

Galaxy Observer's Guide to the South Pole



Galaxy Forum 
MacMillan Space Centre, Vancouver

2008-7-26

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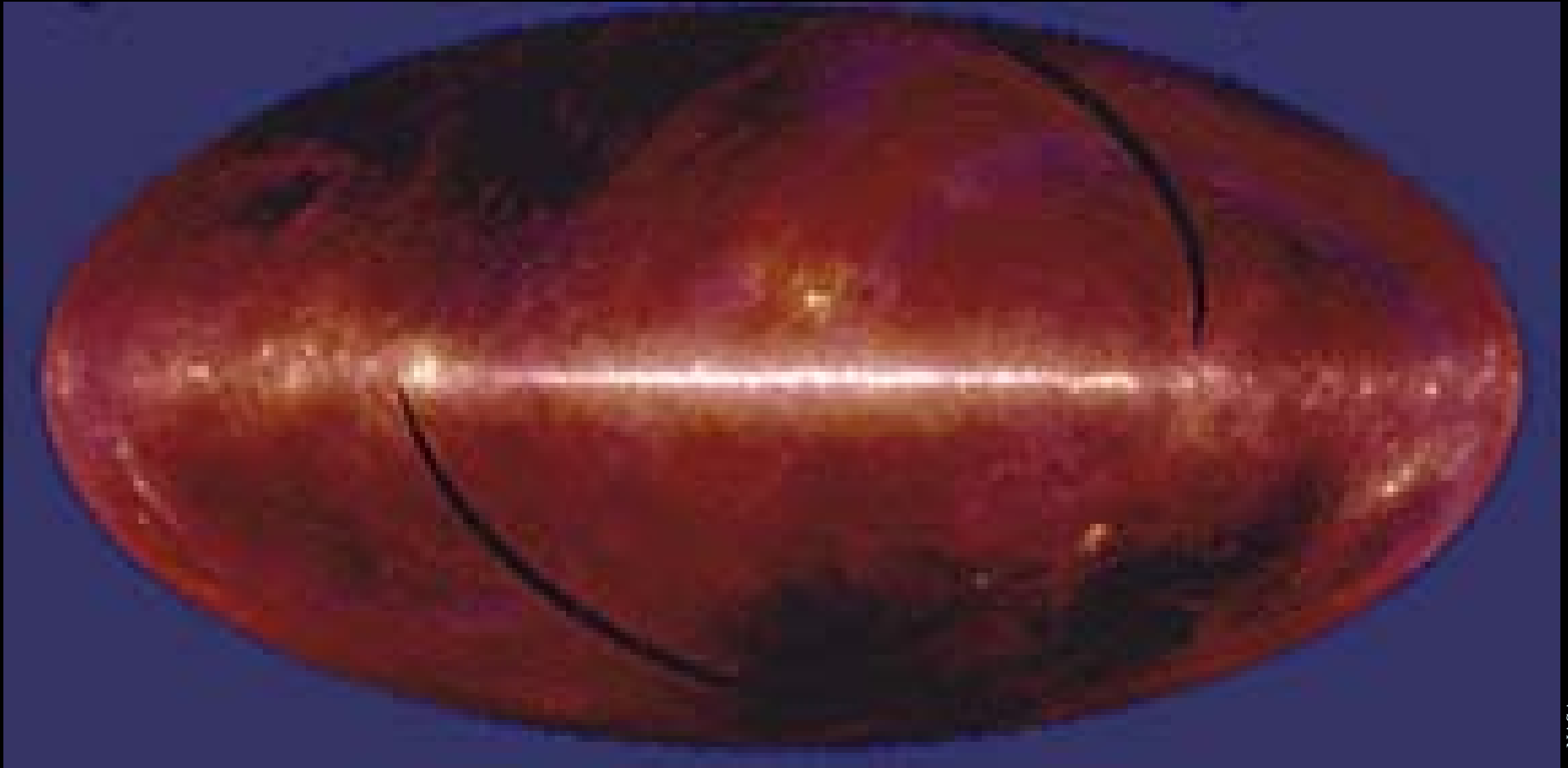
Milky Way is Dusty.



NASA

We used to be Dust in the Galaxy!

Dust absorbs light and gives off **heat**.



NASA

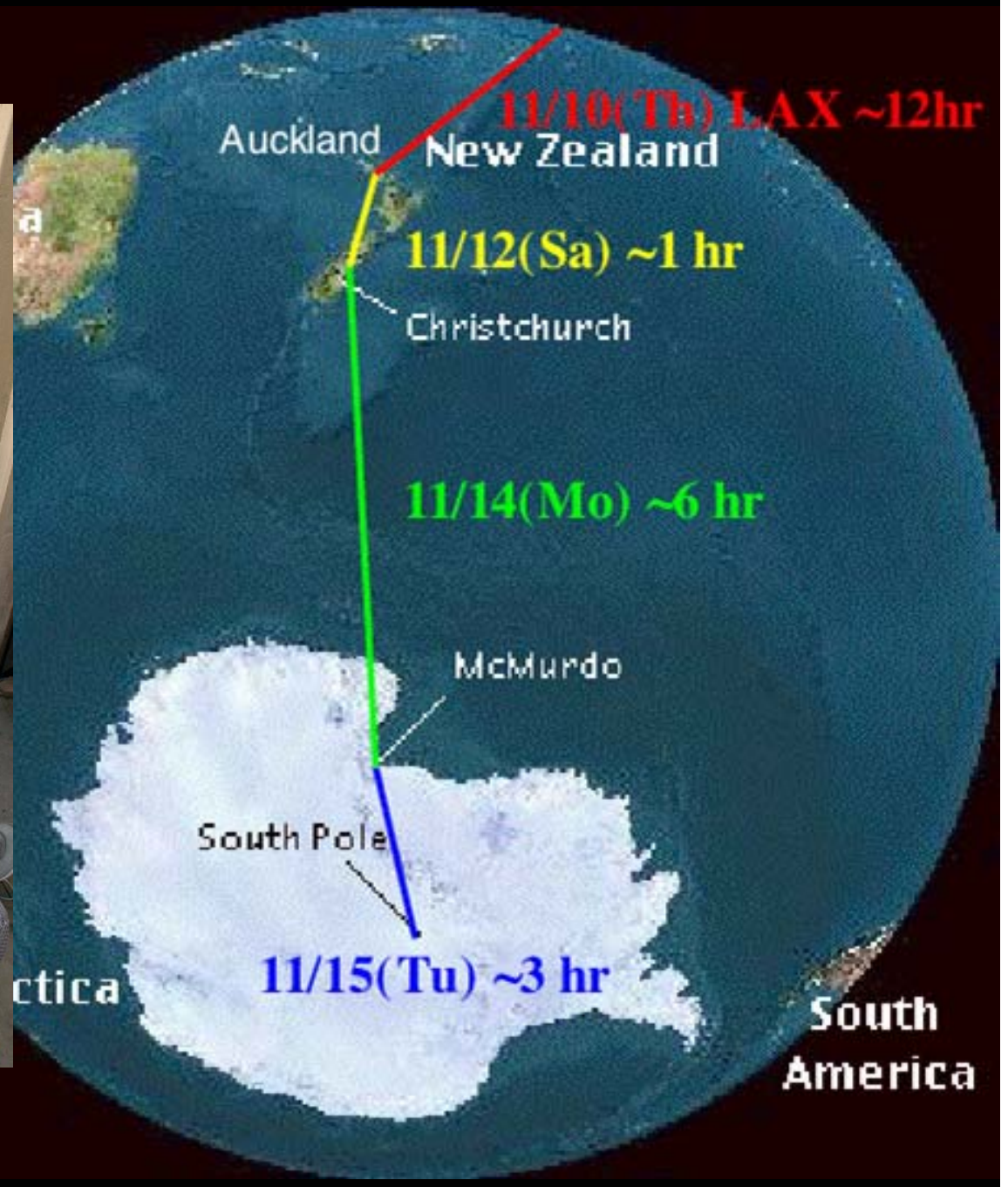
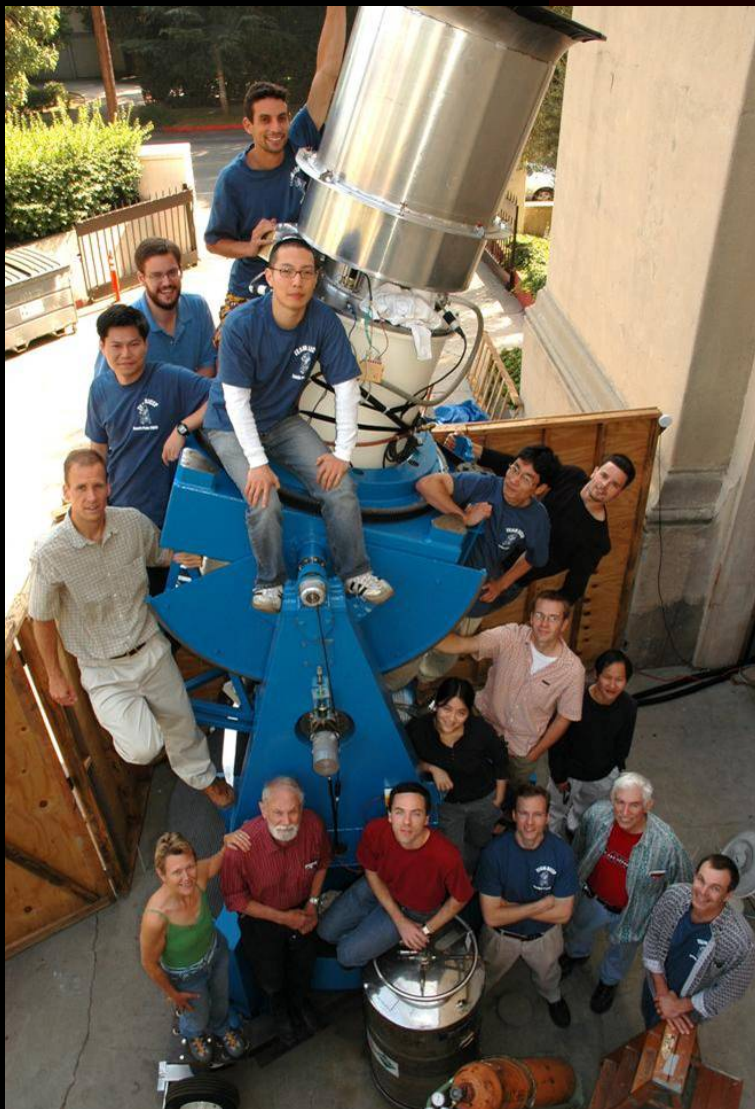
30% of all the energy emitted by the Galaxy comes from dust.
=> Infrared / microwave

South Pole (my favorite place on Earth)

- Dry (because -60 C)
 - Thin air (2800 m)
 - Quiet
 - Dark for 6 months
- <= Galactic Center

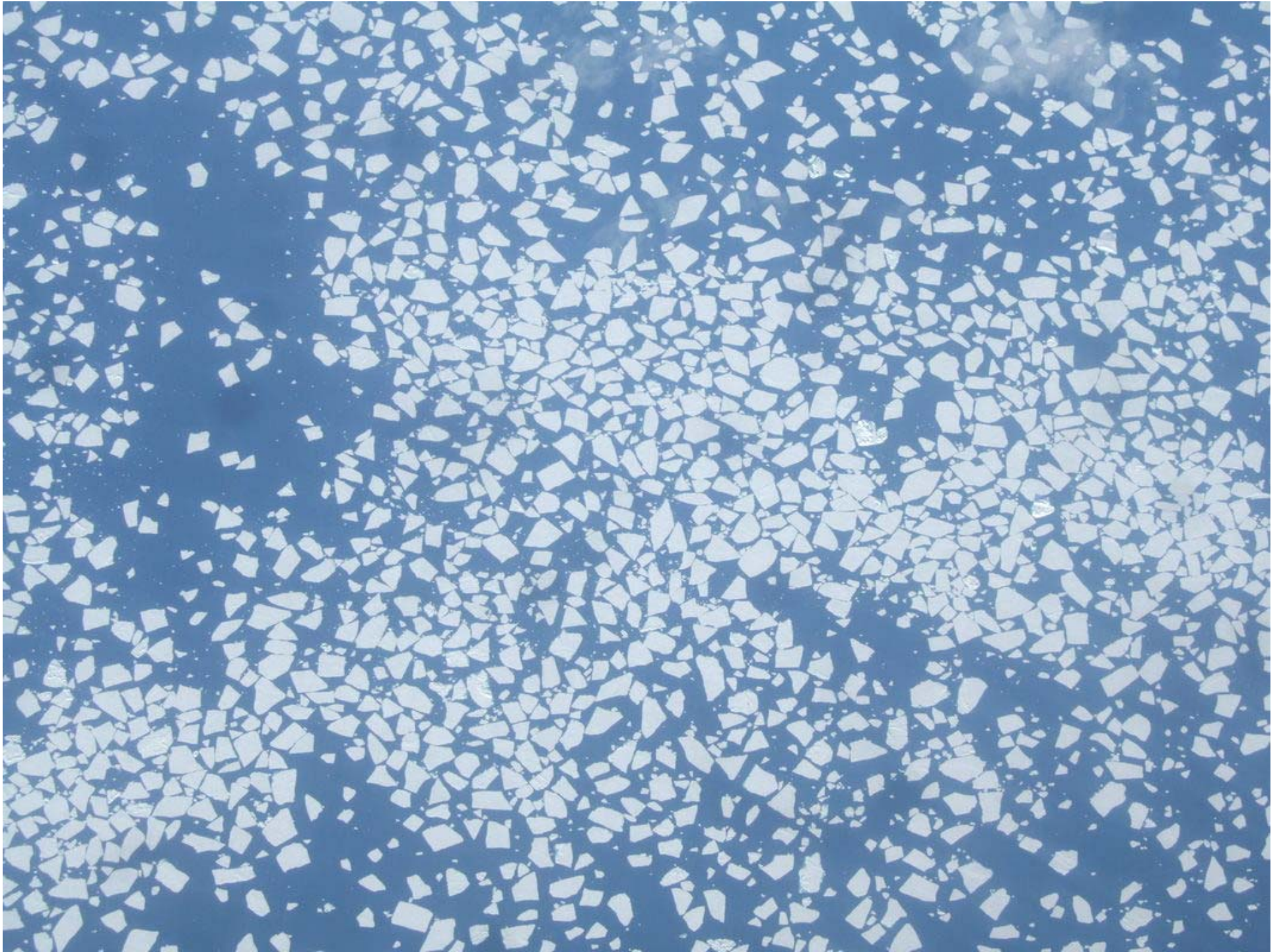
<= Great station

2005 Nov



Yuki D. Takahashi







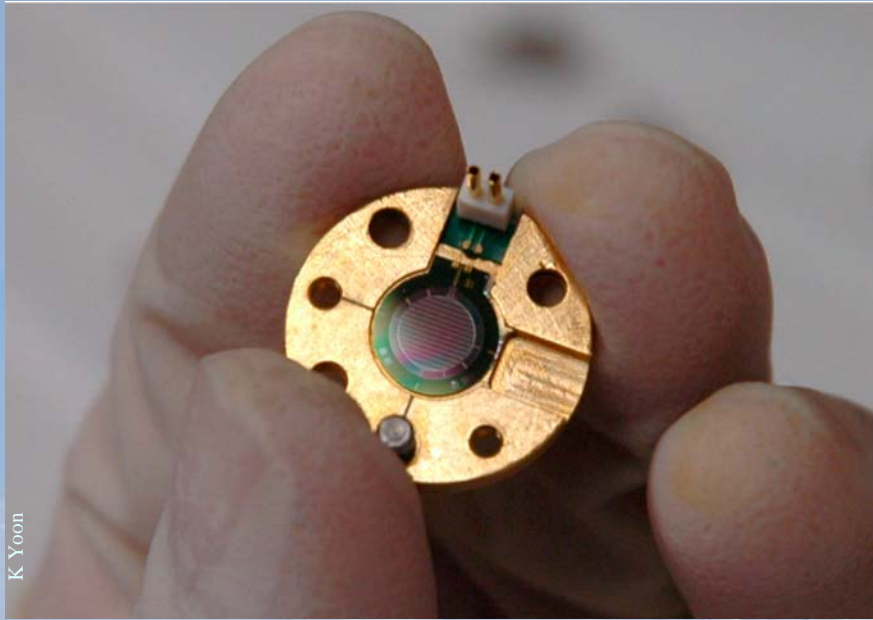








Microwave detectors cooled to 0.25 K.



K. Yoon



2007/11/13 - 2008/2/13
Galaxy observation mission

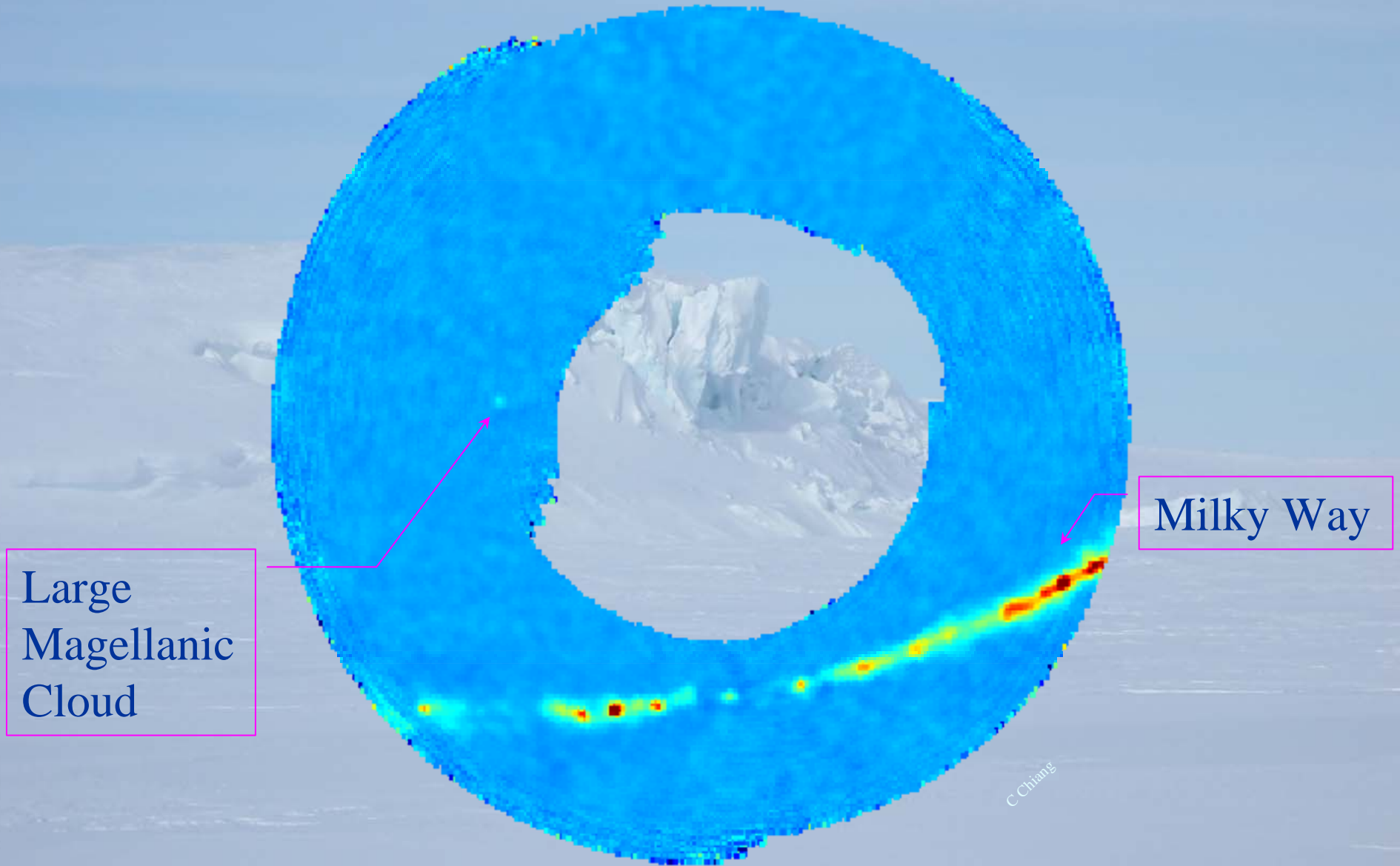


A typical day of running the telescope

5 AM	Wake up; Breakfast.
6	Ski to telescope (1 km, 10 min).
7	Tele-conference w/ California (Wed).
8	Analyze data.
9	Prepare observing schedule.
10	Restart the telescope fridge.
11	Star pointing calibration.
12 PM	Ski back to station for Lunch.
1	Fill liquid nitrogen (40 L).
2	Fill liquid helium (100 L).
3	Clean off snow.
4	Start observations. Clean bathrooms (Fri).
5	Monitor telescope.
6	Ski back for Yoga / Pilates / Dinner.
7	Volleyball / Greenhouse.
8	Trauma training (Wed)
9	Analyze data.
10 PM	Sleep / sunbathe.

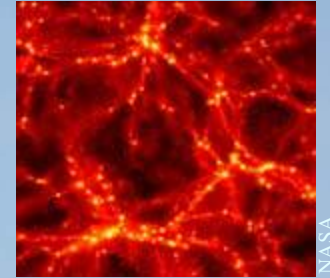
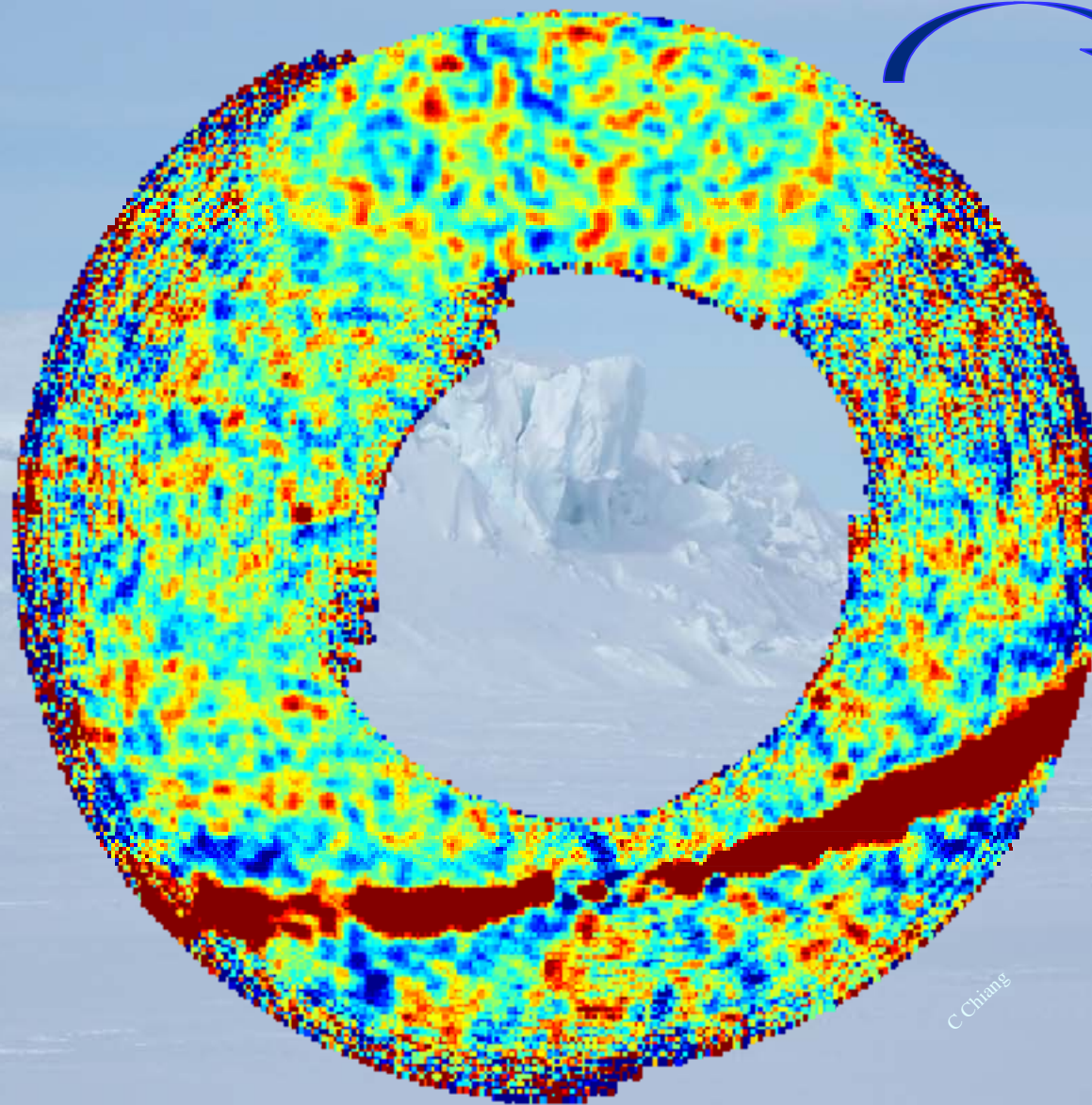


Our Galaxy + a neighbor



C Chiang

Light from the Big Bang



NASA

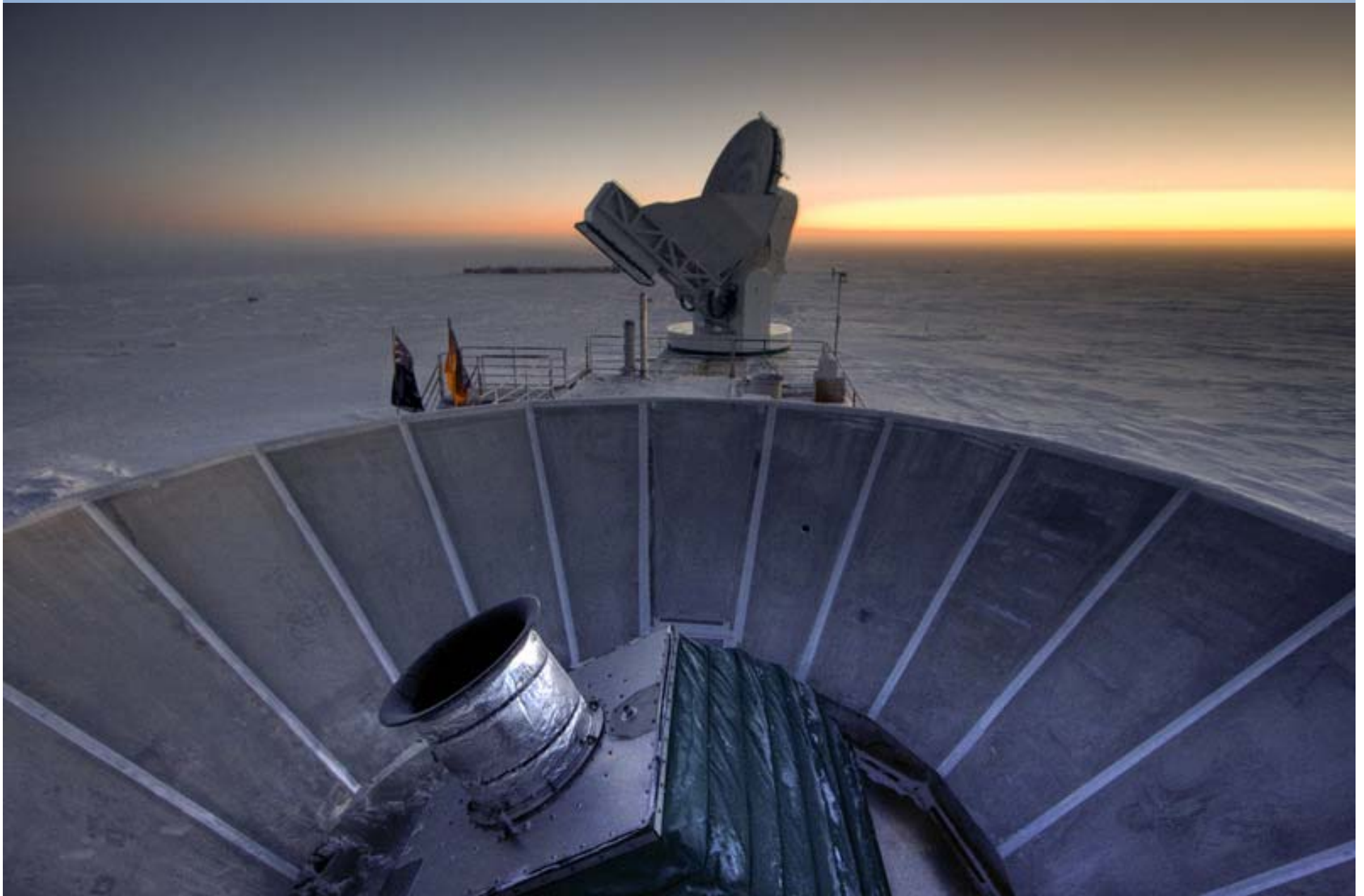


NASA

C Chiang

Galaxy study from Antarctica continues...

Steffen Richter



... and on to



<http://cosmology.berkeley.edu/~yuki/sp>