



# Satellite Meteorology -1 (12 Apr.) Guidance

*Hiro Masunaga (ISEE)*

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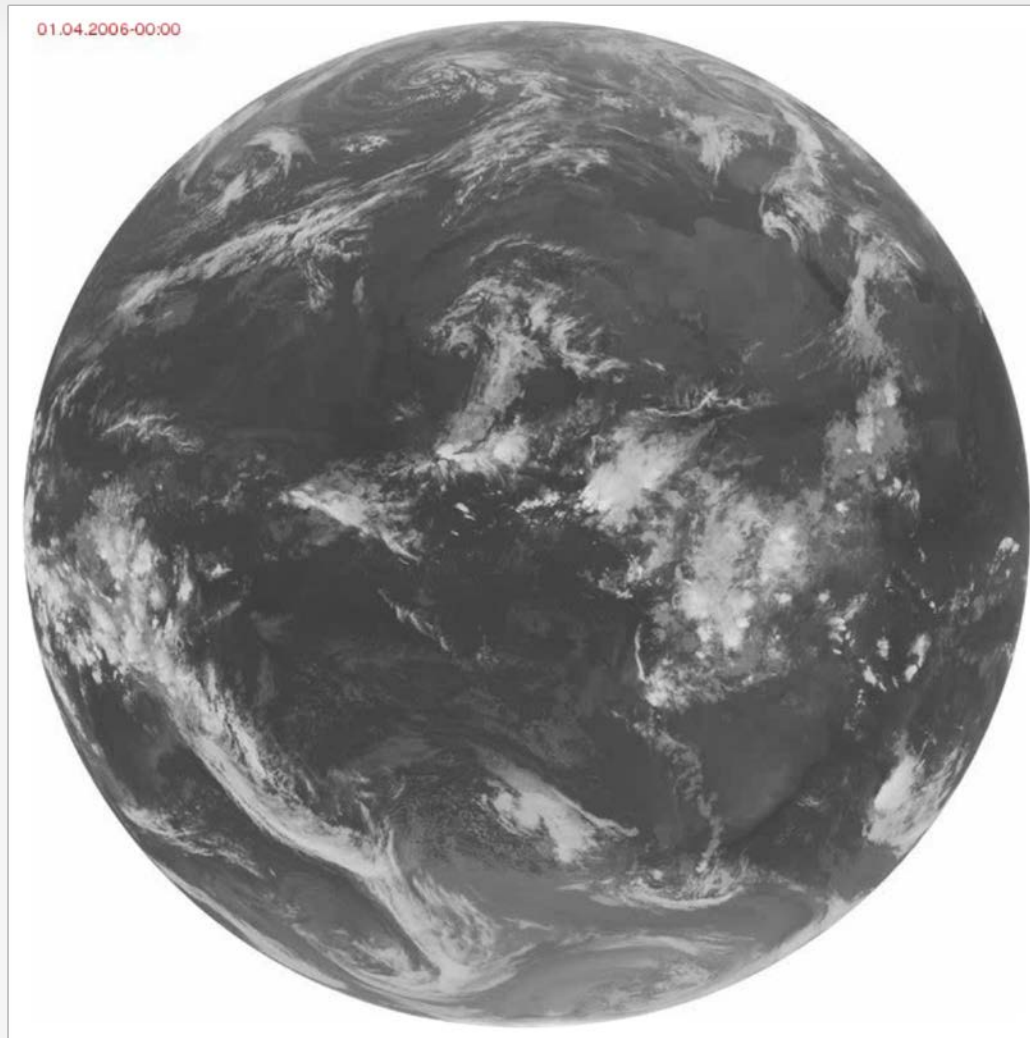
# An example: Himawari 8

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- ▶ **Geostationary Meteorological Satellite “Himawari 8”**
  - ▶ Launched in 2015 and now in operation
  - ▶ From CEReS of Chiba Univ. You Tube official channel
    - ▶ [16 May 2015 global scans](#)
    - ▶ [Typhoon zoom-up on the same day](#)
    - ▶ [26-28 Apr 2015: yellow sands](#)
    - ▶ [12-19 Aug 2015 :twin cyclogenesis](#)
    - ▶ [25 Feb 2016: Karman vortex](#)
    - ▶ [9 Mar 2016: total eclipse over SE Asia](#)

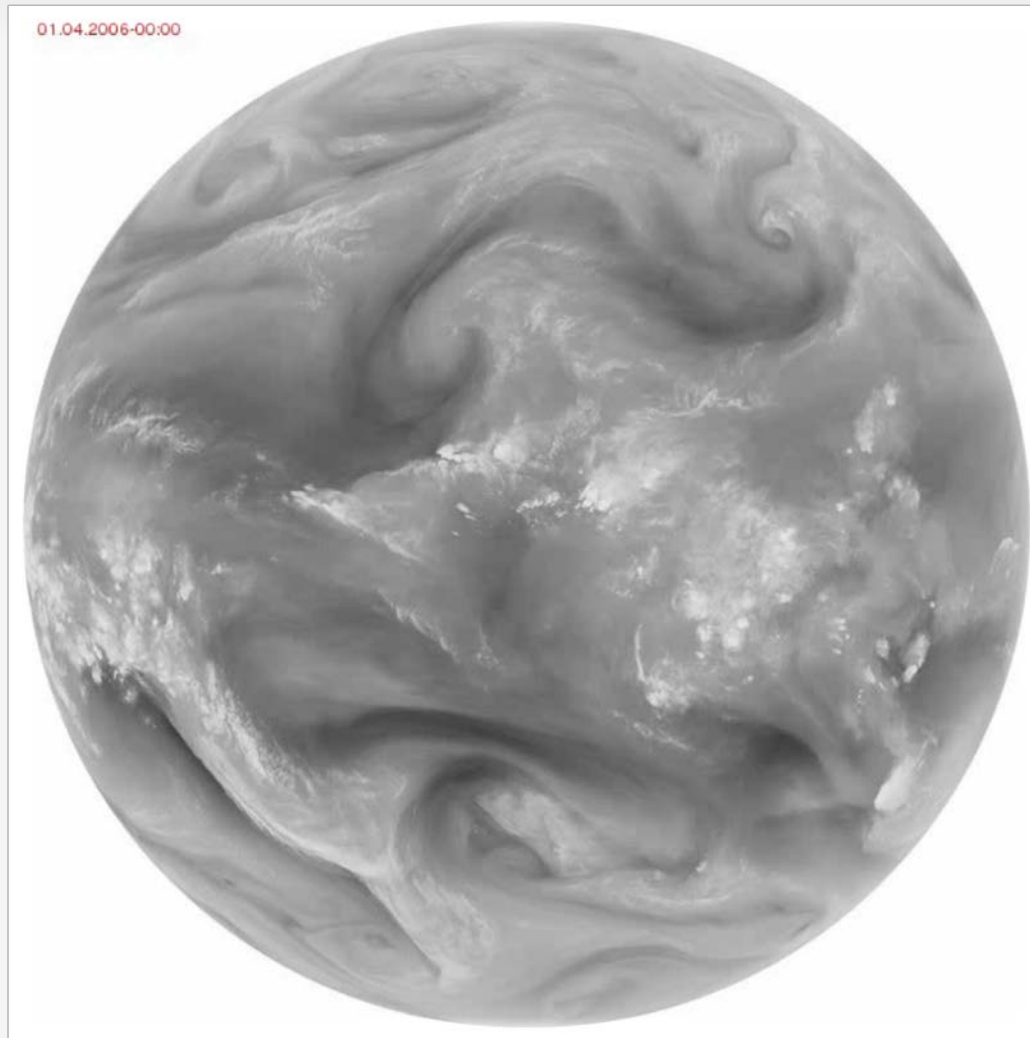
# European Geo Satellite MeteoSat: Channel 9

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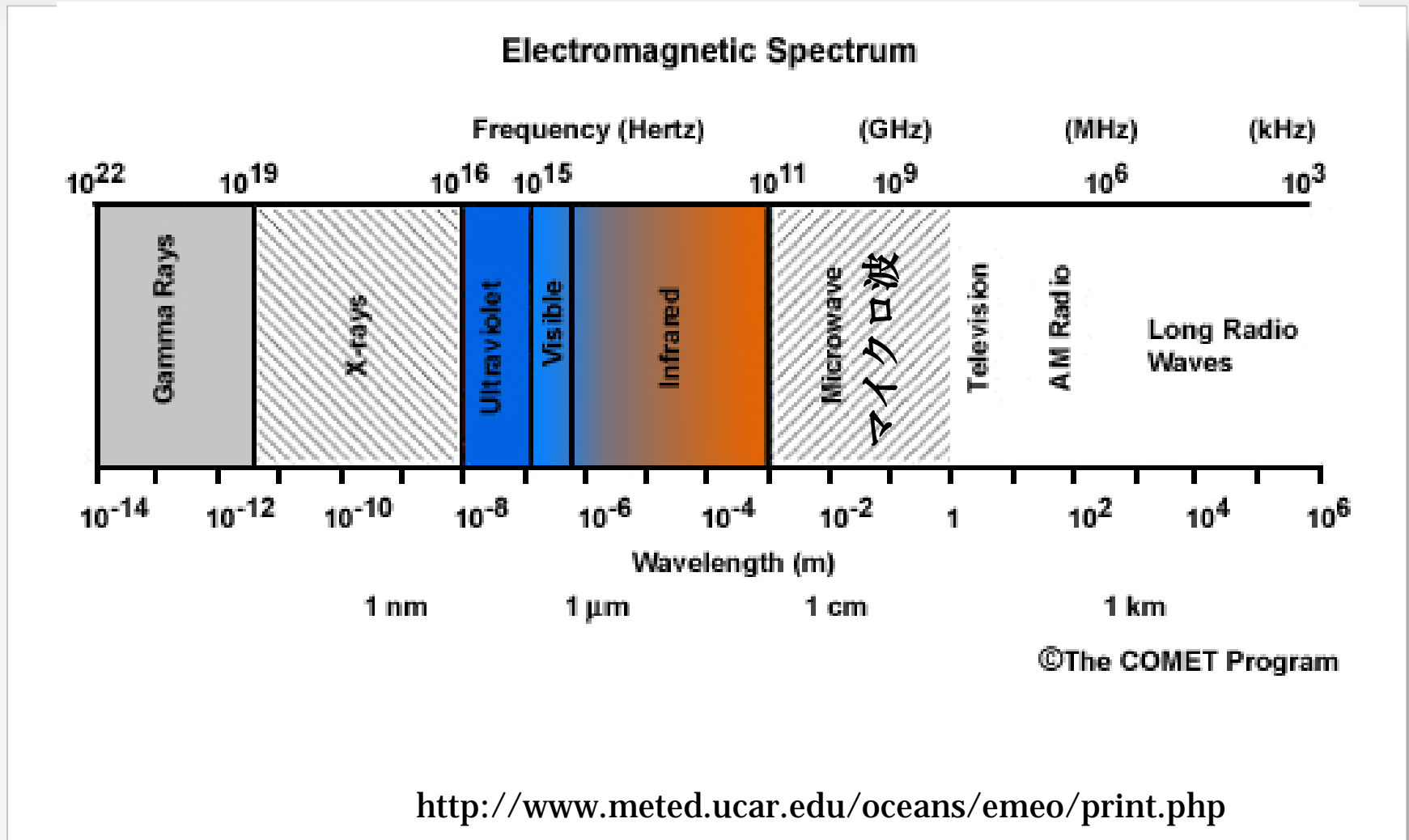


# European Geo Satellite MeteoSat: Channel 5

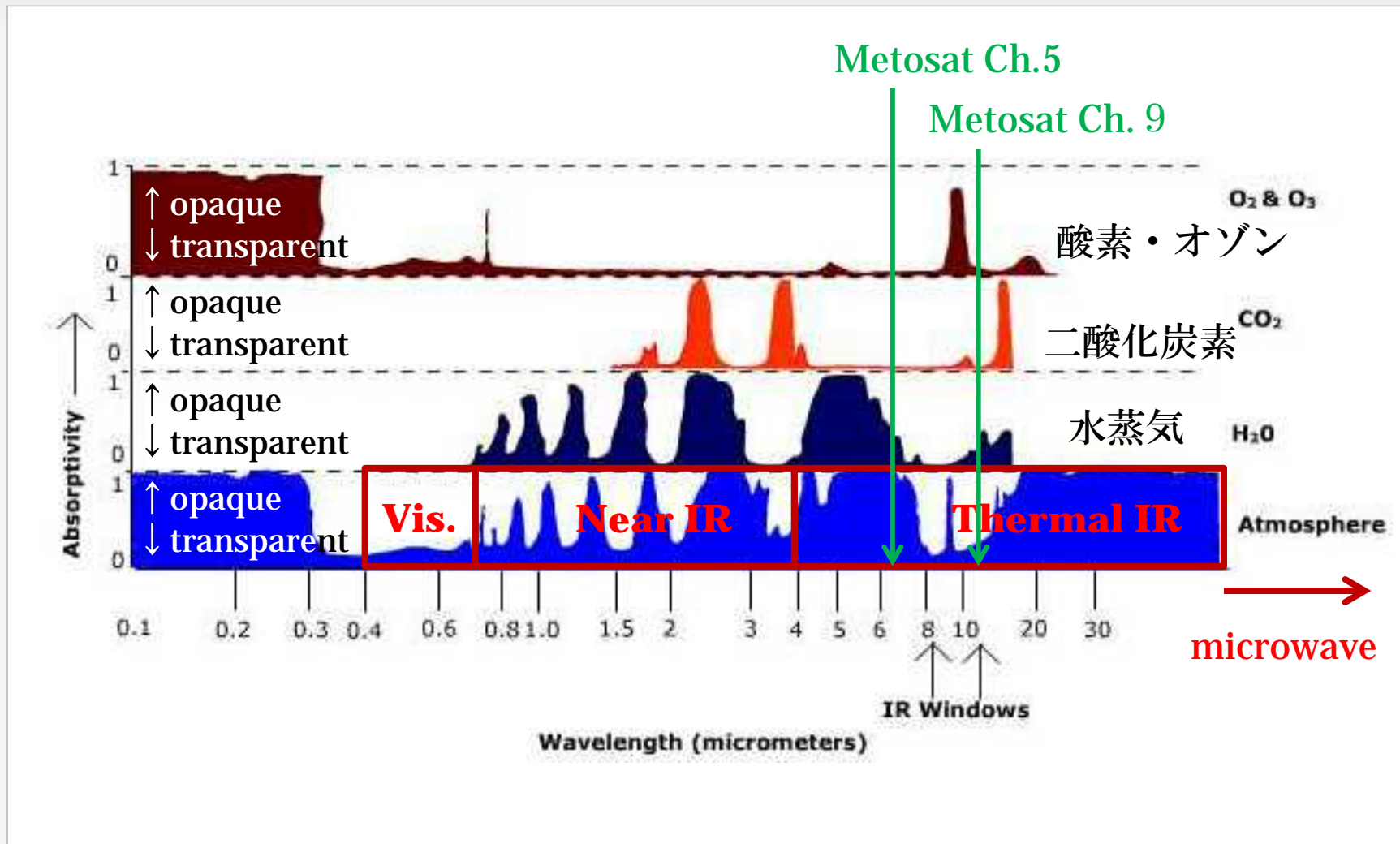
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# Electromagnetic spectrum



# Transmittance of the Earth atmosphere



# Class schedule

	4/12	Guidance
Basics	4/19	(Cancelled)
	4/26	Overview of satellite meteorology
	5/10	Satellite orbits
	5/17	Thermal infrared remote sensing
	5/24	Visible remote sensing
	5/31	Microwave remote sensing
	6/7	Atmospheric obs. by active sensors
	6/14	Atmospheric obs. by satellite sounders
	6/21	Basics of retrieval algorithms
Applications	6/28	Satellite obs. of clouds and aerosols
	7/5	Satellite obs. of precipitation
	7/12	Satellite obs. and tropical meteorology
	7/19	Summary (and term-end assignment)

# Grading

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## ▶ Grading basis

- ▶ Homework (30%) and term-end assignment (70%).

## ▶ Assignments and textbooks

- ▶ Homework will be assigned a few times during the course. No textbook is specified.

## ▶ Other comments

- ▶ Basic knowledge of classical mechanics, thermodynamics, and electromagnetic theory is prerequisite.
- ▶ The term-end assignment will be required for credit to be granted. In case that homework submission cannot be turned in in time due to participation in a field campaign etc., consult with the instructor.



# Other announcements

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## ▶ Contact of the instructor

- ▶ Hiro Masunaga (ISEE, Nagoya University).
- ▶ Research Institutes Building, Room 625.
- ▶ [masunaga@nagoya-u.jp](mailto:masunaga@nagoya-u.jp)

## ▶ Course materials

- ▶ Available online.
  - ▶ <http://precip.hyarc.nagoya-u.ac.jp/~masunaga/courses-j.html>
  - ▶ Login ID: student
  - ▶ Password: satmet
- ▶ Will be uploaded by the previous day to each class.