

## ***Interactive comment on “A low activity ion source for measurement of atmospheric gases by CIMS” by Young Ro Lee et al.***

**Anonymous Referee #3**

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This manuscript describes chemical ionization method using a lower radiation source activity of 1.5 mCi with three commercially available anti-static ionizing cartridges (2U500, NRD), as opposed to using a P-2021 at 10 mCi or P-2031 at 20 mCi. The ionizing cartridges are available to the general public and these devices are used here without any modification. Since 2U500 can be shipped and received without radiation source licenses, this improvement simplifies logistics in field campaigns. So this is a necessary step towards reducing the activity level of radiation in aircraft and field experiments. However, the authors should also mention that even this low activities (e.g., 0.5 mCi) are not exempted and in many states, they still require a radiation source license (even when used in the lab on the academic campus).

Please elaborate (Line 50) “For example, we have found that a significant fraction of

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the 20 mCi ionizers have leaks on the body of the device.”

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Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2019-452, 2019.

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