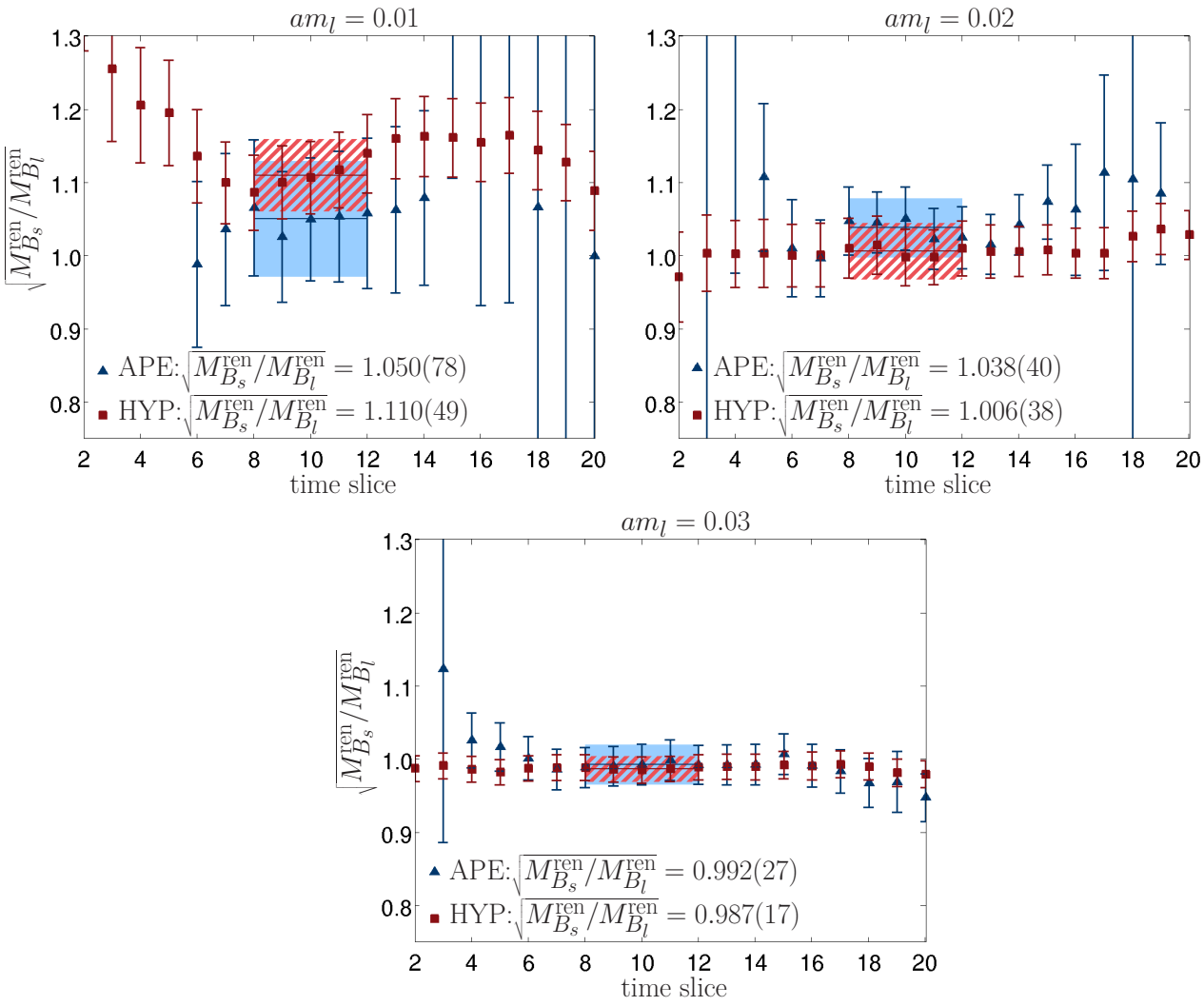

FIG. 4: Determination of $\sqrt{M_{B_s}^{\rm ren}/M_{B_l}^{\rm ren}}$ using the average of two time sources on the three sea quark ensembles. The blue (triangle) points denote the APE data, while the red (square) points denote the HYP-smeared data. The shaded (hatched) band corresponds to the plateau extracted from averaging the APE (HYP) data over four consecutive time slices. Errors shown are statistical only.

quickly than $SU(3)$ χPT [34–37]. For the case of $SU(3)$-breaking ratios such as f_{B_s}/f_{B_d} and ξ, however, $SU(3)$ HMχPT has the advantage that the chiral extrapolation formulae manifestly preserve the fact that the ratios must be equal to one in the limit $m_l \to m_s$. Within the framework of $SU(2)$ HMχPT, this fact must be introduced in a more *ad hoc* manner such as by matching the $SU(2)$ HMχPT expression at small quark masses onto an analytic form at large quark masses that becomes one when $m_l \to m_s$. We therefore plan