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# Mixing-induced pattern formation in an open active flow

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We describe how local mixing transforms a convectively unstable active field in an open flow into absolutely unstable. Presenting the mixing region as one with a locally enhanced effective diffusion allows us to find the linear transition point to an unstable global mode analytically. We derive the critical exponent that characterizes weakly nonlinear regimes beyond the instability threshold and compare it with numerical simulations of a full two-dimensional flow problem.