Observation of Solar Neutrinos in Super-Kamiokande-I

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The results from 1496days of Super-Kamiokande solar neutrino data will be reported. The zenith spectrum analysis shows that the two allowed regions at large neutrino mixing with the combined with either the solar ^{8}B neutrino flux of the standard solar model [1] or the measurement from SNO CC interaction rate. A global fit with combining all data from Homestake, Gallex/GNO, SNO and Super-Kamiokande zenith spectrum prefers a single allowed region at large mixing solution [2].

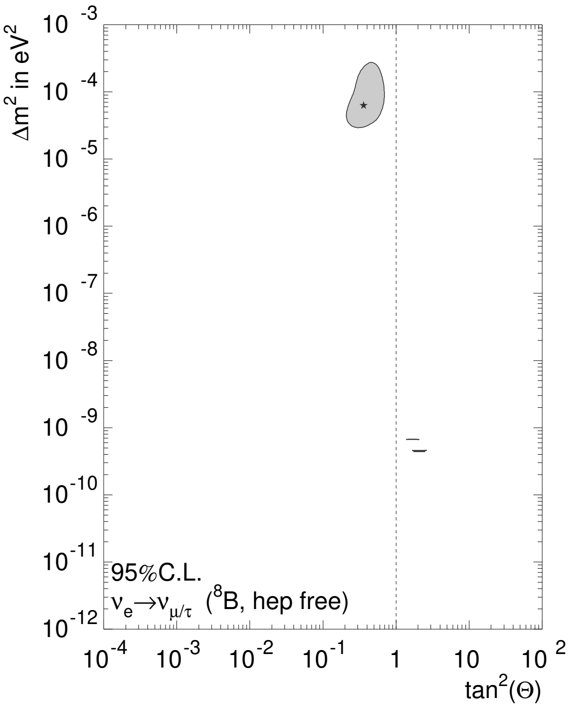

Figure 1: Solar neutrino oscillation parameter constraints from a global analysis with adding the rates of Gallex/GNO, SAGE and Homestake to the Super-Kamiokande zenith spectrum and SNO combined fit. Here the SSM ^{8}B and *hep* fluxes are free parameters.

References

[1] S.Fukuda *et al., Phys.Rev.Lett.* **86** (2001) 5656.

[2] S.Fukuda *et al., to be published.*