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Statistical Technique for Estimation of Global Isotopes Releases Affecting Test Detection

A fairly good estimate of net global (or regional) release of isotopes from man made processes can be formed by a system based on estimates of total isotopes production across the world by all known (and to be known) facilities. These quantities can both be estimated, acquired or reported by the producers. Same can be used to determine release of CTBT related isotopes (Radio Xenon) by using different known techniques. Variations in results, from different techniques can be normalized by using mean values. A mid line of possible releases can therefore be formed. This mid line accordingly can be added to with upper and lower limit curves using both types of estimates while excluding outliers initially for inclusion post successful testing(s). A set of curves comprising different corresponding levels to which probabilities can be assigned can be formed. Accordingly, these curves can be validated over a specified time by comparing values with physically found results from sensors beside gradual perfection using validated data from various other means. This system can therefore help in validation of all test related detection(s) to a fairly accurate levels. Life span of the process can also be shortened using various related expedients.

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