Modeling of Coronal Mass Ejections

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In the last 15 years, there has been significant progress in the modeling of Coronal Mass Ejections. Three areas of research have been actively pursued – their initiation, their 3D morphology and their propagation through the interplanetary medium. An overview of the research in these areas will be presented, with particular attention on the 3D morphology. Some surprises have arisen. For example, detailed studies of the propagation of individual events show that there is significant interaction of the CME with the ambient solar wind. Another example is that rotation of a CME beyond 3 Rsun has been reported.