Title: Interaction of ICMEs with the Solar Wind
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Abstract: Interplanetary Coronal Mass Ejections (ICMEs) are formed of plasma and magnetic field launched from the Sun into the Solar Wind (SW). These coherent magnetic structures, frequently formed by a flux rope, interact strongly with the SW. This interaction is reviewed by comparing the results obtained from in situ observations and numerical simulations. Like fast ships in the ocean, fast ICMEs drive an extended shock in front. ICMEs expand in all directions while traveling away from the Sun, a sheath of SW plasma and magnetic field accumulates in front of the ICME, which partially reconnects with the ICME magnetic field. Furthermore, not only do ICMEs have a profound impact on the heliosphere, but the type of SW encountered by an ICME has an important impact on its evolution (e.g. increase of mass, global deceleration, lost of magnetic flux and helicity, distortion of the configuration).