



Pre-Lunar Prospector schematic cross section through the magma ocean down to ~800 km depth. An ~60 km thick crust of anorthosite forms from buoyant plagioclase cumulates. Also shown are three models for the origin of the younger Mg-suite rocks. In model 1 KREEP is delivered to depth by convective overturn and mixing with Mg-rich ultramafic cumulates. Model 2 is the same as model 1 with the exception that KREEP is assimilated at the base of the crust. Model 3 involves mobilization of urKREEP caused by decompressional melting triggered by basin-forming impact events (After Papike et al. 1998, *Planetary Materials*, Fig. 4, p. 5-5).