

MaCh3 Summer 17 NIWG model implementation

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for the MaCh3 group

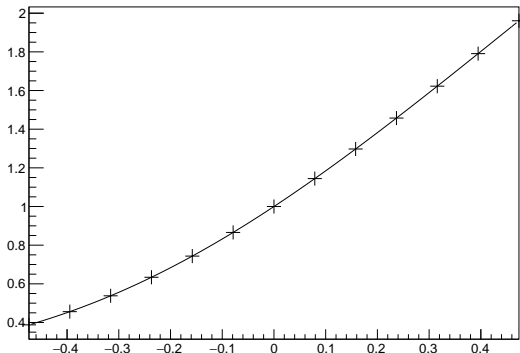
Overview

- ▶ T2KReWeight and neut versions frozen week after collaboration meeting
- ▶ SK splines and weights for new model have been generated and put on iRods
 - Also new mtuples with BeRPA nominal weights
- ▶ Currently using APfit samples as fitQun only recently available
- ▶ New model is implemented in MaCh3 now validating
 - Deadline in OA plan is 3rd March (tomorrow)
 - See Clarence's talks for results with ND280 only fit

Splines

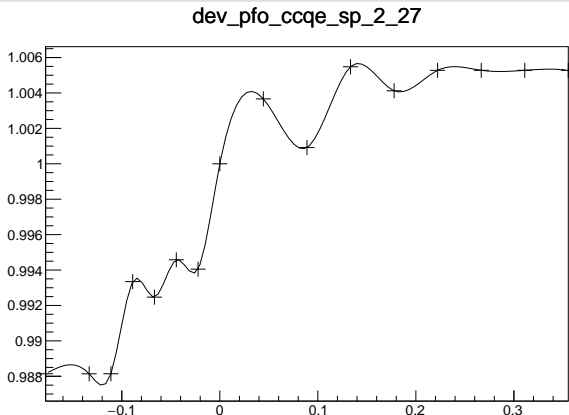
- Most splines behaving well
- Ignore line, just drawn by TGraph

dev_manff_ncpiz_sp_3_0



Splines

- Some don't look so smooth but expected and spline interpolation should be able to take into account



Implementation in MaCh3

- ▶ Code changes required have been made
- ▶ We calculate BeRPA event-by-event using Q2
 - don't use BeRPA splines and nominal weights
 - RPA weights no longer applied
- ▶ Executables compile and run, now validating

Event rates

- ▶ SK nominal event rates with Run 1-7c POT, just a check of code
- ▶ Expected to be different from TN269 as RPA weights not applied anymore
 - BeRPA weight not applied here either

	ν_μ osc	ν_μ unosc	ν_e osc	ν_e unosc
ν_μ	109.7	439.8	1.388	1.861
ν_e	0.3075	0.3113	3.032	3.253
$\bar{\nu}_\mu$	9.067	15.98	0.07582	0.07799
$\bar{\nu}_e$	0.03278	0.03290	0.1591	0.1680
ν_e signal	0.3284	0.000	20.24	0.000
$\bar{\nu}_e$ signal	0.00211	0.000	0.1647	0.000
Total	119.5	456.1	25.06	5.370

Conclusions

- ▶ Currently within schedule for summer OA
- ▶ Need to perform more validations of Xsec model and cross-check with other groups
- ▶ Will start generating weights and splines for fitQun samples

Backup