Review

Science, Biology

Neurospora circadian Rythms in space To test the functioning of circadian rhythms removed from periodicities of the earth’s 24 hour rotation, the conidiation Rhythms of fungus Neurospora crassa was monitored in darkness during spaceflight. The free –running period of the rhythm was the same in space than as on the earth, but there was a marked reduction in the clarity of the rhythm, and apparent a rhythmicity in some tunes.

The background and the purpose of the Neurospora circadian Rhythms was based on two main objectives:- to determine whether effect seen in space was related to removal from 24-hour periodicities and whether the circadian time keeping mechanism was , or merely its expression, was affected.

This experiment was monitored in contrast darkness on the STS 9 flight on the space shuttle Columbia. During the first 7 days, most tubes showed a marked reduction in the apparent amplitude of the conidiation rhythm and some cultures appeared arrhythmic. There was more variability in the growth rate and circadian rhythm of individual cultures in space than it is usually seen on earth.

The results of this experiment indicate that the circadian rhythm of Neurospora conidiation can persist outside of the Earth’s environment, either the time keeping processor or its expression is altered in space.

References:

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