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EXISTENCE OF CLASSICAL SOLUTIONS FOR FLEXIBLE SATELLITE SYSTEMS

To the memory of Pr. Ammar Khamouj, he died in 1/2/2024.

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Abstract. In this paper, we will investigate a satellite system with a double flexible panels and an internal nonlinear disturbance subject to dynamic boundary conditions. The existence of at least one classical solution is proved. Besides, we established the existence of at least two non-negative classical solutions are obtained. To analyze results obtained in different ways, various methods are used, including new iterative approaches with certain topological properties.

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