The study of mesons and baryons which contain at least one charm quark is referred to as open charm physics. It offers the possibility to study up-type quark transitions. Since the charm quark can not be treated in any mass limit, theoretical predictions are difficult and experimental input is crucial. BESIII collected large data samples of e^+e^- collisions at several charm thresholds. The at-threshold decay topology offers special opportunities to study open charm decays.

In particlular, the model independent measurement of the strong phase between D^0 and $\bar{D}^0$ is unique to this production process. Furthermore, a search for direct CPV and the measurement of y_{CP} is presented.