

## Syllabus Reference

Course title	Observation Experiment I B		
Term	通年(前期開始) Whole Year		
Credit(s)	2		
The main day		The main period	
School/Program	School of Physical Sciences		
Department/Program	Department of Astronomical Science		
Category	Common		
Lecturers	K. Hada, S. Ishii, R. Kawabe		

Instructor	
Full name	
* HADA KAZUHIRO	
KAWABE RYOHEI	

Outline	Learn the fundamentals related to radio astronomy observations by lectures and practice radio astronomy observation method and data analysis using the VERA Mizusawa radio telescope system etc
Goal	Aim to be able to explain the outline of radio astronomical observations and experience using observation equipments related to radio astronomy
Grading system	
Grading system	01:Four-grade evaluation (A, B, C, D)
Grading policy	Evaluate based on the report after completion (100%)
Lecture Plan	<ul style="list-style-type: none"> <li>▪ Planned for 3days during late August 2022 (exact dates to be determined)</li> <li>Lecture and Practice</li> <li>▪ About radio astronomy (lecture)</li> <li>▪ Radio telescopes and VLBI principle (lecture)</li> <li>▪ Lunar and planetary exploration method by radio measurements (lecture)</li> <li>▪ Measurements of receiver temperature (lecture, practical training)</li> <li>▪ Performance evaluation of radio telescopes (lecture, practical training)</li> <li>▪ Protection of radio astronomy from radio interference (lecture, practical training)</li> <li>▪ Observations of molecular emission lines and spectral analysis (lecture, practical training)</li> <li>▪ Basics of measuring instruments for radio astronomy observations (lecture, practical training)</li> </ul> <p>Faculty members affiliated with the Mizusawa VLBI Observatory provide support for practical training.</p>
Location	Mizusawa VLBI Observatory (Keyaki Kaikan Meeting Room, VERA Radio Telescope and VERA Observation Building)
Language	English and Japanese
Textbooks and references	Reference book: John D. Kraus, RADIO ASTRONOMY, Cygnus-Quasar Books
Related URL	<a href="http://www.miz.nao.ac.jp/">http://www.miz.nao.ac.jp/</a>
Explanatory note on above URL	HP of the National Astronomical Observatory Mizusawa campus
Others	Stay at Keyaki Kaikan (Guest House of the Mizusawa VLBI Observatory) for 3 nights

