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### **Making Magnetic Fields on Cosmic Scales**

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Magnetic fields are observed very early in the evolution of structure of the universe. It is not known how or when these fields were created. I will discuss the various theories of the field origin and the fluid mechanical issues that arise. Small scale fields of observable amplitudes are relatively easy to create on short time-scales by turbulent flows or compact objects. The central issue is the the creation of the observed long scale coherence in the field.