

## Revisiting the ABC flow dynamo

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The Arnold-Beltrami-Childress flow is a prototype for fast dynamo action, essential to the origin of magnetic field in large astrophysical objects. Probably the most studied configuration is the classical 1 : 1 : 1 flow. We investigate its dynamo properties varying the magnetic Reynolds number  $R_m$ . We identify two kinks in the growth rate, which correspond, respectively, to an eigenvalue crossing and to an eigenvalue coalescence. The dominant eigenvalue becomes purely real for a finite value of the control parameter. Finally, we show that even for  $R_m = 25000$ , the dominant eigenvalue has not yet reached an asymptotic behaviour. It still varies very significantly with the controlling parameter. Even at these very large values of  $R_m$  the fast dynamo property of this flow cannot yet be established.