

Myriam Telus

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Education:

Ph.D., Geology & Geophysics 2009 - 2015

*University of Hawai'i at Mānoa, School of Ocean and Earth Science and Technology,
Department of Geology & Geophysics, Hawai'i Institute of Geophysics & Planetology*

Advisor: Dr. Gary R. Huss

Thesis committee: Gary R. Huss, Kazuhide Nagashima, Alexander N. Krot, G. Jeffrey Taylor, and Jonathan P. Williams

Dissertation: Developing the ^{60}Fe - ^{60}Ni System for Early Solar System Chronology

B.S., Geophysical Sciences 2004 - 2008

University of Chicago, Department of Geophysical Sciences

Advisor: Dr. Nicolas Dauphas

Positions held:

Carnegie Postdoctoral Fellow 2015 - present

Carnegie Institution of Washington, Department of Terrestrial Magnetism

Analyzing *in situ* C, O and ^{53}Mn - ^{53}Cr systematics of carbonates using the ion microprobe to constrain the compositional evolution of fluids and the timing of aqueous alteration on carbonaceous chondrite parent asteroids. Also, analyzing the D/H ratios of phosphates from ordinary chondrites to understand the role of fluids and volatiles during thermal metamorphism of chondrites.

Graduate Research Assistant 2009 - 2015

*University of Hawai'i at Mānoa, School of Ocean and Earth Science and Technology,
Department of Geology & Geophysics, Hawai'i Institute of Geophysics & Planetology*

Analyzed *in situ* Fe and Ni isotope analyses of chondrules from unequilibrated ordinary chondrites (UOCs) using the ion microprobe in order to constrain the initial $^{60}\text{Fe}/^{56}\text{Fe}$ ratio of UOC chondrules for early solar system chronology.

Undergraduate Research Assistant 2004 - 2008

University of Chicago, Department of Geophysical Sciences

Analyzed the bulk Fe isotopic composition of granites, pegmatites and migmatites using ICPMS

Funding:

NASA Earth & Planetary Science Fellowship 2011-2014

Developing ^{60}Fe - ^{60}Ni chronometry to investigate early solar system processes

Successful proposals & awards:

Proposal (2014) XRF mapping of Ni in chondrules from primitive meteorites to constrain their metamorphic history, Advanced Photon Source #37510

Proposal (2014) XRF mapping of Ni and other trace elements in chondrules to constrain their metamorphic history, Australian Synchrotron #M7594
Proposal (2013), XRF mapping of Ni and other trace elements in chondrules to constrain their metamorphic history, Australian Synchrotron #M6665
Award (2011-2014) Travel to Meteoritical Society Conferences
Award (2013) Travel to 2013Rocks ALMA workshop, National Radio Astronomy Observatory
Award (2011) Watamull Scholarship for excellence in graduate research, University of Hawaii at Manoa
Award (2004-2013) Gates Millennium Scholarship

Publications:

Telus M., et al. In situ Fe-Ni isotopic composition of chondrules from unequilibrated ordinary chondrites. (in preparation).
*Telus M., et al. Mobility of iron and nickel at low temperatures: Implications for ^{60}Fe - ^{60}Ni analyses of chondrules from unequilibrated ordinary chondrites. *Geochimica et Cosmochimica Acta* (accepted).*
*Keil K., et al. (2014) The Vicencia meteorite fall: A new unequilibrated S1 LL3.2 ordinary chondrite. *Meteoritics & Planetary Science* 50, 1089-1111.*
*Telus M., et al. (2014) Revisiting ^{26}Al - ^{26}Mg systematics of plagioclase in H4 chondrites. *Meteoritics & Planetary Science*, 49: 929-945.*
*Telus M., et al. (2012) Recalculation of data for short-lived radionuclide systems using less-biased ratio estimation. *Meteoritics & Planetary Science*, 47: 2013-2030.*
*Telus M., et al. (2012) Iron, zinc, magnesium and uranium isotopic fractionation during continental crust differentiation: The tale from migmatites, granitoids, and pegmatites. *Geochimica et Cosmochimica Acta*, 97: 247-265.*

Presentations:

Telus M., et al. (2015) The ^{60}Fe - ^{60}Ni systematics of UOC chondrules, open-system redistribution compromises its usefulness. 46th Lunar & Planetary Science Conference, Abstract #2550. (Poster Presentation)
Telus M. (2015) Extinct radionuclides and the special case of ^{60}Fe . Washington University in St. Louis. (invited oral presentation)
Telus M. (2014) Early solar system chronology and the elusive Iron-60. Muséum National d'Histoire Naturelle. (invited oral presentation)
Telus M., et al. (2014) Synchrotron XRF Fe and Ni mapping and Ni XANES of UOC chondrules: Implications for interpreting ^{60}Fe - ^{60}Ni analyses. Meteoritical Society Conference, Abstract #5431. (oral presentation)
Telus M., et al. (2014) Synchrotron XRF mapping of Fe, Ni and other elements in UOC chondrules: Implications for interpreting ^{60}Fe - ^{60}Ni data. 45th Lunar & Planetary Science Conference, Abstract #2559. (poster presentation)
Telus M., et al. (2014) ^{26}Al - ^{26}Mg Systematics of plagioclase in H4 chondrites: Implications for the H-chondrite parent body. 45th Lunar & Planetary Science Conference, Abstract #2697. (oral presentation)
Telus M. (2014) Synchrotron XRF mapping of Fe, Ni and other elements in UOC chondrules: Implications for interpreting ^{60}Fe - ^{60}Ni data. Australian National University. (invited oral presentation)
Telus M. (2013) ^{60}Fe - ^{60}Ni systematics of chondrites: Then & now. Department of Terrestrial Magnetism. (invited oral presentation)
Telus M., et al. (2013) ^{60}Fe - ^{60}Ni systematics of chondrules from UOC QUE97008: Comparing results from in situ and bulk analyses. Meteoritical Society Conference, Abstract #5294. (oral presentation)

- Telus M.* & Huss G.R. (2013) Constraining timescales of processes in the early solar system. 2013Rocks ALMA workshop, National Radio Astronomy Observatory (poster presentation).
- Telus M.*, et al. (2013) Initial abundance of ^{60}Fe in unequilibrated ordinary chondrites. 44th Lunar & Planetary Science Conference, Abstract #2964. (poster presentation)
- Telus M.*, et al. (2012) A test of possible ratio bias in ^{26}Al - ^{26}Mg measurements of plagioclase from the H4 chondrite Ste. Marguerite. Meteoritical Society Conference, Abstract #5364. (oral presentation)
- Telus M.*, et al. (2012) Reevaluating our understanding of the ^{60}Fe - ^{60}Ni system in chondrites. 43rd Lunar & Planetary Science Conference, Abstract #2733. (oral presentation)
- Telus M.* et al., (2011) The initial abundance of ^{60}Fe in the inner solar system: Evidence from chondrites. Workshop on Formation of the First Solids in the Solar System, Abstract #9127. (invited oral presentation)
- Telus M.* et al., (2011) Development of SIMS Multicollection Fe and Ni Isotopic measurements. Biennial Geochemical SIMS Workshop.
- Telus M.* et al., (2011) Development of routine Multicollection Ni-isotopic analysis of Fe-rich silicates by ion microprobe. Meteoritical Society Conference, Abstract #5326. (oral presentation)
- Telus M.* et al., (2011) Possible heterogeneity of ^{60}Fe in chondrules from primitive ordinary chondrites. 42nd Lunar & Planetary Science Conference, Abstract #2559. (oral presentation)

Professional service:

- Co-mentor*, (2014-2015) Space Grant Trainee, ‘Secondary Minerals in Lava Tubes on Mauna Loa
- Guest lecturer* (2013- Present) Voyage through the Solar System, University of Hawai‘i at Mānoa
- Guest speaker* (April 2014) Careers in Geology and Planetary Science, St. James School, Philadelphia, PA, 5, 6, & 7th grade
- Coordinator* (Fall 2011 – Spring 2014) HIGP weekly seminars
- Executive secretary*, (2013) Cosmochemistry Review Panel
- Teaching assistant*, (2012) Voyage through the Solar System, University of Hawai‘i at Mānoa

Society memberships:

- Meteoritical Society
 Geochemical Society
 Geological Society of America