

High sensitive Xe measurement

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Unfortunately only Xe133 usually detected in the air samples on IMS Noble Gas installations due to its relatively higher concentration in comparison with metastable xenon isotopes which concentrations in the ambient air are on few orders magnitude less and only within short distance to nuclear facilities it is possible to detect them. The new proposed method use Xe sample of big volume for each measurement (>100 cc of pure Xe) and MDC for Xe131m, Xe133, Xe133m and Xe135 in each measured sample are less than 10-5 Bq/m3. We produced a installation for purify the Xe sample from Xe-Kr mixture which are accumulated as a by-product during oxygen and nitrogen production from atmospheric air at different types of air separation plants. During the presentation the design of sample preparation unit, beta-gamma spectrometer suitable for big sample measurement together with the first achieved practical results will be presented.

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