



FIG. 5: The marginalized  $1\sigma$  and  $2\sigma$  errors of  $Om(z)$  reconstructed in the Wetterich model. (a) uses the combination of Csta SNIa+BaoR, (b) uses the combination of Csta SNIa+BaoZ, (c) uses the combination of Sdss2 SNIa+BaoR, and (d) uses the combination of Sdss2 SNIa+BaoZ.

SNIa data sets, respectively. As indicated in Fig. 1 and Fig. 2, the green lines are just for SNIa data alone, the dashed black lines are for SN+BaoR, the cyan lines are results for SNIa+Bao2, the magenta lines indicate SNIa+BaoZ, the blue lines are for SNIa+Bao4, and the solid red lines are for the combination of SNIa+Bao4+WMAP5. It is interesting to see that different from the CPL ansatz, this parametrization allows the compatibility of different SNIa, Bao and CMB data sets, even for comparing the combinations of Csta+BaoR, Csta+BaoZ and Csta+Bao4+WMAP5. The Wetterich ansatz is found able to fit different data sets both at low and high redshifts. In Fig. 5, we present the behaviors of the  $Om(z)$  reconstructed by comparing the influence of different SNIa and BAO data sets. Interestingly, the evolution of  $Om(z)$  is not affected much by different SNIa and BAO data sets. The