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The abnormal solid tide delay of geo-electric resistance and pulsations of harmonic tremble of geo-electricity field before M9.0 earthquake in India Ocean

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For the M9.0 earthquake of the west coast of northern Sumatra in India Ocean, whether the precursors can be recorded is one of the major scientific questions which are paid close attention. By using the remote controlling and detecting of small aperture network of PS100 IP in Sichuan and Yunnan province in China, we observed the phenomena of abnormal solid tide delay of electrical resistance and pulsations of harmonic tremble of geo-electricity with passive source in two months before the M9.0 earthquake in India Ocean. The PS100 small aperture network placed in Sichuan and Yunnan province in China is consist of 4 stations and distributes along the two sides Anninghe large fault in N-S directionN26 28, E100 102. As to eliminate the manual and natural disturbance of electric-magnetic field to the signal of electric resistance with active source, the PS100 system adopts the technique of digital signal processing system with pseudo random binary sequence. Its observation accuracy is better than 0.1The network started to observe in April, 2004 and continue up to now. In ordinary days one can observe solid tide of electric resistance with amplitude 0.5 1The theory and the experiments indicates that the change of geo-electric resistance reflects the change of stress and body-strain in hundreds meters deep under the observation station, while the change of geo-electric field reflects the change of pore pressure of liquids in the deep under the observation station. The American Geophysicists suggested that before the M9.0 earthquake, the earth wobbled slightly. Associating with this, the phenomena mentioned in this paper may be the results caused by the wobbling of the earth, the tide attraction and the pulsation of the earth rotation. The above phenomena are valuable to be further studied.

Keywords: geo-electric resistance, geo-electricity field, precursors, M9.0 earthquake in India Ocean