2D vs 1D yields

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# Overview

▶ Checking the effect of moving from 1D bins in E_{rec} to 2D bins in E_{rec}-θ for the ν_e sample on MaCh3

- ν_μ sample still using 1D E_{rec} bins.

- Valor splines used for ν_e

▶ Have compared rates from and kinematic distributions from 2D with valor

	ν_μ	ν_e	$\bar{\nu}_\mu$	$\bar{\nu}_e$	ν_e signal	$\bar{\nu}_e$ signal
1D	1.468	3.271	0.069	0.144	21.544	0.139
1D Total	26.635					
2D	1.468	3.262	0.069	0.145	21.493	0.138
2D Total	26.575					

▶ Also checked kinematic plots with valor bin by bin
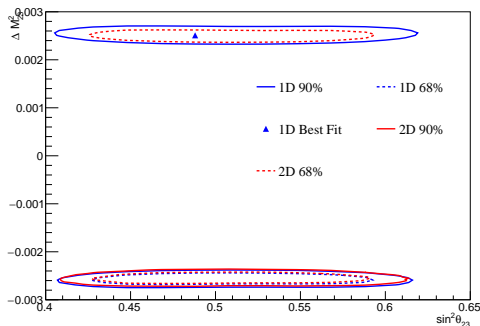
- Agreement better than 0.1% in all bins

1M step chain contour - appearance

▶ As seen by valor 1D and 2D Asimov contours agree well
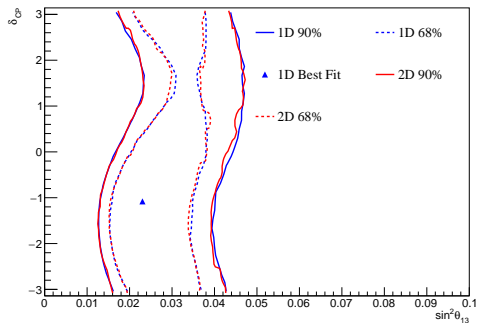
1M step chain contour - disappearance

- Slight shift seen between 1D and 2D for disappearance contour
  - under investigation

- 2D and 1D yields agree very well between MaCh3 and valor
- Appearance contours agree well
- Shift seen in disappearance contours is under investigation