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Interactive comment on "Extreme isotopologue disequilibrium in molecular SIMS species during SHRIMP geochronology" *by* C. W. Magee Jr. et al.

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GENERAL COMMENTS Magee et al. mainly discussed about ionic yield of U and Th as elemental species, monooxide species, and dioxide species for natural minerals (zircon, baddeleyite, and monazite) by using SIMS. The data are important and the topic is attractive for geochronology. In addition, the discussion is essentially useful for SIMS analyses. The data look fine quality and are well discussed. In this manuscript, suitable previous works are refered for discussion. Therefore, the manuscript is worth publishing in GI after minor revision.

Schematic figure of SHRIMP is helpful for reader. Explanation of samples in Method section is boring. Table compiling the samples is helpful for reader. The number of digits in Table 3 about Raman spectroscopic data is too large, especially FWHM. Usually,

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Discussion paper

one or two digits after the decimal point are useful.

SPECIFIC COMMENTS Following paper should be cited in the text. Compston, W. (2004). SIMS U-Pb zircon ages for the Upper Devonian Snobs Creek and Cerberean Volcanics from Victoria, with age uncertainty based on UO2/UO v. UO/U precision. Journal of the Geological Society, 161(2), 223-228.

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