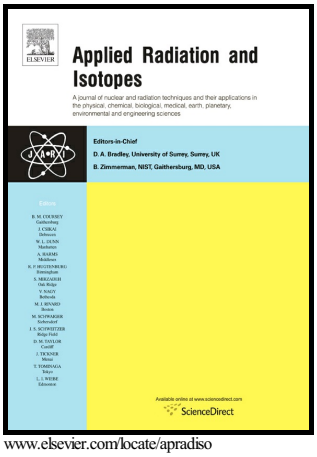

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PII: S0969-8043(17)31376-3
DOI: https://doi.org/10.1016/j.apradiso.2018.08.001
Reference: ARI8443

To appear in: *Applied Radiation and Isotopes*

Received date: 2 December 2017
Revised date: 30 July 2018
Accepted date: 2 August 2018

Cite this article as: Darío Rodrigues, Agustín E. Negri, Christian Balpardo, Andrés Arazi, Thomas Faestermann, Jorge O. Fernandez Niello, Leticia Fimiani, josé Manuel Gómez Guzmán, Karin Hain, Gunther Korschinek, Peter Ludwig and Guillermo V. Marti, Assessment of ^{53}Mn deposition on Earth via Accelerator Mass Spectrometry, *Applied Radiation and Isotopes,* https://doi.org/10.1016/j.apradiso.2018.08.001

Assessment of ^{53}Mn deposition on Earth via Accelerator Mass Spectrometry

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Abstract- The ^{53}Mn flux onto Earth is a quantity relevant for different extraterrestrial and astrophysical questions. It is a proxy for related fluxes, such as supernova-produced material or interplanetary dust particles. In this work, we performed a first attempt to assess the ^{53}Mn flux by measuring the ^{53}Mn/^{10}Be isotopic ratio in a 1400 L sample of molten Antarctic snow by AMS (Accelerator Mass Spectrometry). Using the ^{10}Be production rate in the atmosphere, an upper limit of 5.5×10^3 atoms cm^{-2} yr^{-1} was estimated for the deposition of extraterrestrial ^{53}Mn. This result is compatible with one of the two discrepant values existing in the literature.