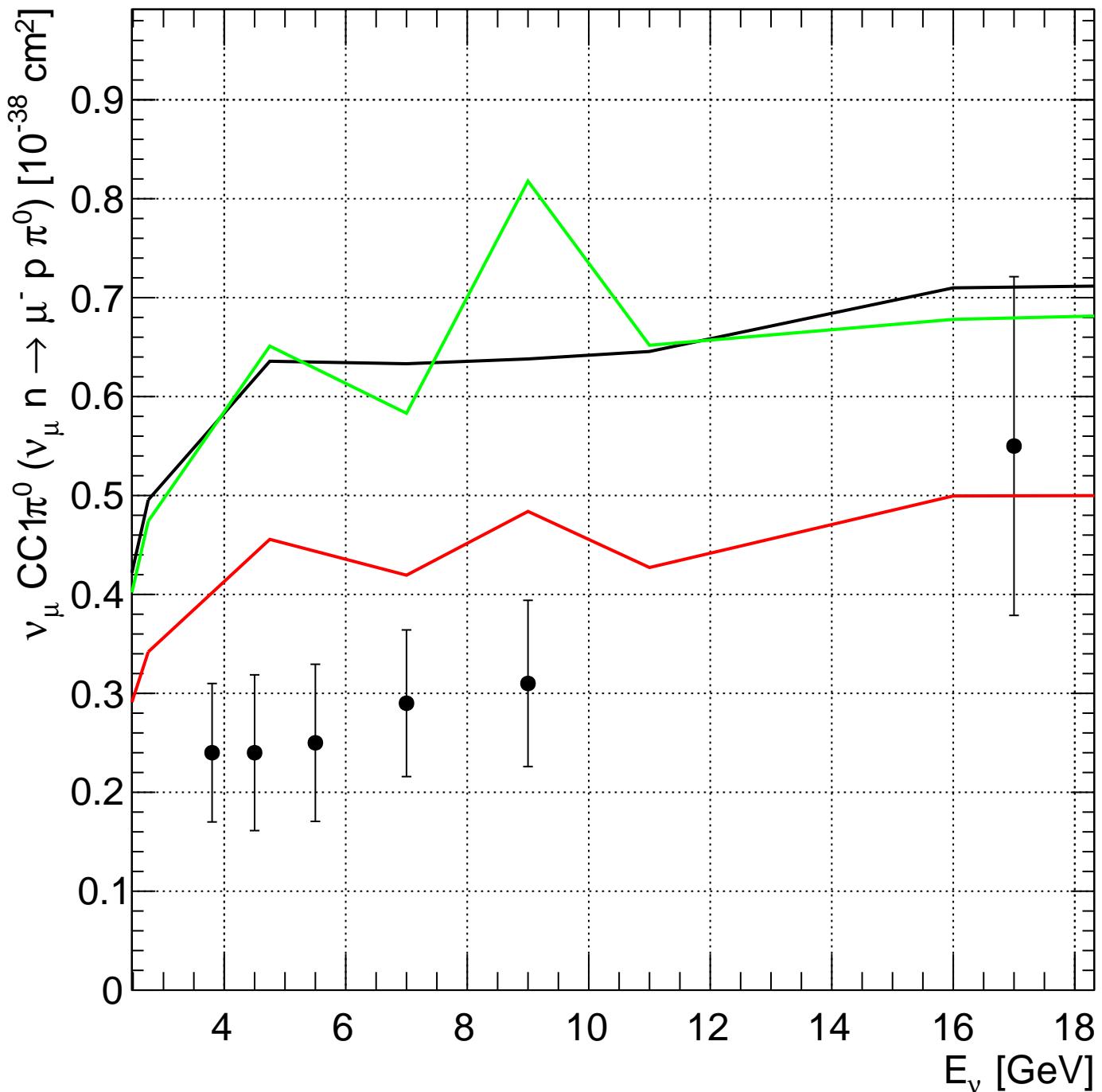
v3.0.0/G18_10j_00_000 $\chi^2 = 66.8 / 6$ DoF

Subset:

numuCCppi0_SKAT,6 [Grabosch et al., Zeit.Phys.C41:527 (1988)]

6 DoF, $\chi^2 = 55.9 \text{ } 15.9 \text{ } 66.8$

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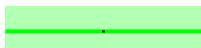
numuCCppi0_SKAT,6 [Grabosch et al., Zeit.Phys.C41:527 (1988)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 55.9/6$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 15.9/6$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 66.8/6$ DoF

Dataset:

numuCCn2pi+_ANL_12FT,13

Day et al., Phys.Rev.D28:2714 (1983)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 8.43 / 5$ DoF

v3.0.0/G18_02a_02_11a $\chi^2 = 8.86 / 5$ DoF

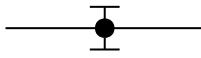
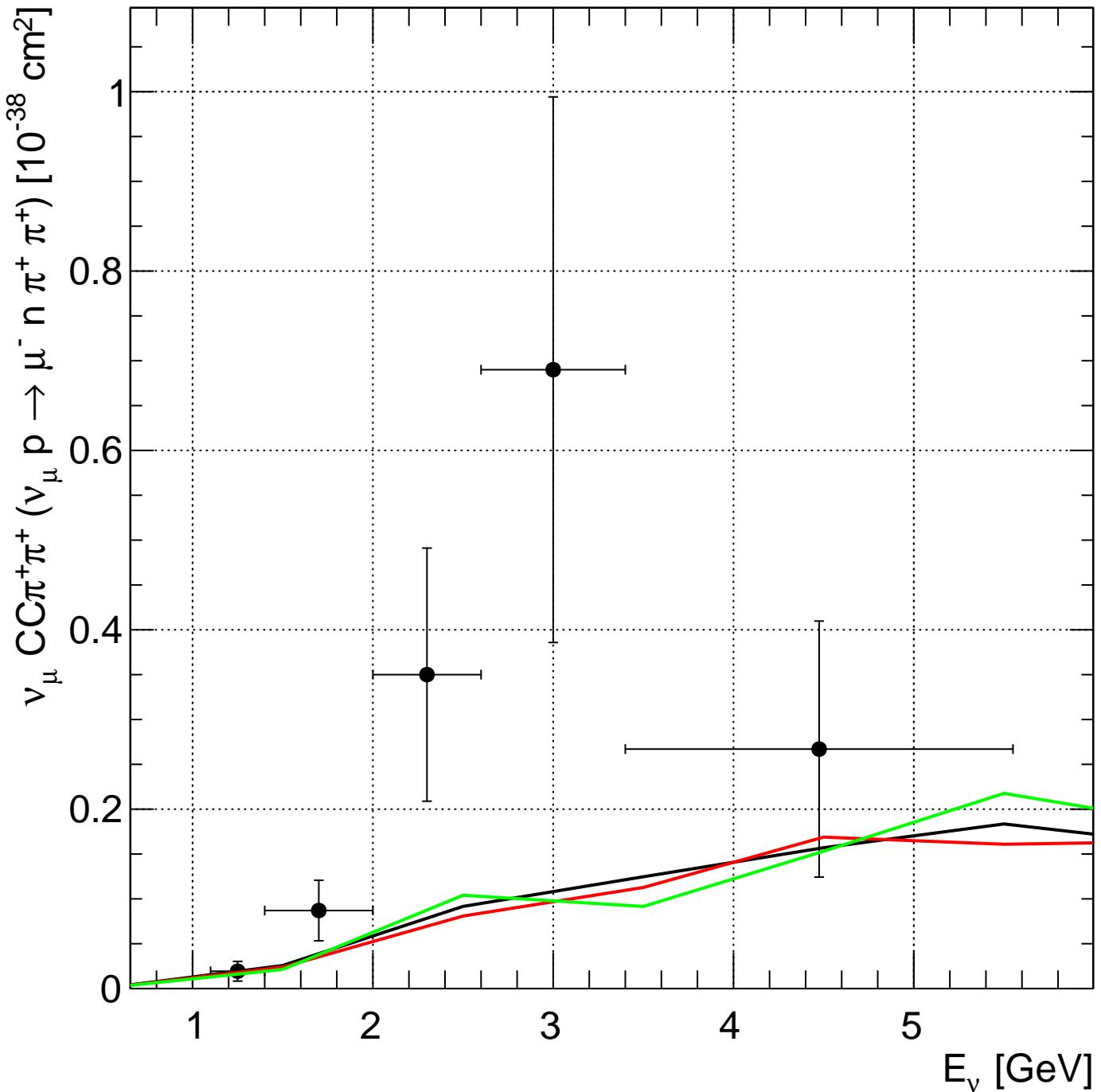
v3.0.0/G18_10j_00_000 $\chi^2 = 8.42 / 5$ DoF

Subset:

numuCCn2pi+_ANL_12FT,13 [Day et al., Phys.Rev.D28:2714 (1983)]

5 DoF, $\chi^2 = 8.43 \text{ } 8.86 \text{ } 8.42$

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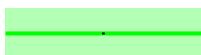
nu_muCCn2pi+_ANL_12FT,13 [Day et al., Phys.Rev.D28:2714 (1983)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 8.43/5$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 8.86/5$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 8.42/5$ DoF

Dataset:

numuCCppi+pi0_ANL_12FT,12

Day et al., Phys.Rev.D28:2714 (1983)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 4.4 / 5 \text{ DoF}$

v3.0.0/G18_02a_02_11a $\chi^2 = 4.12 / 5 \text{ DoF}$

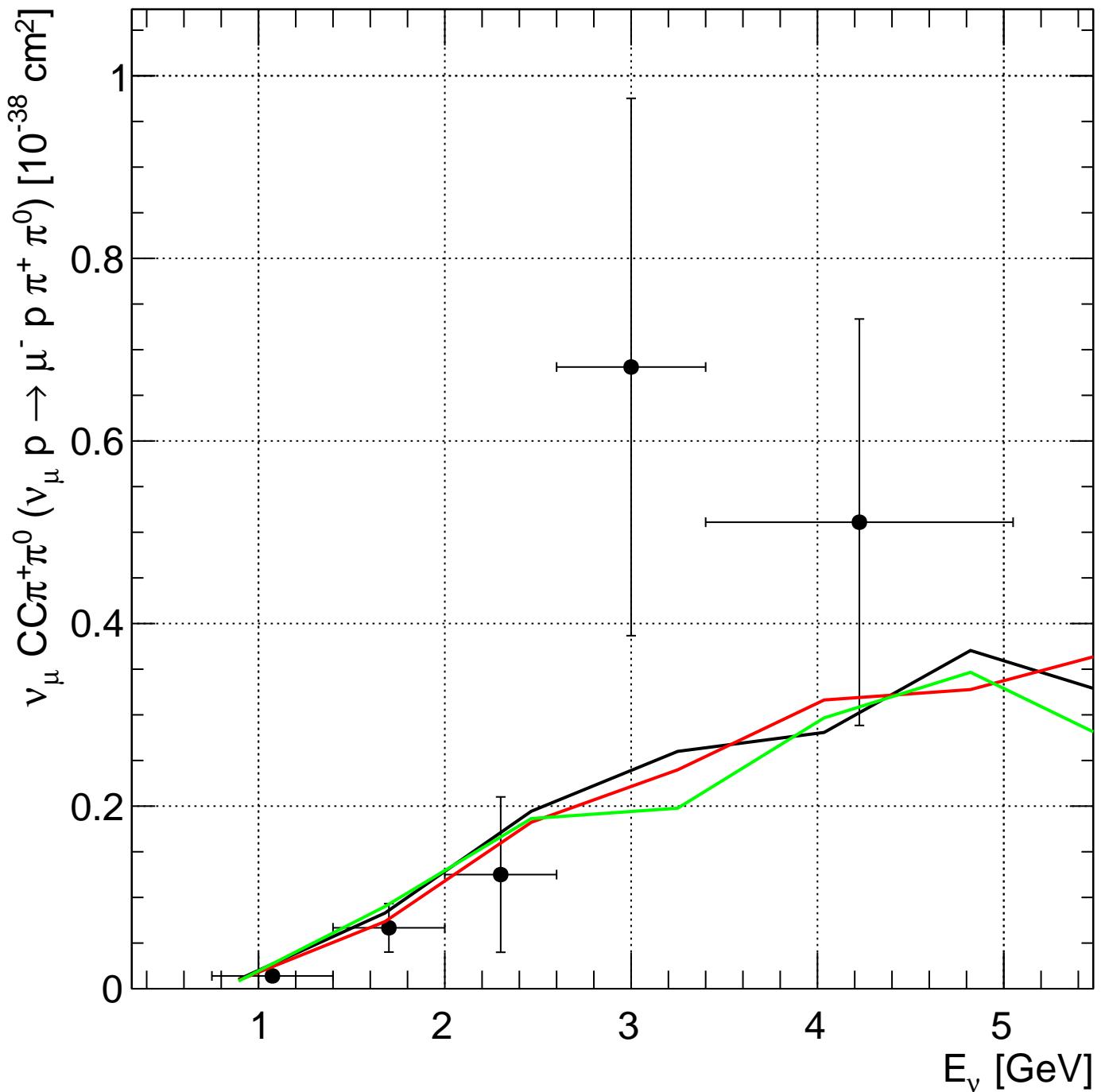
v3.0.0/G18_10j_00_000 $\chi^2 = 5.41 / 5 \text{ DoF}$

Subset:

numuCCppi+pi0_ANL_12FT,12 [Day et al., Phys.Rev.D28:2714 (1983)]

5 DoF, $\chi^2 = 4.4 \quad 4.12 \quad 5.41$

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—●— numuCCppi+pi0_ANL_12FT,12 [Day et al., Phys.Rev.D28:2714 (1983)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 4.4/5 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 4.12/5 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 5.41/5 \text{ DoF}$

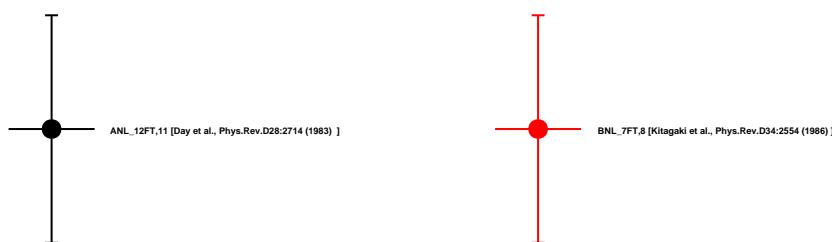
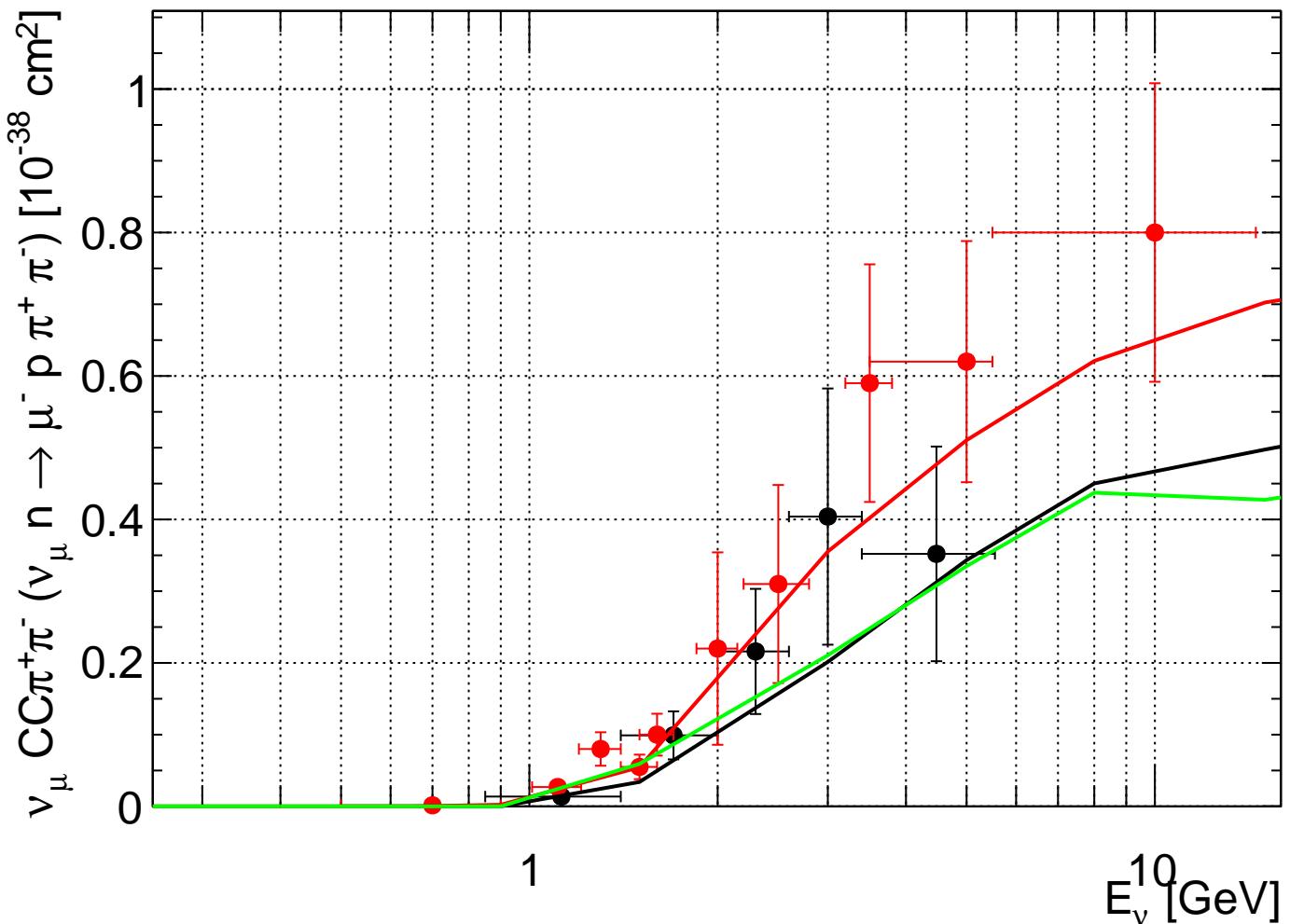
Dataset:
numuCCppi+pi-_all

Models:
v3.0.0/G18_02a_00_000 $\chi^2 = 20.6 / 15$ DoF
v3.0.0/G18_02a_02_11a $\chi^2 = 12.7 / 15$ DoF
v3.0.0/G18_10j_00_000 $\chi^2 = 16.3 / 15$ DoF

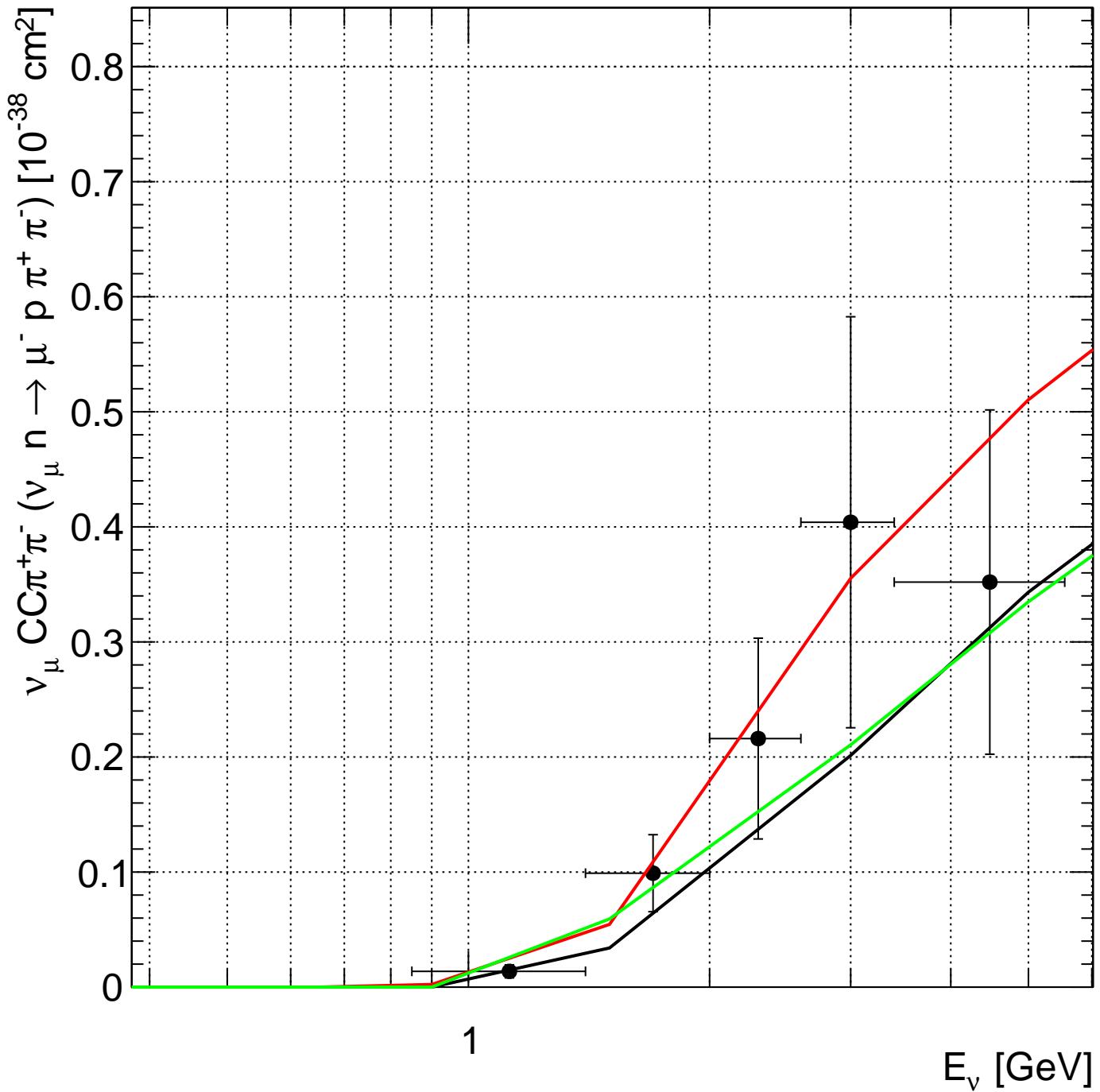
Subsets:
ANL_12FT,11 [Day et al., Phys.Rev.D28:2714 (1983)]
5 DoF, $\chi^2 = 9.2 \text{ red} \text{ green}$

BNL_7FT,8 [Kitagaki et al., Phys.Rev.D34:2554 (1986)]
10 DoF, $\chi^2 = 11.4 \text{ red} \text{ green}$

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v3.0.0:G18_02a_00_000:numu_freenuc
 v3.0.0:G18_02a_02_11a:numu_freenuc
 v3.0.0:G18_10j_00_000:numu_freenuc



ANL_12FT,11 [Day et al., Phys.Rev.D28:2714 (1983)]

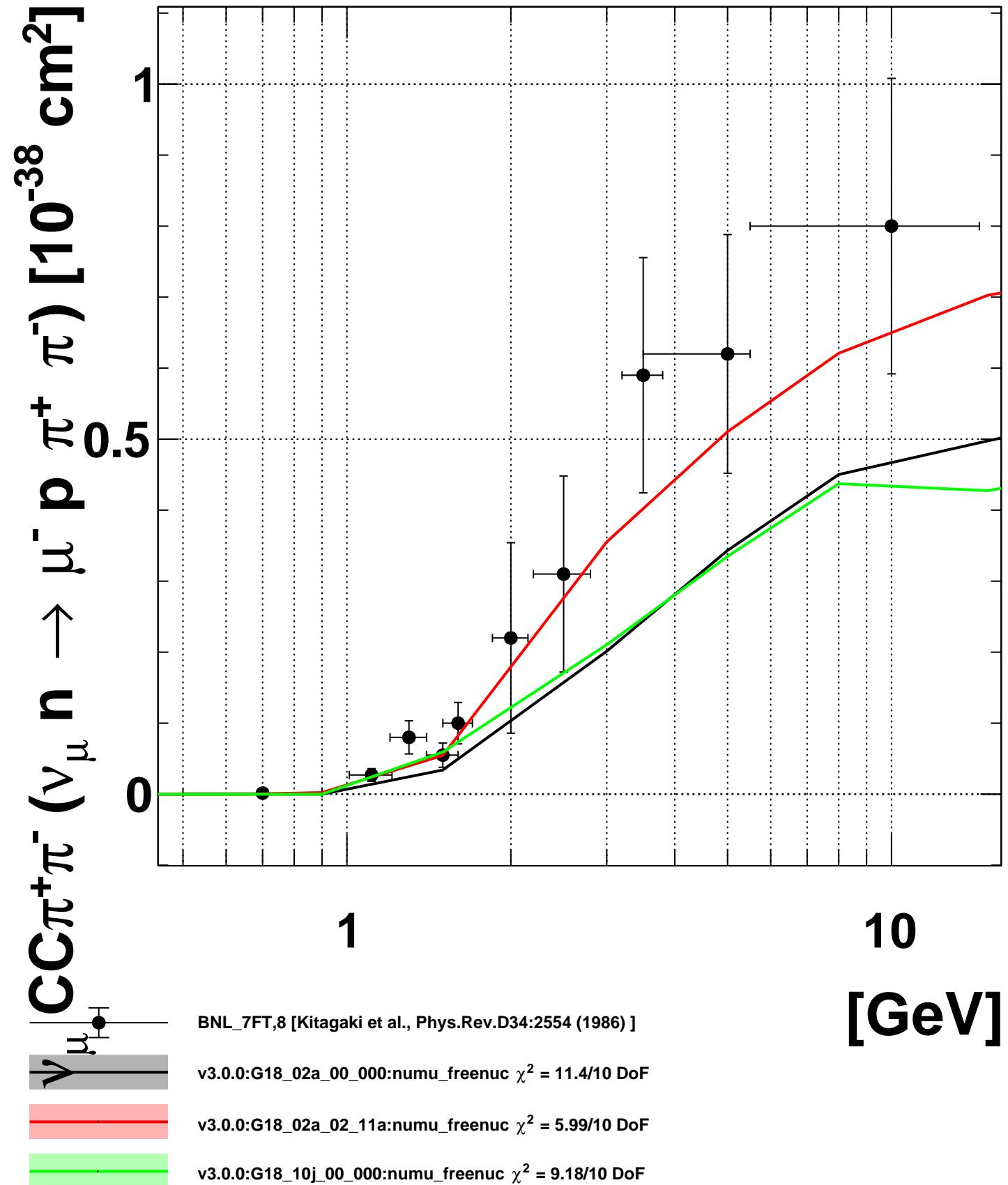
v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 9.2/5$ DoF

v3.0.0:G18_02a_02_11a:numu_freenuc

$\chi^2 = 6.66/5$ DoF

v3.0.0:G18_10j_00_000:numu_freenuc

$\chi^2 = 7.16/5$ DoF



Dataset:

numubarCCnpi-_Gargamelle,7

Bolognese et al., Phys.Lett.B81:393 (1979)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 57.1 / 5$ DoF

v3.0.0/G18_02a_02_11a $\chi^2 = 27.3 / 5$ DoF

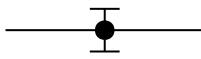
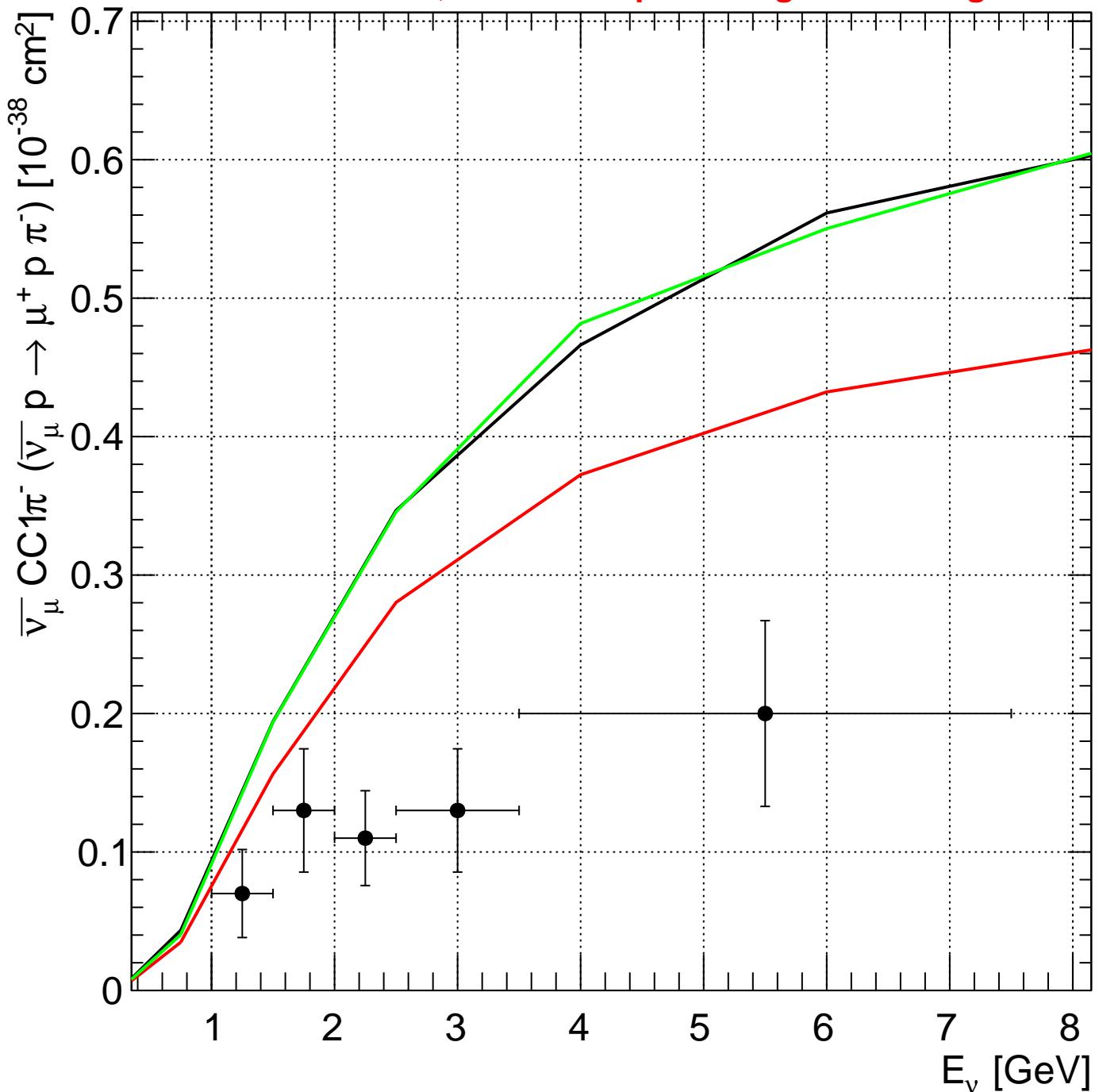
v3.0.0/G18_10j_00_000 $\chi^2 = 55.5 / 5$ DoF

Subset:

numubarCCnpi-_Gargamelle,7 [Bolognese et al., Phys.Lett.B81:393 (1979)]

5 DoF, $\chi^2 = 57.1 \text{ } 27.3 \text{ } 55.5$

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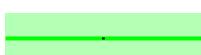
numubarCCpi-_Gargamelle,7 [Bolognese et al., Phys.Lett.B81:393 (1979)]



v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 57.1/5$ DoF



v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 27.3/5$ DoF



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 55.5/5$ DoF

Dataset:

numubarCCnpi-_SKAT,10

Grabosch et al., Zeit.Phys.C41:527 (1988)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 16.9 / 2 \text{ DoF}$

v3.0.0/G18_02a_02_11a $\chi^2 = 5.17 / 2 \text{ DoF}$

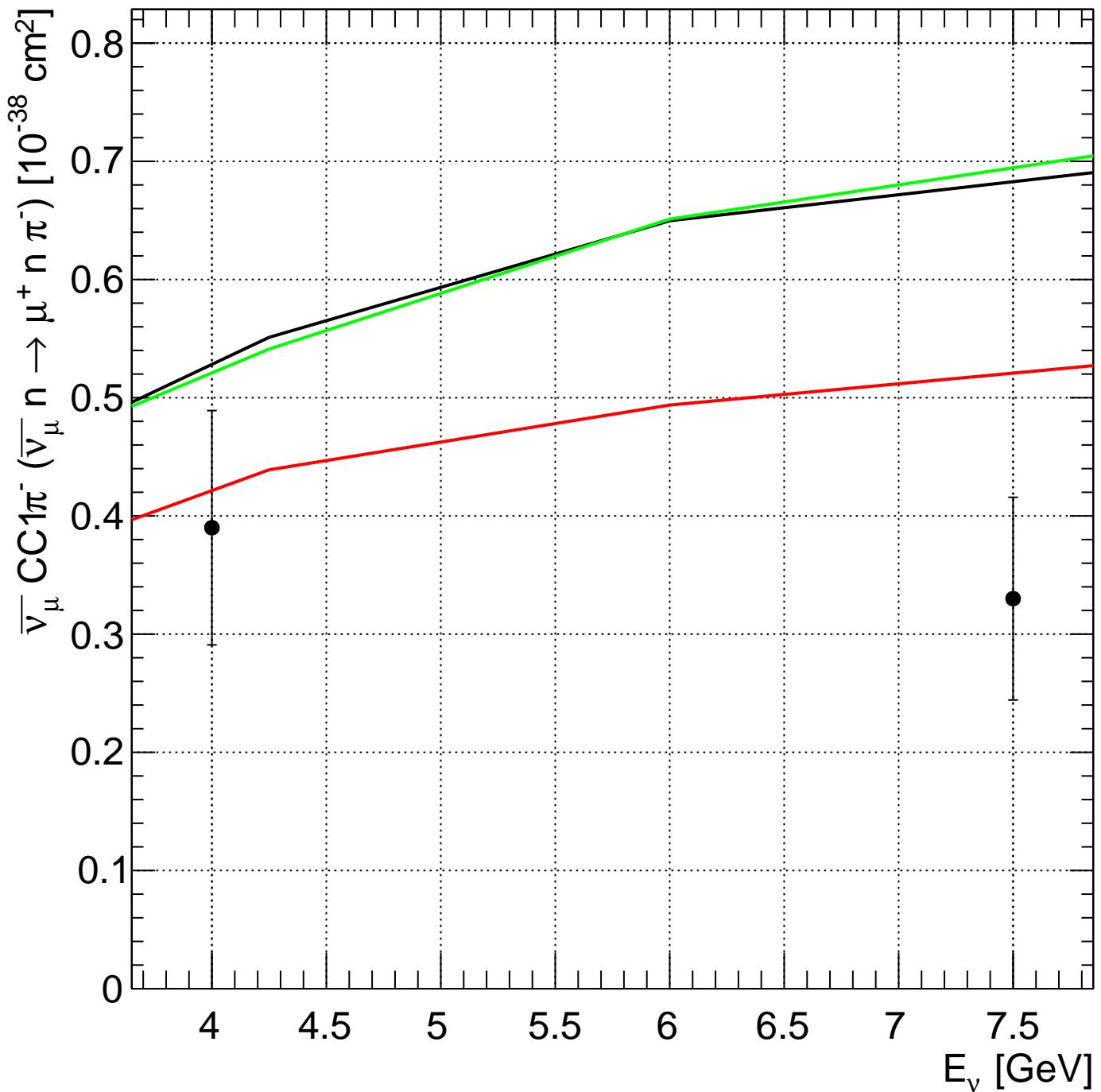
v3.0.0/G18_10j_00_000 $\chi^2 = 18.1 / 2 \text{ DoF}$

Subset:

numubarCCnpi-_SKAT,10 [Grabosch et al., Zeit.Phys.C41:527 (1988)]

2 DoF, $\chi^2 = 16.9 \text{ } 5.17 \text{ } 18.1$

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—●— numubarCCnpi_SKAT,10 [Grabosch et al., Zeit.Phys.C41:527 (1988)]

—■— v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 16.9/2 \text{ DoF}$

—■— v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 5.17/2 \text{ DoF}$

—■— v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 18.1/2 \text{ DoF}$

Dataset:

numubarCCppi-_FNAL_15FT,10

Barish et al., Phys.Lett.B91:161 (1980)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 86.8 / 1$ DoF

v3.0.0/G18_02a_02_11a $\chi^2 = 22.3 / 1$ DoF

v3.0.0/G18_10j_00_000 $\chi^2 = 74.7 / 1$ DoF

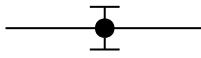
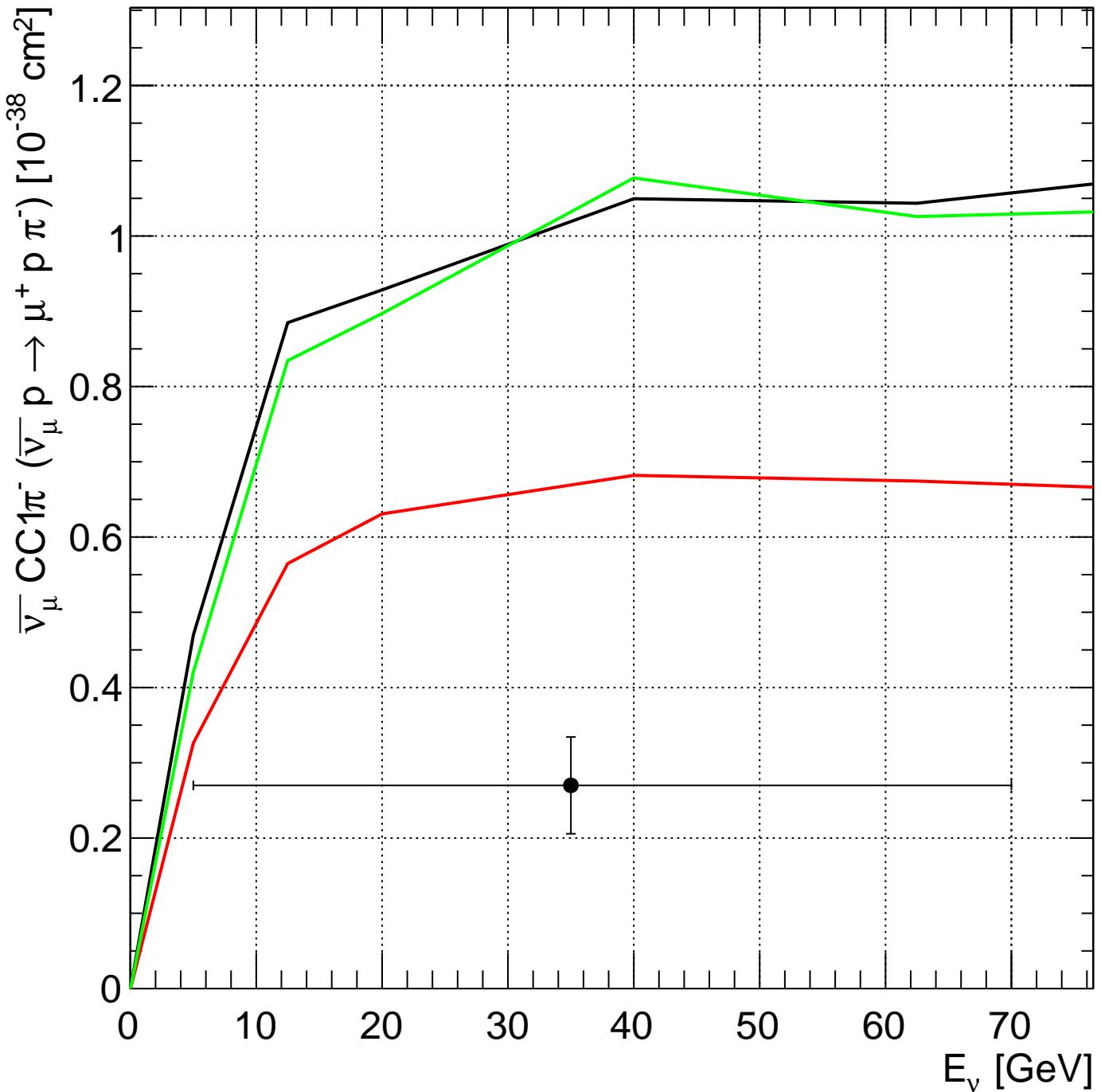
Subset:

numubarCCppi-_FNAL_15FT,10 [Barish et al., Phys.Lett.B91:161 (1980)]

1 DoF, $\chi^2 = 86.8 \text{ } 22.3 \text{ } 74.7$

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numubarCCppi-_FNAL_15FT,10 [Barish et al., Phys.Lett.B91:161 (1980)]



v3.0.0:G18_02a_00_000:numu_freenuc $\chi^2 = 86.8/1$ DoF



v3.0.0:G18_02a_02_11a:numu_freenuc $\chi^2 = 22.3/1$ DoF



v3.0.0:G18_10j_00_000:numu_freenuc $\chi^2 = 74.7/1$ DoF

Dataset:

numubarCCppi-_SKAT,11

Grabosch et al., Zeit.Phys.C41:527 (1988)

Models:

v3.0.0/G18_02a_00_000 $\chi^2 = 61.7 / 5$ DoF

v3.0.0/G18_02a_02_11a $\chi^2 = 18.3 / 5$ DoF

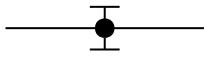
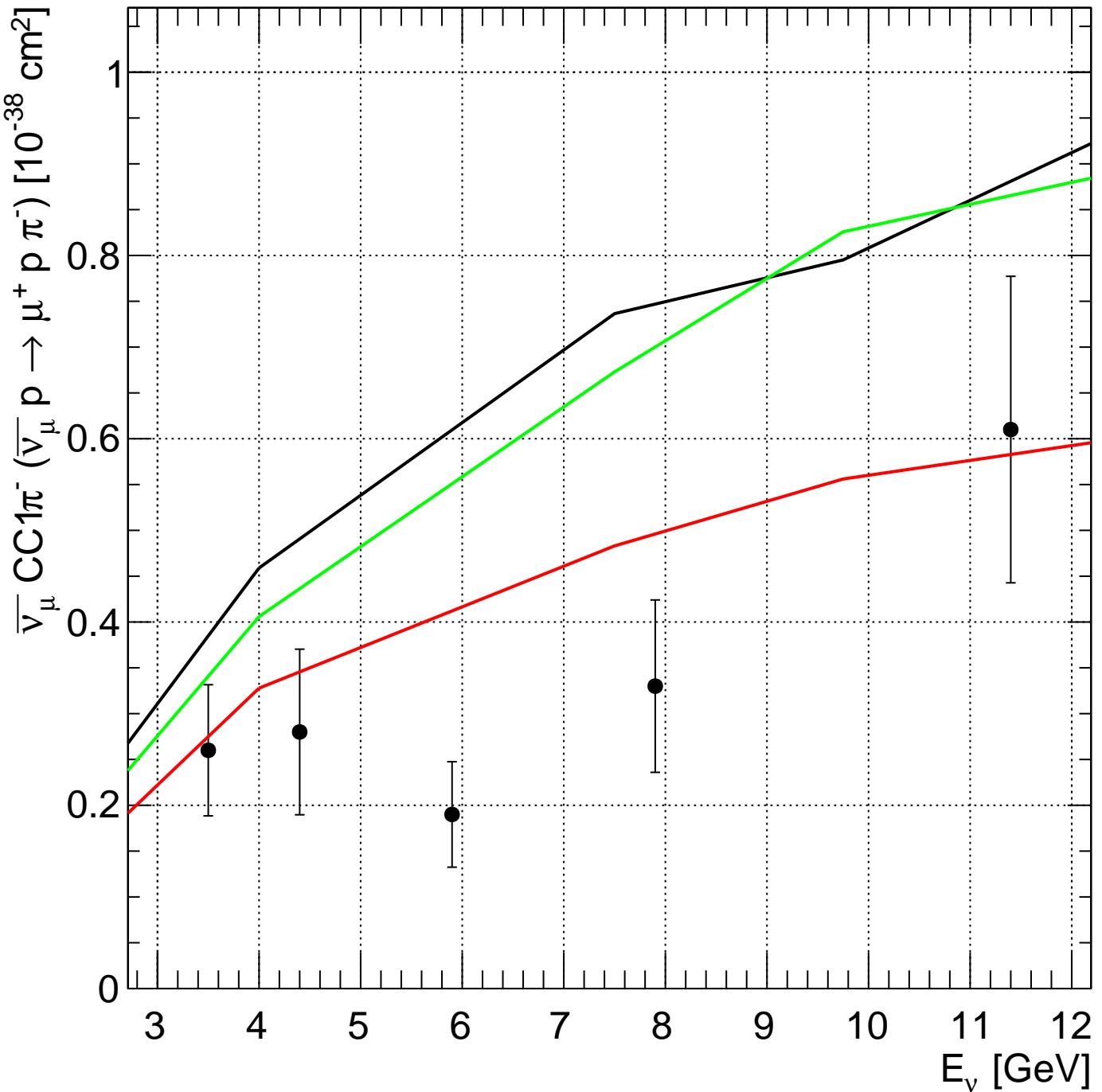
v3.0.0/G18_10j_00_000 $\chi^2 = 46.7 / 5$ DoF

Subset:

numubarCCppi-_SKAT,11 [Grabosch et al., Zeit.Phys.C41:527 (1988)]

5 DoF, $\chi^2 = 61.7 \text{ } 18.3 \text{ } 46.7$

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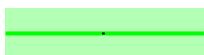
numubarCCppi_SKAT,11 [Grabosch et al., Zeit.Phys.C41:527 (1988)]



v3.0.0:G18_02a_00_000:nu_mu_freenuc $\chi^2 = 61.7/5$ DoF



v3.0.0:G18_02a_02_11a:nu_mu_freenuc $\chi^2 = 18.3/5$ DoF



v3.0.0:G18_10j_00_000:nu_mu_freenuc $\chi^2 = 46.7/5$ DoF

