Cosmic rays in intermittent magnetic fields

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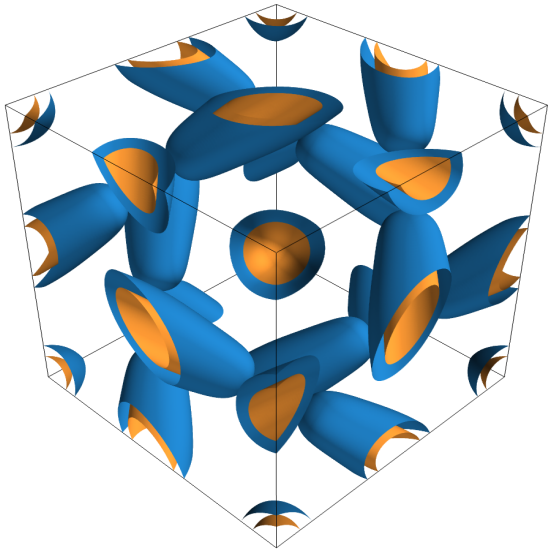
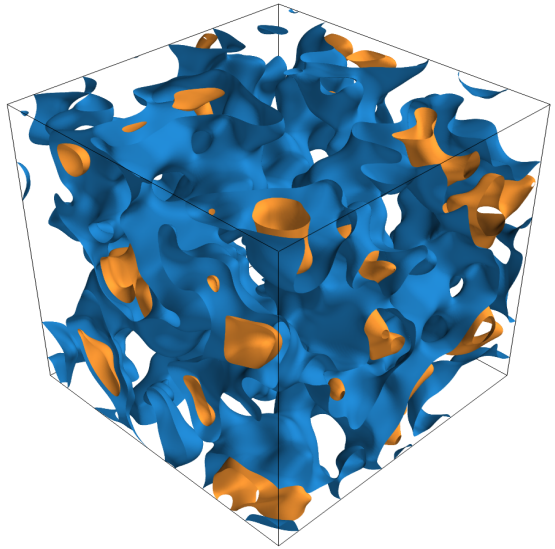
$$\frac{\partial \mathbf{B}}{\partial t} = \nabla \times (\mathbf{u} \times \mathbf{B}) + R_{\rm m}^{-1} \nabla^2 \mathbf{B}$$

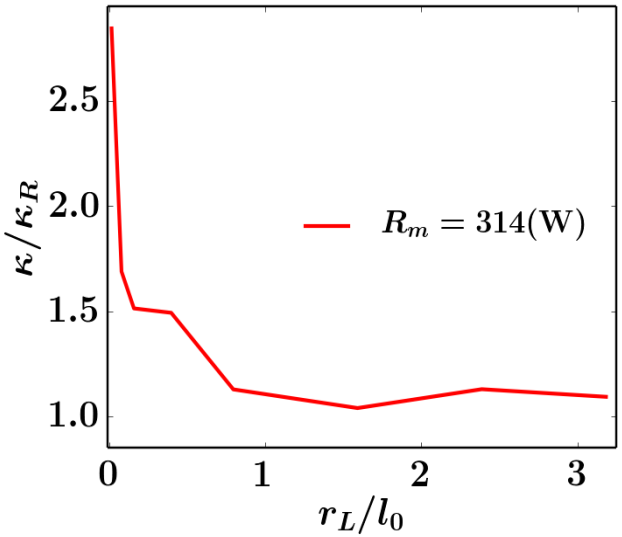
$$\mathbf{B}(\mathbf{x}) \xrightarrow{FT} \mathbf{B}(\mathbf{k}) \xrightarrow{R} \mathbf{B}(\mathbf{k}) e^{i\phi(\mathbf{k})} \xrightarrow{IFT} \mathbf{B}_R(\mathbf{x})$$

$$\mathrm{d}\mathbf{v}/\mathrm{d}t = \frac{e}{c}(\mathbf{v} \times \mathbf{B})$$

$$\kappa = \lim_{t \to \infty} \langle |\Delta \mathbf{x}(t)|^2 \rangle / (6t)$$







$\Longrightarrow$ **magnetic structures enhances cosmic ray diffusion**