



## Stargazing Workshop by University Students in Okinawa

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**Abstract.** Okinawa Prefecture has a beautiful southern starry sky. We visited two isolated islands in Okinawa Prefecture and held a stargazing workshop in order to give a chance to people in the region to realize the charm of a starry sky and learn about astronomy. We guided them, not only through the starry sky, but also giving insights of the local culture in connection with stars and constellations.

### 1. Introduction

The isolated island areas in Okinawa Prefecture, southwest Japan, have an amazing starry sky with little light pollution. This is advantageous to astronomy education in the sense that we can find various "natural" teaching materials (such as stars, planets, constellations, etc.). On the other hand, and since there are no universities in these areas, there are very little opportunities for school kids; junior and senior high school students, to communicate with university students and to learn about stars, constellations and the Universe in general.

Furthermore, in recent years, universities are required to contribute to the local community. Therefore, the authors started a community building project named "Okinawa Space School", and in 2017, visited two isolated islands holding a stargazing workshop for the residents, mainly for school students.

### 2. Method

#### 2.1. University COC program "Chura Pro"

"Chura Pro" is a project in which the students of University of the Ryukyus go to a local community and collaborate with the local people for community building by discovering problems and solving it independently.

This project was implemented under the universities' COC (Center Of Community) program funded by the Japanese government.

#### 2.2. Stargazing workshop "Okinawa Space School" Curriculum

1. Story of Space and Astronomy (indoors)
2. Talk about Okinawa folklore based on stars
3. In case of good weather: Workshop of Astronomical observation (outdoors).

In case of bad weather: Quizzes about "Space and Astronomy", learn to operate an astronomical telescope.

### 3. Result

We could provide an opportunity of exchange between university students and remote island children.

The students were able to learn more about the area through planning and implementing the classes in collaboration with the local people.

The authors got an opportunity to think deeply about local issues.

The school had a lot of echoes and was asked for continuation

### 4. Discussion

If we can organize this flow of the implementation of the class as one model and advance it to the flow of University → Local government → Country → World flow, we can contribute to astronomy education.

### 5. Future Work

1. Move from a student-based project to a community-based project.
2. Make a contrivance that students go to the local community.
3. Development of an evaluation method.

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