

Response for comments

- “two neutrino emission double beta decay ” -> “double beta decay with two-neutrino emission” -> **done**
- “early fiscal year” is this necessary to have “fiscal”? -> **replaced by ‘May 2024’**
- “the observation will starting” -> will start or will be starting. -> **done**
- “photomultipliers (PMT)” -> “photomultipliers (PMTs)”. -> **done**
- “Therefore it is almost similar structure as KamLAND-Zen detector.” change to “Therefore, it has a structure almost similar to the KamLAND-Zen detector.” -> **done**
- “Those backgrounds should be serious” - are serious? -> **done**
- Introduce ROI. -> replace **‘Region of Interest’**
- Please take care that units and values are placed at the same line. -> **done**
- “which contained about 0.4 g” -> “which will contain about 0.4 g ” -> **done**.
- “2 neutrino double beta decay” use words or symbols. -> **done**
- “about 1 million backgrounds. ” -> “about 1 million background events”? -> **done**
- Please use the style provided by PoS for figures. Add capture to Fig1.-> **done**
- “and Zirconium tetrachloride (ZrCl₄) as a material of zirconium complex” do you refer here only to this material? The sentence sounds slightly confusing. -> **add ‘which is a material’**
- In “Assuming the radiation perpetual equilibrium, the expected number of backgrounds from the quartz are 1 million events for 208Tl and 6 million events for 214Bi per year, respectively. ” “number of backgrounds” sounds confusing. Please write it more clear and correctly.-> **replace ‘number of background events’**
- The same comment to the rest of the text. What do you mean under backgrounds? Sources as materials, as isotopes, etc?-> **replace ‘number of background events’**
- Add caption to Fig.2.-> **done**
- Check correct use of articles.-> **which one?**
- What do you mean when you say “the most serious background”? The most dangerous for the detection of...? -> **done**
- “We have made the special round bottom flask using the ultra-pure quartz. ” you or by Asahi? -> **removed**
- “The chimney could be” add link to the Fig.1.-> **removed**
- This sentence is contradicting previous one “However, the welding of Fluoro resin is typically so difficult that the company, which has some productions of the PTFE bag, is now testing the welding using the ETFE sheet. ”.-> **removed**
- “the transparency using the side PMT light yield could be calculated the ratio of peak position. ” using is missing?-> **rewrite ‘the transparency could be calculated by the ratio of**

peak position using the side PMT”

- “2 little of ZICOS liquid scintillator” is it correct? And did it started?-> 1 little is correct and it has already started.

- “2nu-ZICOS” - fix nu. -> done