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Presentation of the 2021 MSA Distinguished Public Service Medal to Denton Ebel

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It is an honor to give the citation for Denton Ebel, recipient of the Mineralogical Society of America Distinguished Public Service Medal. Denton has made numerous contributions to the scientific community, enhancing public awareness and education in the Geosciences and in training the next generation of geoscientists. Through lectures, museum exhibitions, and the development of public programs, he has served to bring the excitement of Earth and Planetary Sciences to the public. His work with students at many levels of education has increased their appreciation of the Geosciences, especially in the Mineralogy and Geochemistry of meteorites, inspiring many young potential scientists. I have always been very impressed by his generosity. He is always willing to take the time to talk with students, explain scientific concepts to them or show them meteorites from the museum's collection, always having an interesting story to tell them about the meteorites he shows.

The Arthur Ross Hall of meteorites is a major exhibit at the American Museum that serves to educate the public. When Denton first came to the museum, as meteorite curator, in 2001, he headed a major revision of the Meteorite Hall, revising it to reflect more of the current concepts in the Planetary Sciences and completely reorganizing it to a more process-oriented exhibition, focusing on how meteorites inform us about the origin of the Solar System and geologic processes on early-formed planetesimals and asteroids. About 5 million people visit the museum each year, and many of them experience the Hall of Meteorites. It is also a major teaching resource for schools throughout the New York area and beyond.

Another activity impacting a large number of people is Denton's work on the Hayden Planetarium Space Show "Worlds Beyond Earth." He was the lead curator in developing this show, which introduces the public to the other worlds in our solar system and their geological features, using spectacular imagery projected onto the Planetarium dome. The show presents the evolution of the Solar System and comparative planetology, with a direct application of the knowledge gained to implications for climate change. Every scene is a visualization of either real data from space missions or physics-based simulations, all chosen by Denton and his team. Millions of museum visitors view this show each year. It is also licensed around the world to over 40 other planetariums, adding many more viewers.

The space show utilizes Open Space visualization software. Denton organized the fundamental collaboration to utilize this NASA-funded open-source tool for the visualization of Earth and planetary imagery.

In addition to public education, Denton has always been generous in giving his time to serve the scientific community, serving on numerous NASA review panels as well as committees for evaluating different methods for geoscience data storage, archiving, and making planetary science data publicly available. Denton's curation of the museum's meteorite collection is another important aspect of service. Under his curation, the collection has been safely stored and has strategically grown. Denton always tries to maximize the amount of information gained from the materials loaned to other institutions or used in-house for research purposes. His efforts will ensure that the collection will be available for future generations of educators and researchers.

Denton has also contributed to the vitality of Meteoritics and Planetary Science. He served as chair of the local organizing committee for the 73rd Meteoritical Society Meeting in 2010, which was hosted in New York City by the American Museum and City University of New York (CUNY). Denton devoted a considerable amount of time to make the event very successful and memorable both in terms of the science presented and in bringing together over 480 planetary scientists, geochemists, and students from around the world. He made a particular effort of working with The Society and donors to generate travel support for a large number of graduate students, as well as scientists from low-income countries, so they could attend the meeting.

Denton's contributions to Geoscience education are also exceptional. He teaches courses at Columbia University and is currently the advisor for Ph.D. students from both CUNY and Columbia. He has inspired undergraduate students through the Research Experience for Undergraduate (REU) Program, an NSF-funded summer intern program held at the museum. Denton is currently a Co-PI of the grant that supports this program and has been mentoring undergrads each summer for more than 10 years. Some of these students have since gone on to achieve their doctorate degrees in the geosciences.

Denton is also a faculty member of the American Museum's Master of Arts in Teaching (aka, MAT) Program in Earth and Astrophysical Sciences, which is administered through the Richard Gilder Graduate School at the museum. This is an innovative program for training a new generation of Earth Science teachers. It provides high school teachers with knowledge of the latest trends and issues in the Geosciences, gives them a research experience, includes trips to study geology in the field

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(often led by Denton), and trains high school teachers to bring the excitement of the Geosciences into urban classrooms. This program serves as a seed to continually educate students in the future through the graduates of the program.

In summary, Denton has given a great deal of effort to education and professional service and does so with great integrity and generosity. He is always eager to talk to students and generate interest and enthusiasm in young, potential scientists. He has an impressive record of Public Service to the Geoscience Community and to Geoscience education. He has utilized his position at the museum to successfully bring Geoscience and Planetary Science to the general public, continually keeping the public involved in the excitement of the latest developments. Mr. President, members of the Society, it is a pleasure to present the Mineralogical Society of America Distinguished Public Service Medal to my friend and colleague Denton Ebel.