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Three-dimensional evolution of fast and slow CMEs from the Sun to 1 AU

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The evolution of a flux-rope coronal mass ejection (CME) is defined by the processes that change its geometrical and morphological properties, which include deflection, rotation, expansion and distortion. The CME evolution is associated with its interaction with the magnetic field of the Sun and with the background solar wind and/or surrounding magnetic structures embedded in the solar wind. The evolution of a flux rope embedded into interplanetary CME can change its geoffectiveness. We present a method for estimation of three-dimensional geometrical evolution of individual CMEs and apply this technique to a number of events observed during the decay of Solar Cycle 23 and rise of Solar Cycle 24. We particularly focus on two case studies of CMEs characterised by relatively low and high propagation speeds, respectively.