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A Stability Investigation of Dynamically Evolved Tangled Nature Model[1] FERHAT TASKIN, OSMAN CANKO, KAMIL ARGIN, Erciyes University — An individual based Tangled Nature model has non-stationary macrodynamics of evolutionary ecology. System travels among the multi-space minimum through saddle point and stays in a valley, called quasi-steady states (qSS). We have compared the stability of sequential qSS by perturbation. To investigate stability of community, the perturbed and unperturbed systems are compared by their center of mass properties. Our primary results exhibit that the angle and distance between two center of mass shows a delayed response to perturbation for aged system. We have observed that the system evolves dynamically to the more stable states and shows robustness to external shocks with passing time.

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