# Response to Reviewers’ Comments

**SCOPE**

**Paper ID: #23040**

**Title:** The Promising Use of Volcanic Silica as an Environmental Source for Diagnostic X-ray Shielding Applications

**Dear Editor,**

First of all, I would like to thank you and the reviewers for your valuable comments. I tried my best to make the adequate changes.

# Reviewer: 1

## Comment 1

The English of the paper is not adequate. it needs significant improvement.

## Answer 1

**The language of the paper has been revised and necessary changes have been made.**

## Comment 2

The paper deals with only Monte Carlo Fluka code for simulating the experimental setup for x-ray shielding. However, a large section was devoted to describe the experiment, which was not performed by the authors.

## Answer 2

**I did not understand properly the reviewer's phrase “which was not performed by the author”. I did all the simulations by myself. The simulation procedures were described in subsection II.D.**

## Comment 3

The discussion is weak (almost none)

## Answer 3

**The discussion was revised.**

## Comment 4

All references are appropriate but not enough.

## Answer 4

**Some references have been added.**

## Comment 5

The title of the paper provided in the system is not the same as the one in the attached paper.

## Answer 5

## After obtaining permission from the Technical Program Committee, the title of the paper has been changed from “radiation characterizations of two isotopic neutron sources merging in one irradiator for experimental applications in the laboratory ” to “ The Promising Use of Volcanic Silica as an Environmental Source for Diagnostic X-ray Shielding Applications”.

# Reviewer: 2

## Comment 1

The author mentioned in the abstract that he used Monte Carlo Simulations to justify his experimental results. There is no information about the simulation in the text.

## Answer 1

**The simulation procedures were described in subsection II.D.**

## Comment 2

The abstract is repeated in the introduction with same sentences.

## Answer 2

**Adequate changes have been applied.**

## Comment 3

Cited references in the introduction mainly 1-6 are very general. No good reference that strength the proposed work.

## Answer 3

**Some references have been added.**

## Comment 4

For Radiation shielding, what are the level of natural radioactive contaminations. Shielding material should be free from radiation. More investigation is needed for that matter.

## Answer 4

**All the building material naturally has some levels of natural radiation. It is impossible to be free from radiation.**

## Comment 5

The fits for the points in Fig3 and Fig4 are bad. It should not be a connection between points. Error bars are not even shown in the figure.

## Answer 5

**Since these points are the results of the simulation and the errors were less than 0.1% (0.001 of the value) it was difficult to present error bars on the curve.**