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Anna Ghazaryan, Yuri Latushkin and Xinyao Yang* (xinyao.yang@xjtlu.edu.cn), 411 Annex Ave, Apt. B4, Nashville, TN 37209. *Stability of multi-dimensional fronts in exponentially weighted norms.*

We consider a class of systems of reaction diffusion equations that frequently appears in combustion theory and chemical modeling. We study stability of traveling fronts in multi-dimensional cases. The essential spectrum of the operator obtained by linearizing the system about the front touches the imaginary axis, and thus we have to work in the intersection of the spaces of functions with and without exponential weights. We extend the stability theorems to the case of exponentially weighted spaces, and prove algebraic decay of perturbations of the front. (Received September 17, 2017)