

T2K ν_μ disappearance result file (2013 paper results)

t2k_2013paper_likelihoodratio_contour_and_deltachisq.root contains the following ROOT objects:

- **g_bestfit_68_o1 :**
TGraph with the best-fit point in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \leq \pi/4$ (o1) and normal hierarchy (NH).
- **g_contour_68_o1 :**
TGraph with the 90% C.L. contour in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \leq \pi/4$ (o1) and normal hierarchy (NH).
- **g_contour_90_o1 :**
TGraph with the 90% C.L. contour in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \leq \pi/4$ (o1) and normal hierarchy (NH).
- **h_deltachisq_o1 :**
TH2D with the $\Delta\chi^2$ surface in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \leq \pi/4$ (o1) and normal hierarchy (NH).
- **g_bestfit_68_o2 :**
TGraph with the best-fit point in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \geq \pi/4$ (o2) and normal hierarchy (NH).
- **g_contour_68_o2 :**
TGraph with the 90% C.L. contour in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \geq \pi/4$ (o2) and normal hierarchy (NH).
- **g_contour_90_o2 :**
TGraph with the 90% C.L. contour in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \geq \pi/4$ (o2) and normal hierarchy (NH).
- **h_deltachisq_o2 :**
TH2D with the $\Delta\chi^2$ surface in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \geq \pi/4$ (o2) and normal hierarchy (NH).
- **h_osc_param_space :**
TH2D with the axes set up appropriately for drawing the TGraph's, is included for convenience.

t2k_2013paper_likelihoodratio_deltachisq_octant1.txt contains the $\Delta\chi^2$ surface in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \leq \pi/4$ (octant1) and normal hierarchy (NH) in tab separated text format (the three columns are $\sin^2(2\theta_{23})$; $|\Delta m_{32}^2|$; $\Delta\chi^2$).

t2k_2013paper_likelihoodratio_deltachisq_octant2.txt contains the $\Delta\chi^2$ surface in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space assuming $\theta_{23} \geq \pi/4$ (octant2) and normal hierarchy (NH) in tab separated text format (the three columns are $\sin^2(2\theta_{23})$; $|\Delta m_{32}^2|$; $\Delta\chi^2$).

Figure 1 shows the best-fit point, and the 68% and 90% C.L. limits in $\sin^2(2\theta_{23})$ - $|\Delta m_{32}^2|$ space using this file. plot_t2k_numu_disappearance_contours.C is the macro used to make this figure.

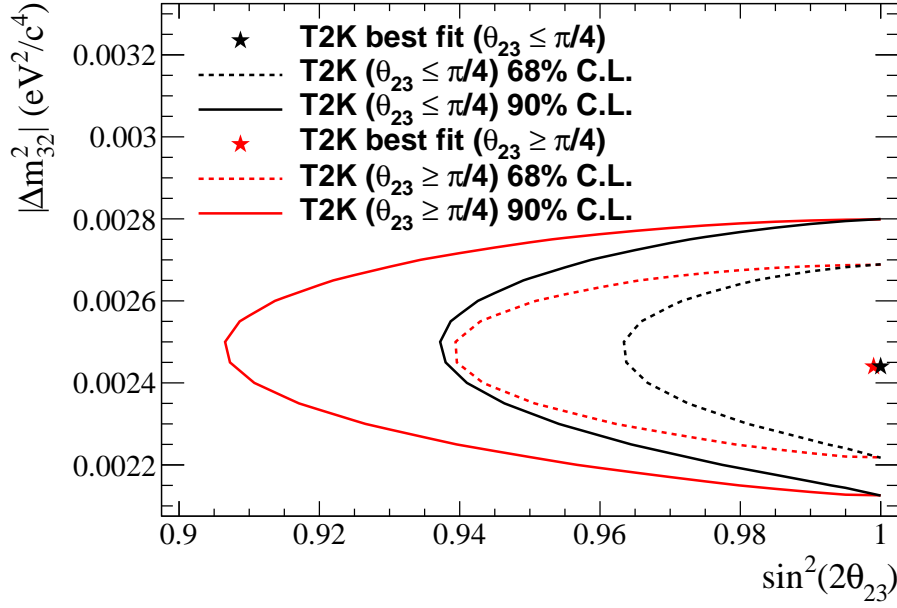


Figure 1: The 68% and 90% C.L. contour regions and best-fit points for $\sin^2(2\theta_{23})$ and $|\Delta m_{32}^2|$ are shown for octant 1 (black) and octant 2 (red).