



LAIC Model – a Source for Integration between Ground and Satellite Observation of Seismo-Tectonic Activities

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The Lithosphere-Atmosphere-Ionosphere Coupling model developed recently together with experimental data used for the model validation put forward the doubtless and urgent need to reconsider our understanding of the earthquake preparation process in its latest stage (one-two weeks before the seismic shock). The four major results are the following: 1.The pre earthquake thermal anomalies consistently observed over different seismo-tectonic regions confirm the existence of radon variability to initiate the observed anomalies; 2.The thermal and ionospheric anomalies observed by the remote sensing satellites for all recent major earthquakes demonstrate that the area affected by the earthquake preparation process is quite large (from few hundred up to thousands of kilometers); 3. The area of earthquake preparation includes not only the region of epicenter of impending earthquake but also the active tectonic faults and the borders of tectonic plates one of which is the plate where epicenter is situated and others are the adjacent plates; and 4. The temporal dynamics of the thermal, and atmospheric anomalies as well as their altitude distribution from the ground surface up to the top of the atmosphere (TOA), the estimated thermal energy released imply that they are produced by the air ionization process and the source is the alpha radioactivity of radon. Presentation will provide valuable source of information for planning the ground-based gas released monitoring, radon observation and atmospheric/ iono-

spheric interpretation related to active faulting and earthquake preparation process.