

Winner of the 2019 IAG Young Scientist Award

Martijn Klaver



When Martijn received his award he was a senior research associate in isotope cosmochemistry at the University of Bristol where he studied planetary differentiation using a range of mass-dependent isotope systems.

Martijn got hooked on isotope geochemistry during his geology degree at the Vrije Universiteit Amsterdam. He was responsible for running the TIMS lab as a student-assistant and quickly took on developing mass spectrometry routines and calibrating spikes for isotope dilution measurements. Development of analytical techniques remained prominent during his PhD at the same institute as he moved onto the realm of double spiking with Pb. Taking advantage of the availability of then prototype $10^{13} \Omega$ resistors, he developed a technique for the high-precision measurement of ng-size Pb samples.

Martijn joined the Bristol Isotope Group in 2016 after finishing his PhD, where he developed and deployed novel methods in measuring mass-dependent isotope systems to study the differentiation of the Earth. With an optimised Ni double spike method, he showed that Earth's mantle is noticeably fractionated relative to chondritic meteorites, potentially reflecting a core formation signature. He further embraced the possibilities of critical mixture double spiking for studying both Si and Mg isotopic variability at high precision and employed the capabilities of Proteus, a prototype collision cell multi-collector mass-spectrometer, to examine the Ca isotopic systematics of the Moon.

Martijn is currently a Humboldt postdoctoral research fellow at WWU Münster, Germany.

When not indulging in this rich isotopic smorgasbord, Martijn enjoys hiking and playing korfbal.