

**INTERDISCIPLINARY COLLABORATION FOR OUTREACH BY YOUNG SCIENTISTS IN A JAPANESE UNIVERSITY.** T. Toyota<sup>1,2</sup> and S. Kasahara<sup>2,3</sup>, N. Narita<sup>4</sup>, T. Hirasawa<sup>2</sup>, M. Watanabe<sup>5</sup>, C. Kodera<sup>2</sup>, N. Homma<sup>2</sup>, Y. Kaburagi<sup>7</sup>, H. Yokoyama<sup>2</sup> and Oto1<sup>8</sup>, <sup>1</sup>toyota@eri.u-tokyo.ac.jp / Earthquake Research Institute, 1-1-1 Yayoi Bunkyo-ku Tokyo, Japan, <sup>2</sup>The University of Tokyo, Japan, <sup>3</sup>Institute of Space and Astronautical Science, Japan, <sup>4</sup>National Astronomical Observatory of Japan, Japan, <sup>5</sup>Rikkyo University, Japan, <sup>7</sup>Yahata Elementary School, Japan, <sup>8</sup><http://sc.adm.s.u-tokyo.ac.jp/0to1/>.

**Abstract:** There are many groups performing science communication in Japan. However, most of them consist of only members who specialize in science communication

Our group, named “0to1: Zero to One”, mainly consists of graduate students of the University of Tokyo in Japan. Most of the members of 0to1 are not outreach specialists and want to be scientists in the future. We are communicating with each other beyond the bounds of the departments, and performing various outreach activities.

In this paper, we introduce our activities for interdisciplinary communication of young scientists in a Japanese university. We also report an educational activity of the Astrobiology Class at an elementary school in Japan, performed by members of 0to1 and other collaborators.

**Introduction:** The number of Japanese science communicators increased rapidly in the last couple of years. However, the importance of scientist’s ability to communicate with the public hasn’t been treated as an important matter in Japan.

Some Japanese scientists still think outreach activity has nothing to do with their research activity. Outreach activity is usually performed by outreach specialists in Japan. However, outreach activity that is performed by scientists themselves is beneficial to both scientists and the public. People can improve their science-literacy without misunderstanding if they are directly taught by scientists. Scientists can get good understanding from the public if they perform outreach by themselves.

Our group, named “0to1: Zero to One” (<http://sc.adm.s.u-tokyo.ac.jp/0to1/>), mainly consists of graduate students who aim to be not outreach specialists but scientists. We are communicating with each other beyond the bounds of the departments, and performing various outreach activities. Our activities are subdivided into two types.

The first type of our activity is inter-department communication for young scientists. Ordinary Japanese universities are divided vertically into departments that have little contact with one another. Our activity will make it easier to do interdisciplinary research.

The second type of our activity is interdisciplinary collaboration for outreach. The members of 0to1 have

various specialties, for example, planetary science, physics, biology, chemistry, mathematics, and so on. We can perform an outreach which subject is interdisciplinary such as astrobiology.

In this paper, we introduce the activity of 0to1, and report an educational activity of the Astrobiology Class at an elementary school in Japan, performed by members of 0to1 and other collaboration.

**Activity of 0to1:** We 0to1 performs (1) inter-department communication activity and (2) interdisciplinary outreach.

*(1) Inter-department Communication Activity*

0to1 performs activities below.

- Interdisciplinary Lunch Seminar: young scientists who have various specialties gather every weekend, and give a talk freely.
- Making a Podcast: our Podcast introduces the latest research developments in our university.

*(2) Interdisciplinary Outreach*

Our educational activities at high school, junior high school, and elementary school are good examples of interdisciplinary outreach. We introduce “the Astrobiology Class” that was performed by young scientists and some members of 0to1.

We performed an educational activity of the Astrobiology Class at an elementary school in Japan [1, 2], from November 2007 to February 2008. Astrobiology is an interdisciplinary field that consists of such as astronomy, planetary science, biology, and so on. Accordingly, we can efficiently combine many pieces of scientific topics into a spectacular scenario. This activity was organized by young scientists in many research areas in cooperation. The activity was conducted for all 5th year students at Yahata elementary school in Soka city, Saitama, Japan. The significant properties of the activity in Yahata elementary school are (1) the series consisted of 6 lessons through 3 months, (2) the lesson plans were prepared along with the private policy of the school, (3) graduate students made the lesson plans and indeed gave lessons, (4) a teacher in the school also gave lessons in collaboration with graduate students, and (5) we gave the lessons for every classroom.

Such a group like 0to1 that consists of scientists who have various backgrounds is optimum organizational form to perform interdisciplinary outreach.

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**References:** [1] Kasahara, S. et al. (2008), *Asia Oceania Geoscience Society 5<sup>th</sup> Annual General Meeting*, PS-ST-AS01-A004. [2] Toyota, T. et al. (2008), *European Planetary Science Congress*, EPSC2008-A-00410