

A Possible Statistical Approach to Address the Issue of Anomalous Values of Activity Concentrations

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One of the main challenges for the Comprehensive Nuclear-Test-Ban Treaty Organization verification regime is to be able to discriminate anomalous signals generated by underground nuclear explosions (UNEs) from those generated by other sources like medical isotope production facilities (MIPFs) and nuclear power plants (NPPs). The general method can consist in a procedure starting with the assessment of activity concentration's "anomalous values" and ending with the proper interpretation of the isotopic ratios. The first step to achieve this goal should be to establish a proper definition of activity concentration's "anomalous values". A possible statistical approach to address the issue of activity concentration's "anomalous values" against atmospheric background and to consequently suppose a proper definition of activity concentration's "anomalous values", is suggested by the Italian National Data Centre – Radionuclides to accomplish the purposes of the CTBTO verification regime.

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Promotional text

Statistical approach to properly address the issue of activity concentration anomalous values.

Oral preference format

in-person

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