

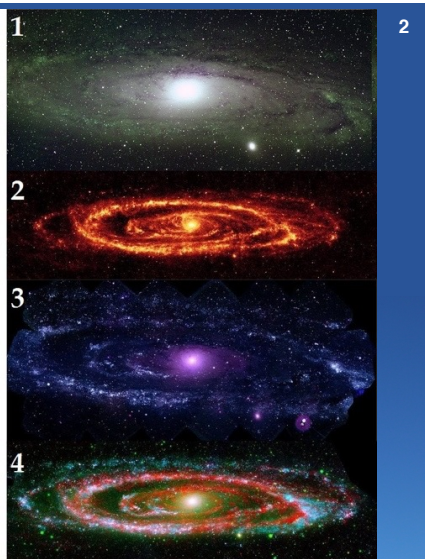
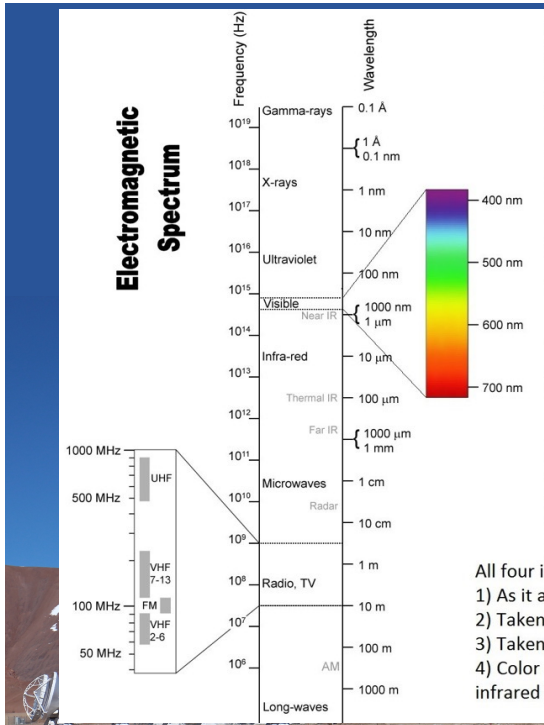
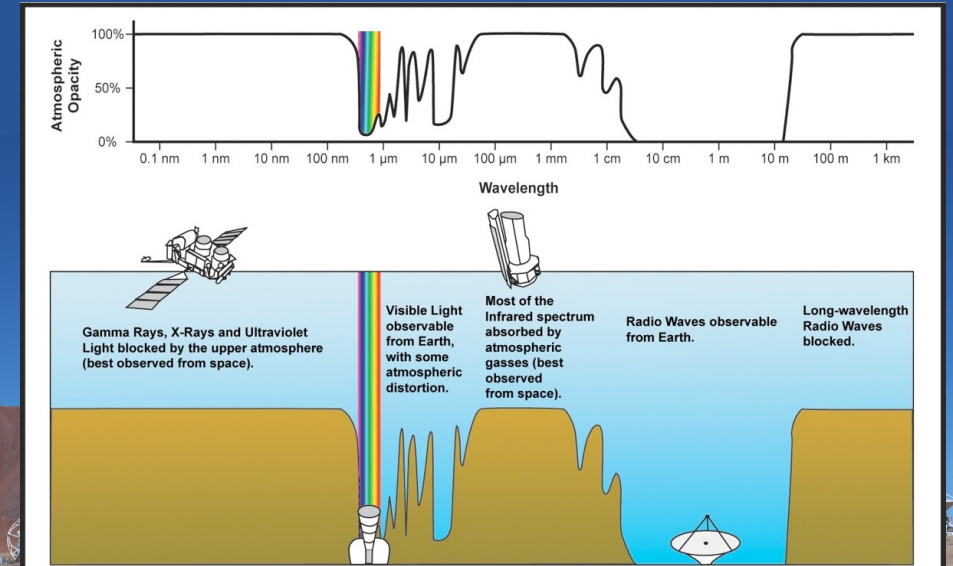
ALMA暑期學生培訓營

Vivien Chen 陳惠茹
(National Tsing Hua University)

July 16, 2018 @ALMA summer student training camp



大氣層的透明度



All four images are of the Andromeda Galaxy
1) As it appears in visible light.
2) Taken by the Spitzer Space Telescope in infrared.
3) Taken by the Swift Space Observatory in ultraviolet.
4) Color composite Containing:
infrared (red channel) and ultraviolet (blue channel)

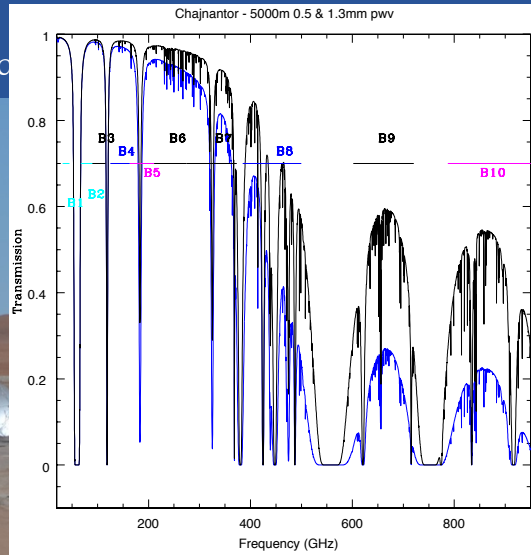
Where is ALMA?

Image courtesy: Stephane Guisard



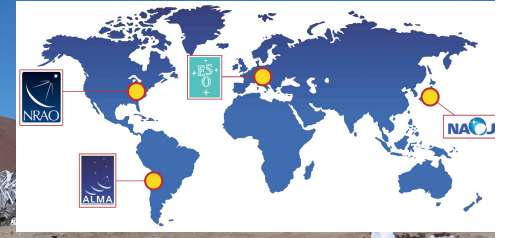
ALMA at Chajnantor, Chile

▶ Chajnantor plateau



Atacama Large Millimeter Array

- ▶ International partnership
 - ▶ Europe (ESO), North America (NRAO), East Asia (Japan, Taiwan, South Korea), and Chile
 - ▶ Cost US \$1.4 billion
- ▶ ALMA (66 antennas to be) operating since 2011
 - ▶ 12-m: 50 x 12m
 - ▶ ACA: 12 x 7m + 4 x 12m
 - ▶ 10 receiver bands (30 - 950 GHz)

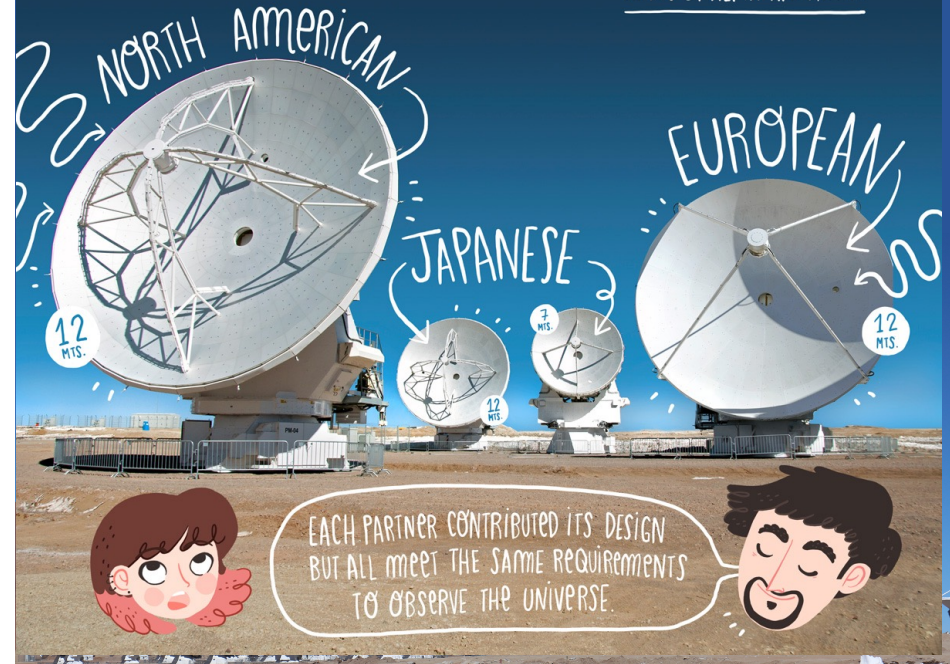


Still, High Site is to be feared



Credit: J. C. Rojas/ESO

KINDS OF ALMA ANTENNAS



How big is a 12-meter?

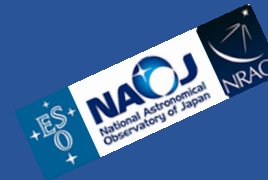


Even a Song for ALMA~



UCAT Campus Visits

Date	Campus	Host
8/3 (Fri)	臺灣師範大學	管一政/曾瑋玲
8/17 (Fri)	中央大學	黃崇源
8/31 (Fri)	清華大學	TBA



Course Plan

- ▶ Day 1: What is ALMA? Linux?
- ▶ Day 2: What are antennas?
- ▶ Day 3: What are arrays?
What is CASA?
- ▶ Day 4: ALMA data, what next?



Let's Start the Fun!

More Questions? Ask Sarah! 陳彥華

