ID: Type: **Poster**

T3.2-P08. Considerations on the application of preparative chromatograph in the OSI radioxenon processing system

Gas chromatograph (GC) with thermal conductivity detector (TCD) is indispensible for the OSI radioxenon processing system to be used to analyze the concentration of stable xenon to calculate recovery. The functionality of GC is not only to analyze the concentration of stable xenon but also to resolve other technical problems in the radioxenon system，including concentrating of xenon，and removal of impurities, such as H2O, CO2 and radon. It is intended to do research work on preparative chromatography and to explore the potentiality of GC to simplify the system structure, to hasten the sample processing velocity and to lessen the impurities content in sample prepared for the radioxenon measurement system. The basic operation is described as follows: appropriate volume of gas sample is injected into the GC by means of syringe or cylinder to enrich and analyze xenon，as well as to separate the impurities. The xenon component is collected at the outlet of GC for radioxenon measurement.

Primary author: ZHOU, Guoqing (Northwest Institute of Nuclear Technology)

Presenter: ZHOU, Guoqing (Northwest Institute of Nuclear Technology)

Track Classification: 3. Advances in sensors, networks and processing