CKNS Convection in stars

F. Kupka

Max-Planck-Institute for Astrophysics, Karl-Schwarzschild-Strasse 1, 85741 Garching, Germany

Convection is one of the most important physical processes in stellar astrophysics. I will hence begin with an overview on the basic physics of convection, its most obvious manifestations, and its relevance for astrophysics in general and for stellar astrophysical research in particular by recalling a couple of examples.

Although neglected in research for a while, convection processes in A-stars have found quite some interest again over the last couple of years. A-stars present a unique combination of convection zones: near surface and in the core, several on top of each other, or some of them depleted by diffusion processes, suppressed by or even creating magnetic fields, suspected to create a chromosphere in some of them, sometimes influenced by binaries, to name just a few. I will give an overview of how this richness of different manifestations of convection can arise in A-stars in comparison with other types of stars and mention the methods we have to study them. The general astrophysical interest in such research will be discussed. The last part of my talk will present a few of my own research results which were obtained on the subject more recently.

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