Re-analysis of the supernova data to test the effects of large-scale inhomogeneties

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We re-analyzed **the SN gold set data** from an **inhomogeneous** viewpoint, and...

found that the SN data does not necessarily require **Dark Energy**, if...

if we accept the idea Ω_m and H_0 may be different between here and there, namely...

# the inhomogeneous universe!

Model without Λ gives even better fitting for z > 0.1

Fitting the Distant SNe only: No Λ Necessary?

Since the distant SN data are important to determine the value of Ω_m and Ω_Λ, what happens if we use only the distant SNe, say $z > 0.1$, for the fitting? The following figure shows the best fit results. The left figure shows the best fit open model without Λ, and the right figure also shows the best fit flat model with Λ. The χ^2 values shows the open model without Λ gives "*slightly*" better fitting.
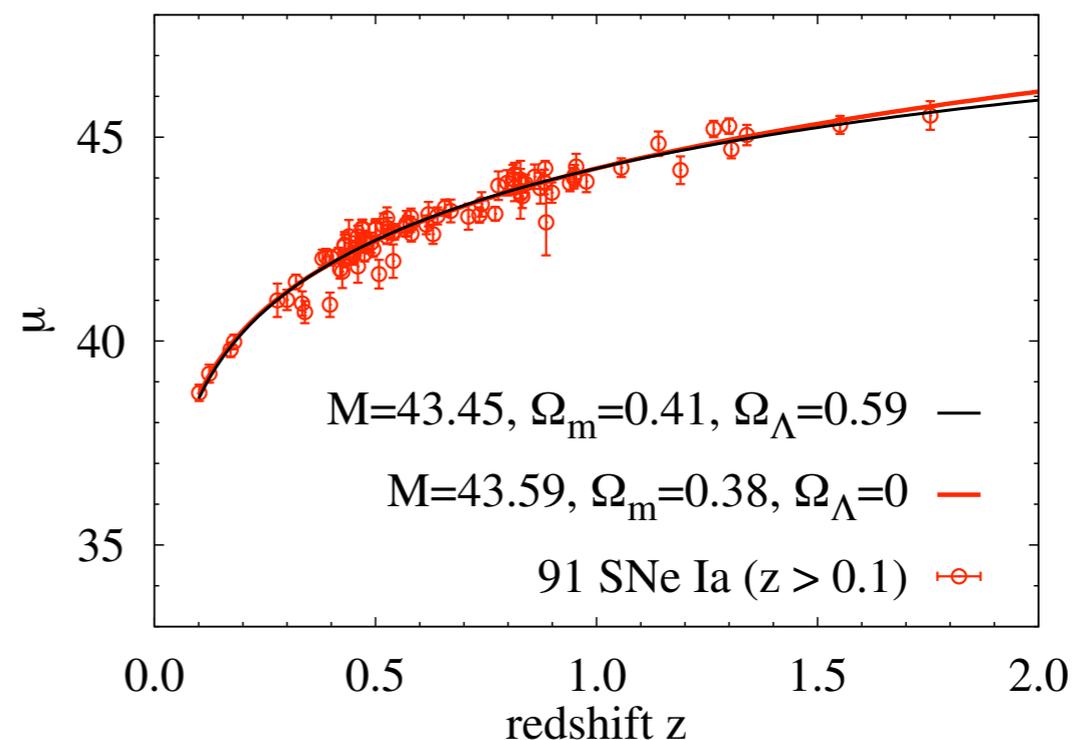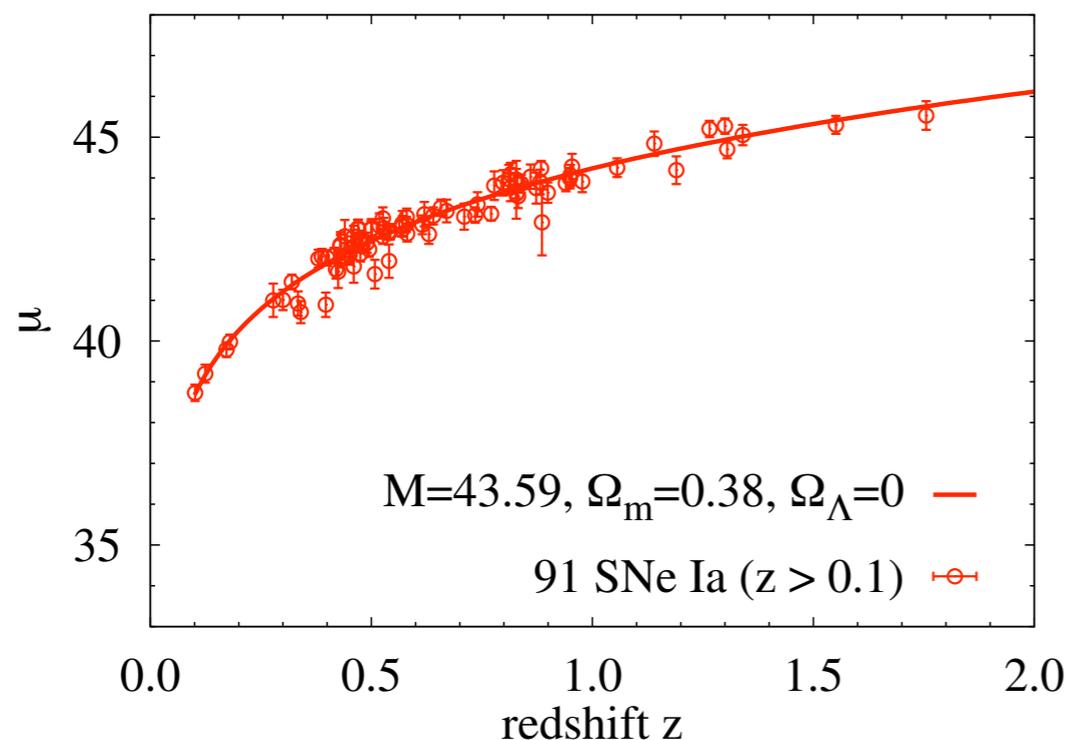
the best fit model for $z > 0.1$	χ^2	deg. of freedom	reduced χ^2
flat ($\Omega_m = 0.41, \Omega_\Lambda = 0.59$)	108.80	$91 - 2 = 89$	1.222
open ($\Omega_m = 0.38, \Omega_\Lambda = 0$)	108.40	$91 - 2 = 89$	1.218

We also investigated the effects of local emptiness using Dyer-Roeder distance.

If you are interested in our results, please come to our poster (No.1).