

Popularization of Astronomy under Cooperation between Students and Educators in Japan: the TENPLA project (1)

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ABSTRACT

We present the concepts and products of the TENPLA project, a unique activity in popularization of astronomy under cooperation between students of astronomy and educators in Japan. The goal of the project is to show the true, latest and exciting results of astronomy, and to let more people be familiar with astronomy and find pleasure in astronomy, as they enjoy sports and fine arts. Our mailing list has about 200 participants, including 80 university students. The members share information and exchange views on various educational activities. Derived from the discussions, we have proposed some innovative materials for popularization of astronomy. Our "Astronomical Toilet Paper (ATP)" is a novel tool which enables public people to get close to astronomy. We have also developed a typing game "Sora-Uchi" and a Japanese card game "Astro-Karuta". These products have won a lot of coverage in the mass media and this helps to awake people's interest in astronomy. In this paper, we show the details of our projects and responses of the public.

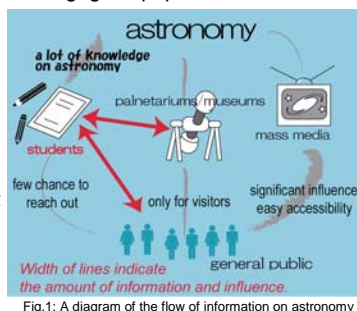
Motivation

The TENPLA Project is a cooperative network of astronomy students, planetarium/museum staffs, and those who engage in popularization of astronomy in Japan.

Students are always close to the latest astronomy, but have few chance to outreach just by themselves.

On the other hand, mass media have a significant influence to the public and easy accessibility although they are not always show the real universe.

So, we have tried to build up a network between students and educators for popularization of the latest and real astronomy. This is the TENPLA network.



Activities

The TENPLA project has some sub-projects and working groups (WGs).

- No.0: TENPLA Mailing list
- No.1: Astronomical Toilet Paper (ATP)
- No.2: Online Typing Game "SORA-UCHI"
- No.3: TENPLA Astronomy Archive of public domain images
- No.4: Astro-KARUTA WG
- No.5: Science Café WG
- No.6: Traveling Lecture in Hospital
- No.7: "Mitaka Project" – Community-based Learning of Astronomy

For No. 5,6,7 please see SPS2-95, Kamegai et al.

BASIC CONCEPTS:

- We show the true, latest, exciting results of astronomy under cooperations between students and educators.
- Target is the general public, not only "astronomy-lovers."
- We develop novel and innovative ways of popularization of astronomy.

sub-project #0: TENPLA Mailing List

An important foundation for the TENPLA project.
A place for interaction and information interchange.

201 participants: 85 astronomy/physics students (51 graduates)
41 planetarians / museums staffs
75 university/institute staffs, amateur astronomers

Some cooperative activities :

- Lectures by graduate students in science museums,
- Collaboration in planetarium programs,
- Coproduction of innovative educational material.

sub-project #1: Astronomical Toilet Paper (ATP)

Bring fruits of astronomy into your daily life !

We print astronomical topics on the paper sheet of the ATP!

To become familiar with astronomy, it is the best way to inject astronomy facts into your daily life. (English version is not available yet.)



Theme of the ATP: the Life of Stars

Cycles of the life of stars:

Molecular Cloud, Protostar + Jet, T Tauri + Proto-planetary Disk, Main-Sequence Star + Planets, Red Giant, and Planetary Nebula.

Unit of printing size : 70cm repetition (restricted by technical problem)

In this unit, we show the life of a star with 6 illustrations & expository writing.

Life of stars is also CYCLIC ! **10-billion years in 70cm !**

ATP prototype is funded by the NISSAN Science Foundation.

Appeared on some Newspapers, TV programs, Magazines...

ex) the Science Magazine 2006.03.10 issue

A science magazine in France, Canada, and Argentina.

Available commercially : Over 17,000 ATPs have been sold in 17 months.

→ We bring astronomy in successfully to those who take no notice of scientific events or museums in their daily lives. This is the important and huge first step of popularization of astronomy.

sub-project #2: Online Typing Game "Sora-Uchi"

A web browser-based FLASH typing game.

Free play on the Internet.

- ◆ Type as many technical terms as possible on astronomy and space development ("Venus", "Subaru", "ALMA", "protoplanetary disk", "cosmic microwave background" etc. .)
- ◆ After a play, you can read precise descriptions about terms you typed.
- ◆ Also you can jump to related web pages.



sub-project #4: Astro-KARUTA

Karuta is a Japanese traditional card game.

The words in the "reading cards" are read and players have to find its associated "grabbing cards" before anybody else does.

In Astro-KARUTA cards, astronomical topics are written. Playing this Karuta, you can take into be familiar with astronomy naturally.



We also prepare for astronomy-lovers. In the backside of grabbing cards, precise astronomical facts and data sheets are described.

You can choose ways of playing, depending on the degree of knowledge.

Other Activities & Summary

Some events such as star parties, science café, and cooperative projects with hospitals and local NPOs are introduced in SPS2-95, Kamegai et al.

We have much more projects and ideas, still in preliminary stages. All are innovative and novel ways, and we will continue to develop various ways of popularization of astronomy for much closer to general public, in much more appealing ways.