

Theoretical calculation of Mars' background free oscillations

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Theoretical power spectral density of ground acceleration due to Mars' background free oscillations was estimated by using the recent atmospheric excitation theory (Fukao et al., 2002). Characteristics of atmospheric disturbance on Mars were scaled by the theory based on dimensional analysis (Kobayashi et al., 2001). The present result showed that with a careful installation of sensors equivalent to recent feedback seismometers it is possible to observe Mars' background free oscillations. Analysis of observed eigenfrequencies of low-frequency modes will give critical information on deep structure of Mars.