



Additional Fig. 1. The fraction of stellar mass formed for the split bimodal distribution in infall and pericenter times are shown for GMP 3254. The values corresponding to earlier peak are shown in black color whereas the later peak values are shown in red color. The circles represent infall time and stars represent pericenter time. The values for the combined distribution (our main result, see left panel of Fig. 4) are shown in color corresponding to the color code for GMP 3254 based on its stellar mass. The earlier peak considered in isolation leads to qualitatively the same picture as summarized in our main results. However, the later peak considered alone hints that the galaxy GMP 3254 might have been close to quenching, or already quenched, when it entered the cluster. We note that not all the galaxies in our sample show a strong bimodality in the time distributions. Also, there is no clear reason to prefer one peak over another. Lastly, the cumulative distribution shown in the right panel of Fig. 3 includes the combined effects of both the distributions.