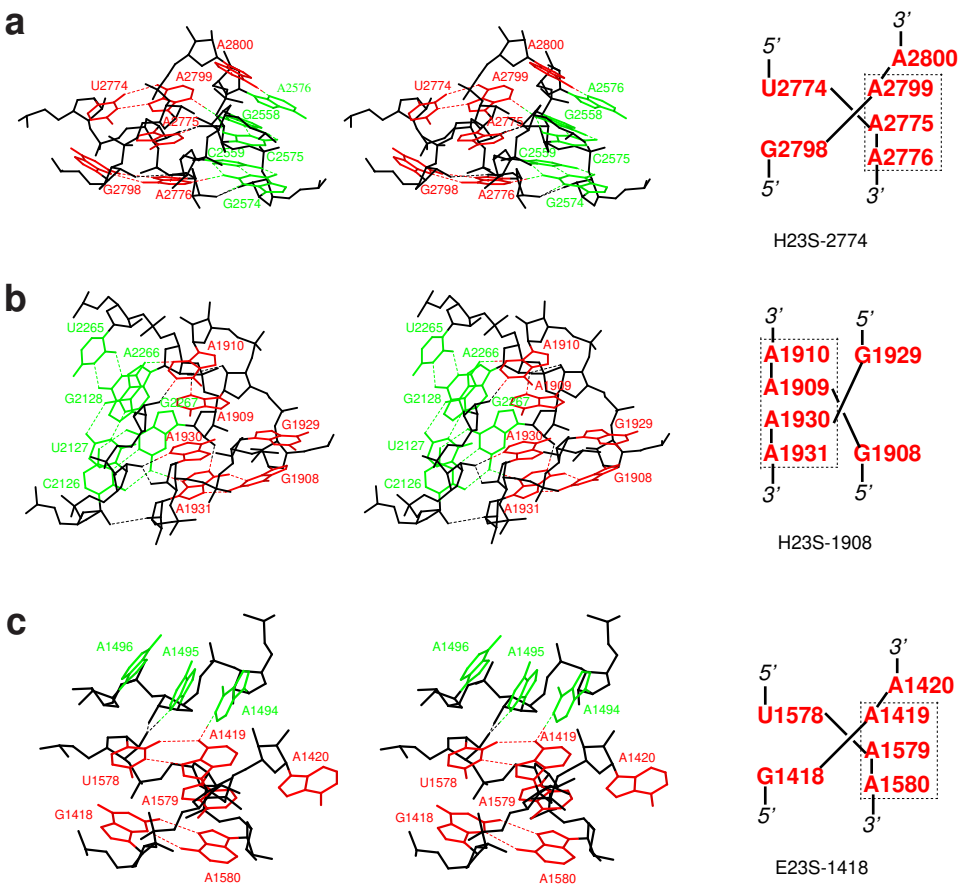

Supplementary Fig. 1 Stereo views of the three UAA/GAN loops not shown in Fig. 2: (a), H23S-2774; (b), H23S-1908; (c), E23S-1418. H23S-2774 has the canonical sequence UAA/GAA and forms a canonical motif by creating an AAA stack in the minor groove, whereas H23S-1908 has a GAA/GAA sequence and creates an AAAA stack in the minor groove. Despite these differences, the H23S-1908 loop forms long-range A-minor interactions. E23S-1418 is a bacterial-specific loop with the canonical sequence UAA/GAA but is not involved in long-range tertiary A-minor interactions; instead it interacts with the 1495 hairpin loop in *E. coli*.