

# RANDOM ATTRACTOR FOR STOCHASTIC HINDMARSH-ROSE EQUATIONS WITH MULTIPLICATIVE NOISE

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**Abstract.** The longtime and global pullback dynamics of stochastic Hindmarsh- Rose equations with multiplicative noise on a three-dimensional bounded domain in neurodynamics is investigated in this work. The existence of a random attractor for this random dynamical system is proved through the exponential transformation and uniform estimates showing the pullback absorbing property and the pullback asymptotically compactness of this stochastic cocycle.