Differential rotation, dynamos, and magnetic fields in F-type stars

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Abstract

From the standpoint of stellar dynamo theory, F-type stars are objects of intrigue. The F-type stars represent a bridge between stars with a convective envelope and those with a convective core, sometimes possessing both. Thus, they can have two regions with a convective dynamo and a radiative zone sandwiched between them, which could in turn host a fossil magnetic field. Further, the outer convective envelope can be very thin and so the convection can be heavily influenced by the this envelope's geometry. Thus, the influence of such properties on the differential rotation and the convective dynamos of F-type stars, as well as the potential linkage between them, will be discussed in this talk.

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