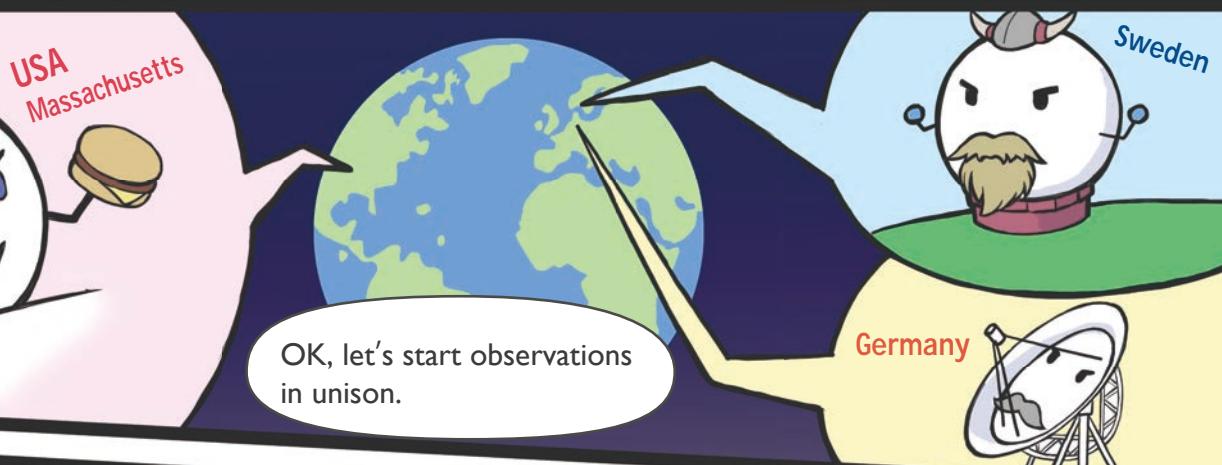
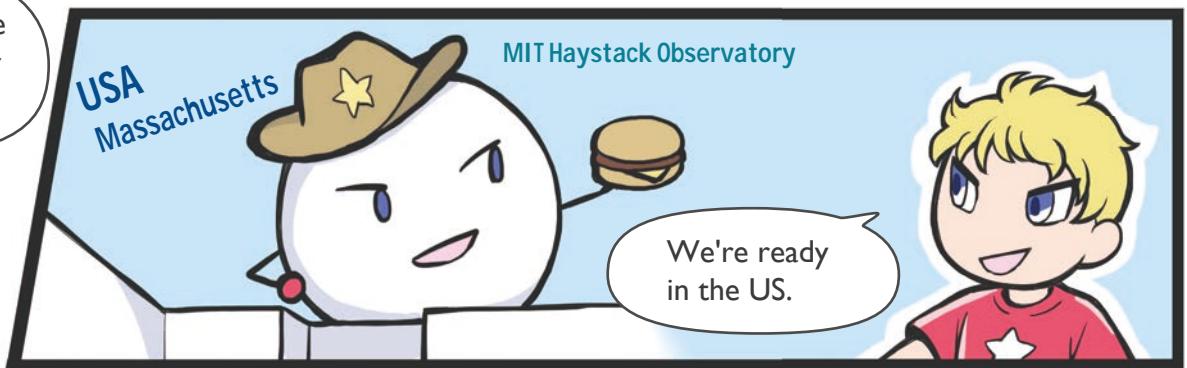


In 1982...



... this is only the first try,  
but it could enhance  
the capability of our radio telescope



Well done!



In 1985...

We'll help with our Nobeyama 45 m telescope!

We succeeded in making transatlantic observations, so the next step is to go global.

Welcome, Japan!

Japan  
Nobeyama 45 m Telescope

OVRO 40m

We now have new telescopes too.

Let's include an Asian telescope to enhance the telescope power.

Good!

We got even higher resolution!

The future of this project is really promising.

3C84

0.04 pc  
100 mas

Hey, we can go much further!

What?

Our goal is a ...

BLACK HOLE!

Cool!

Certainly we still need many things:

more telescopes and shorter wavelengths ... But it is not impossible!



Future generations of scientists can surely do it!

— In 2011 —

We have many telescopes with better sensitivity.

We are almost ready ...

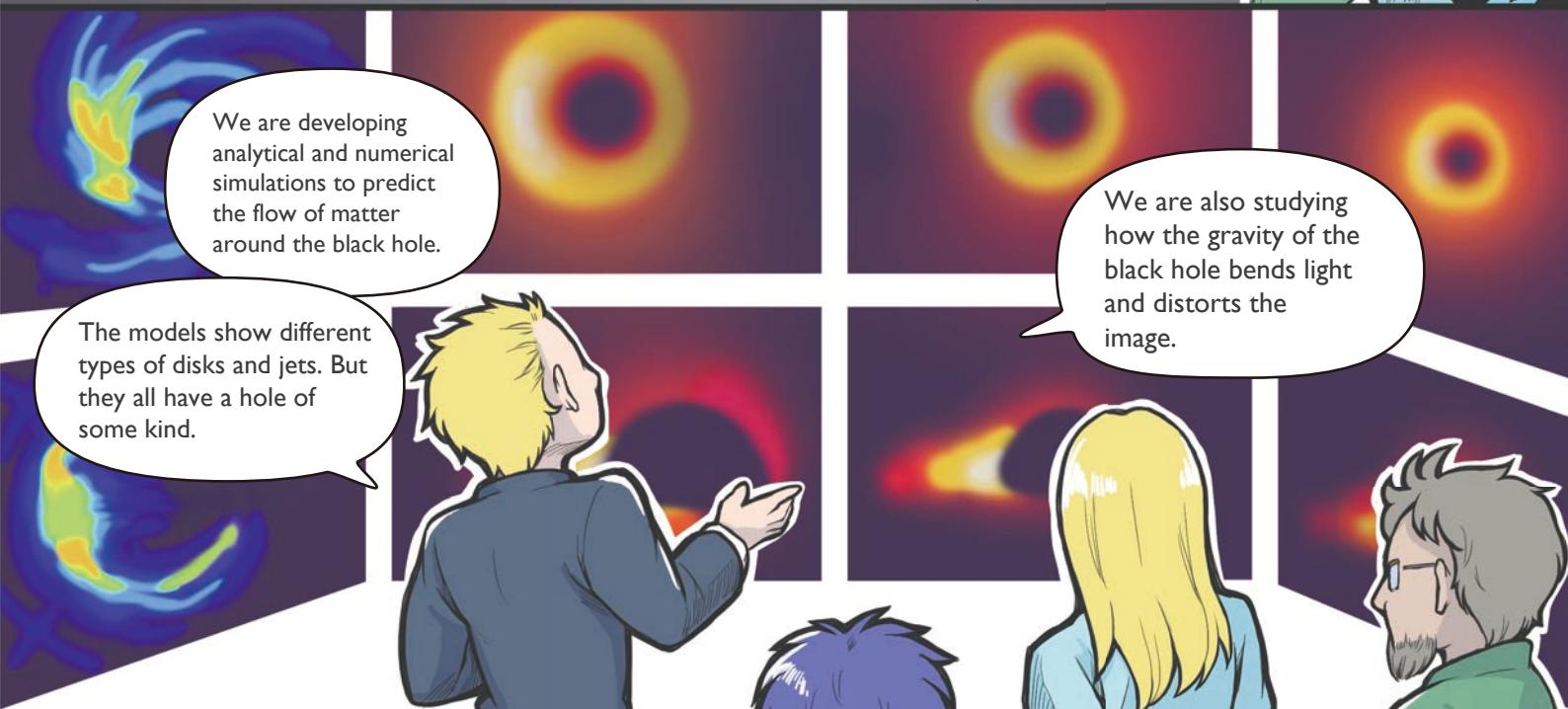
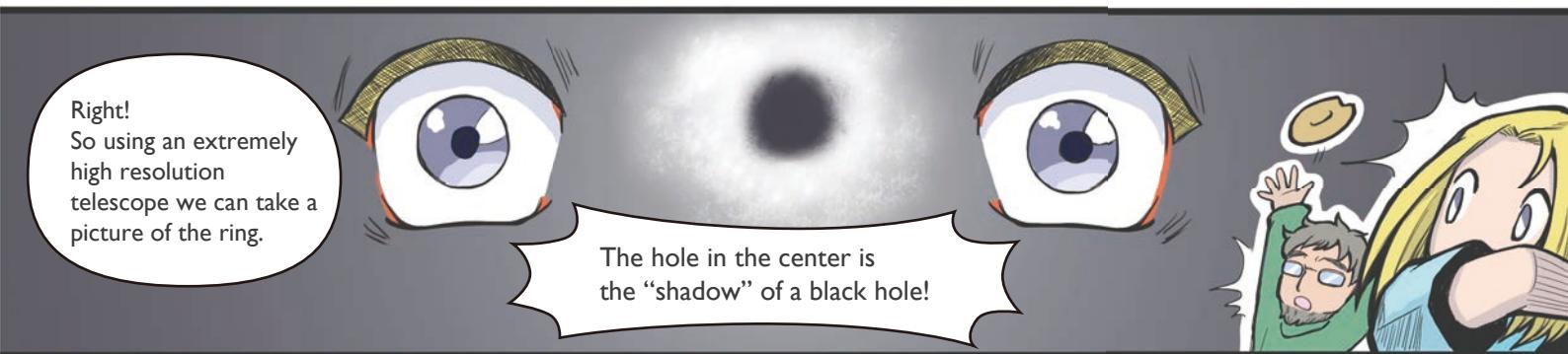
Dr. Shep Doeleman

Now, is the time!

to take the very first image of a ...



BLACK HOLE!



The target is the supermassive black hole in the center of the galaxy M87.

The black hole is pretty massive, so the central "hole" in the image should be big enough ...

... to capture with our network of telescopes.

## Elliptical galaxy M87

Yes. Many telescopes in various locations joined

our project to make an Earth-sized virtual telescope.

Credits: NASA, ESA and the Hubble Heritage Team (STScI/AURA); Acknowledgment: P. Cote (Herzberg Institute of Astrophysics) and E. Baltz (Stanford University)

JCMT

IRAM 30 m in Spain

JCMT and SMA in Hawai'i

IRAM 30m

SMA

LMT

LMT in Mexico

SMT

SMT in Arizona

APEX

South Pole Telescope in Antarctica

SPT

APEX in Chile

And the brandnew ALMA in Chile.

ALMA

It is not an easy job coordinating all the telescopes.

