# THE UNIVERSE YOURS TO DISCOVER



ASTRONAL YEAR OF ASTRONAL YEAR OF ONLY

ASTRONOMY 2009

MARK WALKER

#### OVERVIEW

- \* OUR PLACE IN THE UNIVERSE
- \* ASTRONOMERS AT WORK
- \* CURRENT ACTIVITIES
  - \* SCIENCE
  - \* TECHNOLOGY

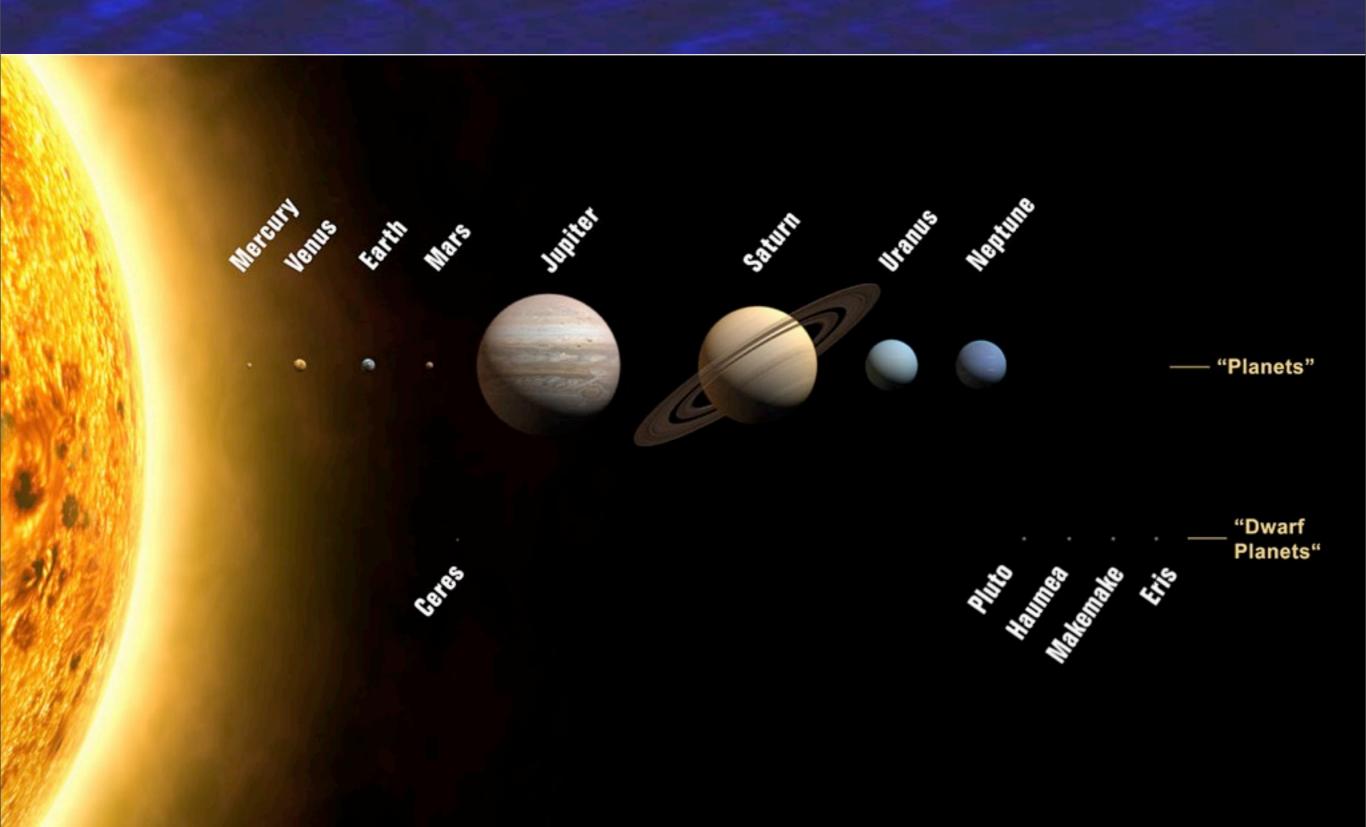
### ASTRONOMY, NOT ASTROLOGY!

ASTRONOMY IS SCIENCE

ASTROLOGY IS SUPERSTITION

#### **ORIENTATION:**

#### SOLAR SYSTEM



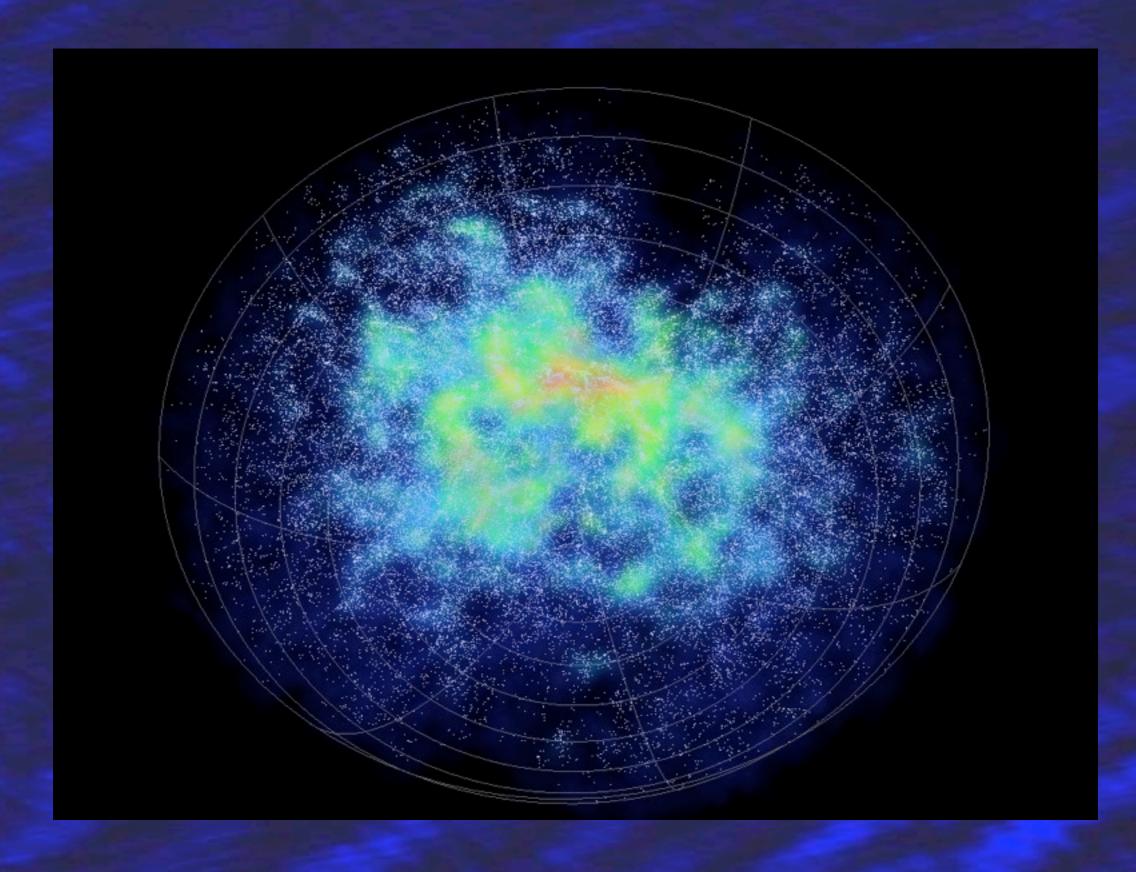
#### ORIENTATION:

### MILKY WAY (GALAXY)



#### ORIENTATION:

#### THE UNIVERSE



## THE JOB

NOT MUCH OF THIS

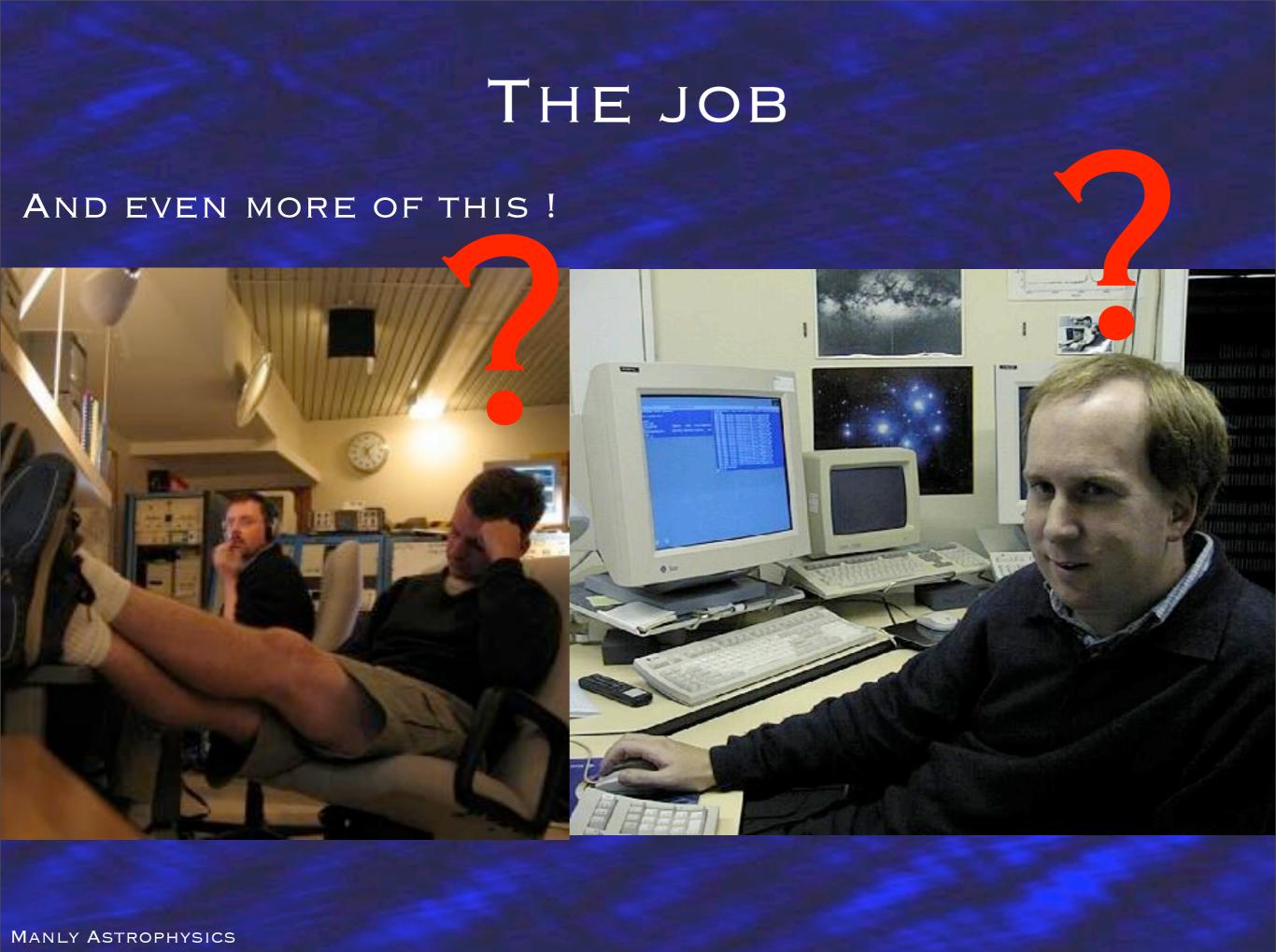
BUT A LOT OF THIS



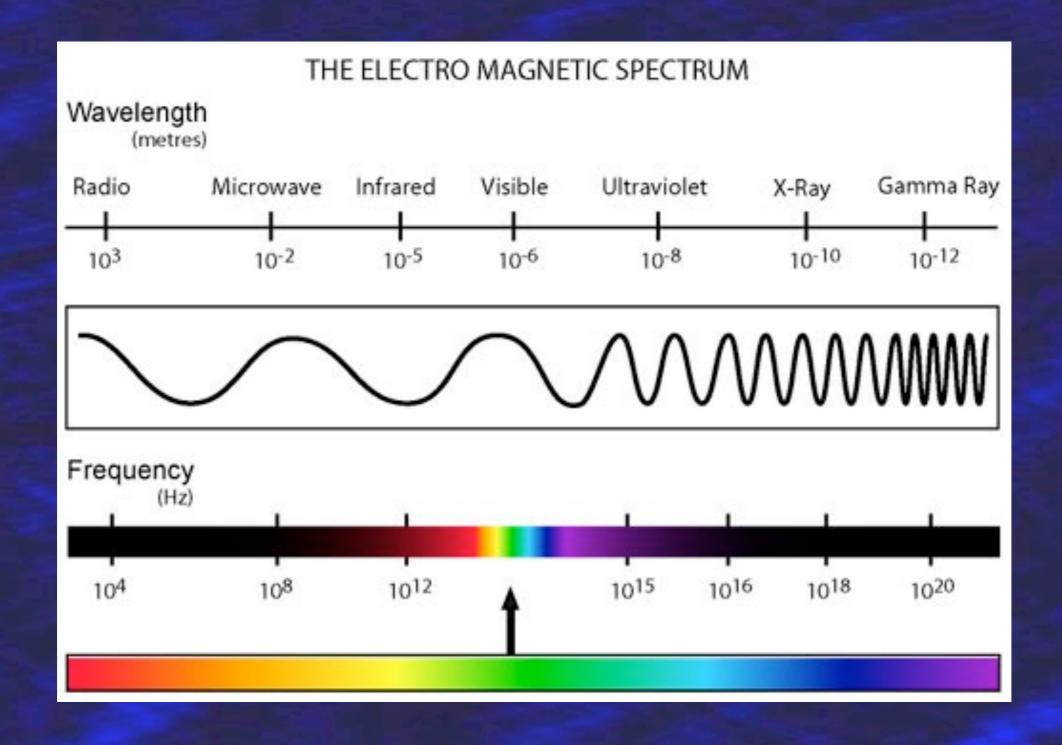
# THE JOB

AND EVEN MORE OF THIS!





#### ACROSS THE SPECTRUM



# ACROSS THE SPECTRUM



### "SOMBRERO" GALAXY

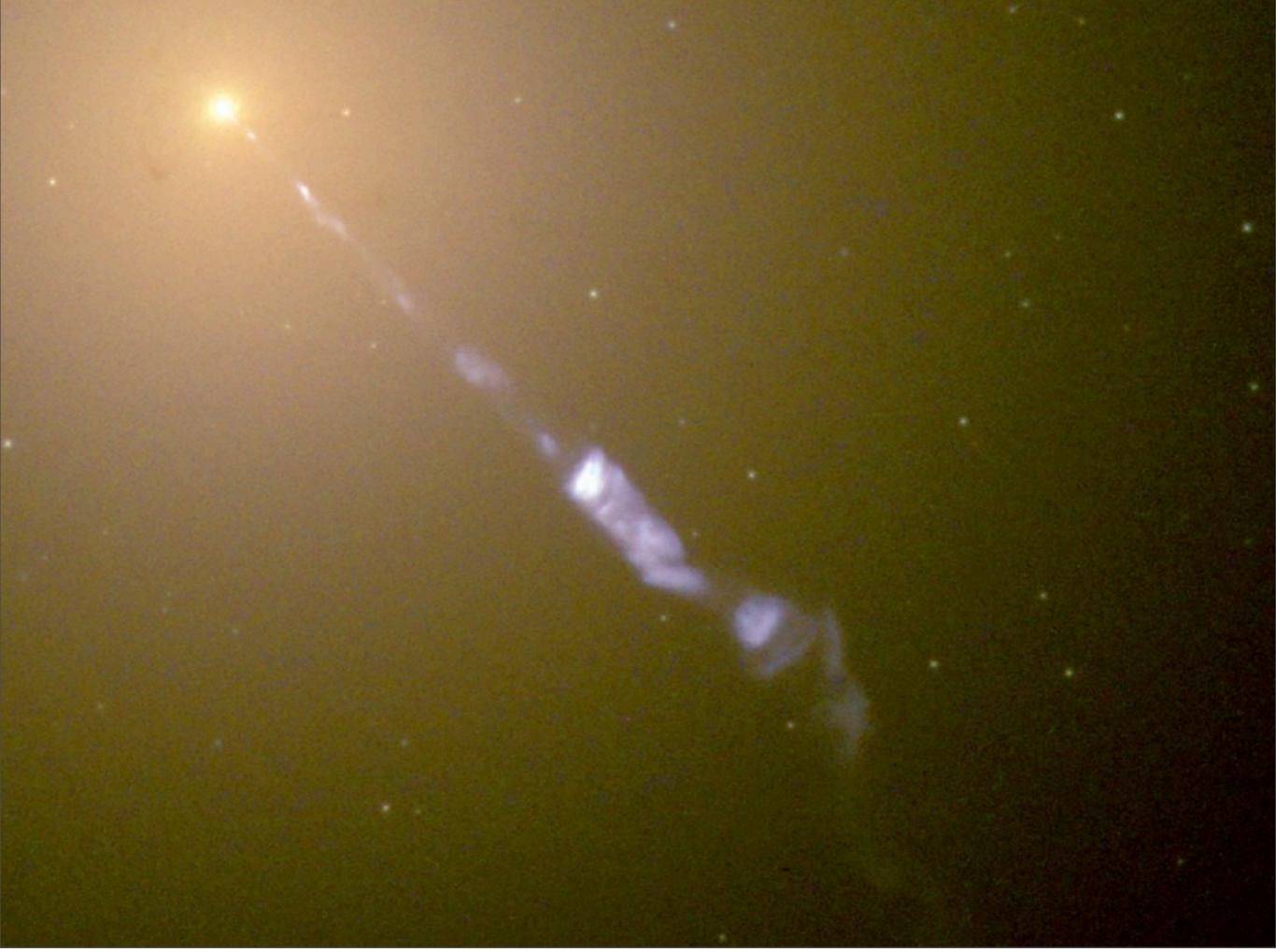


OPTICAL

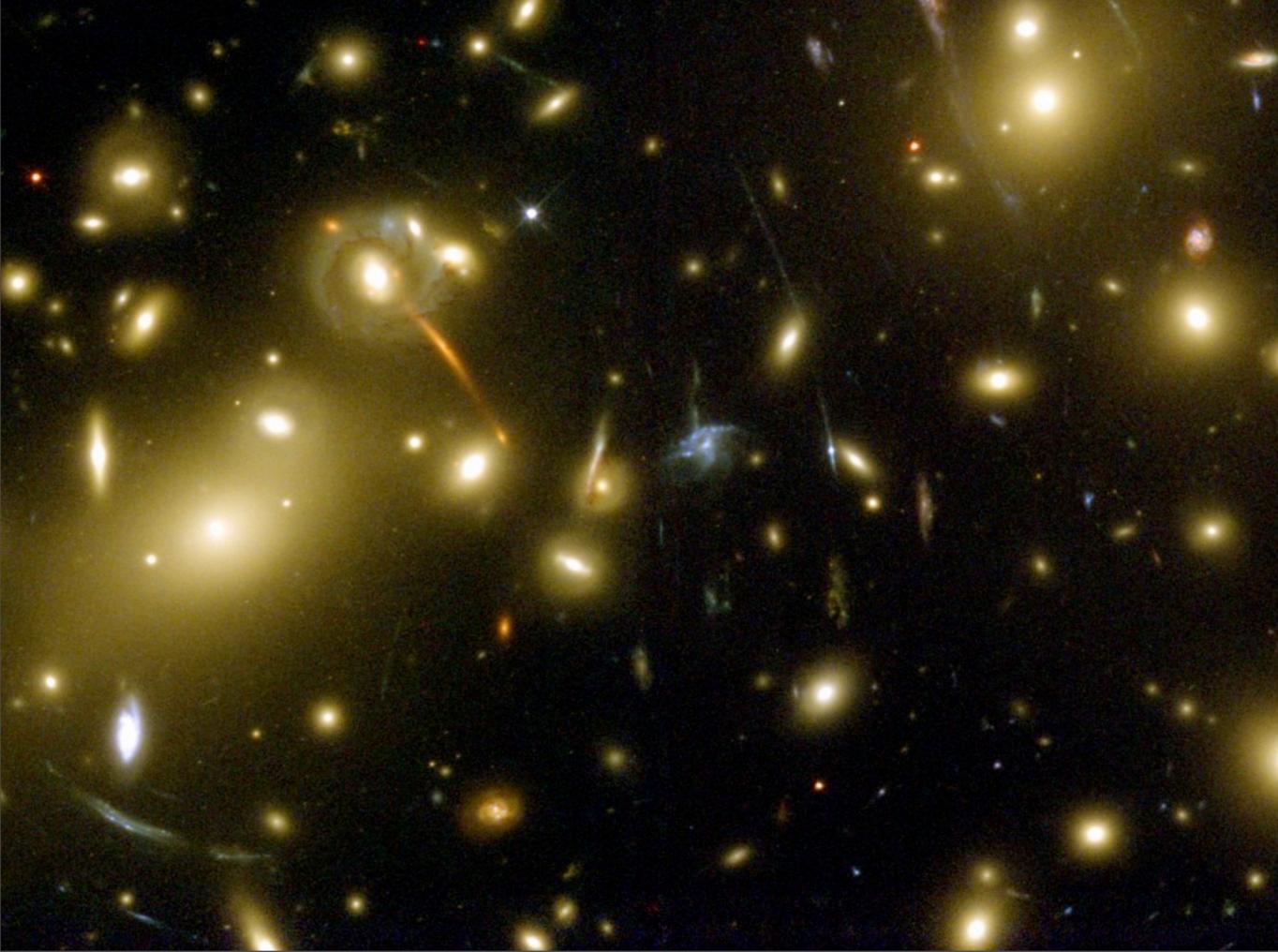


INFRARED





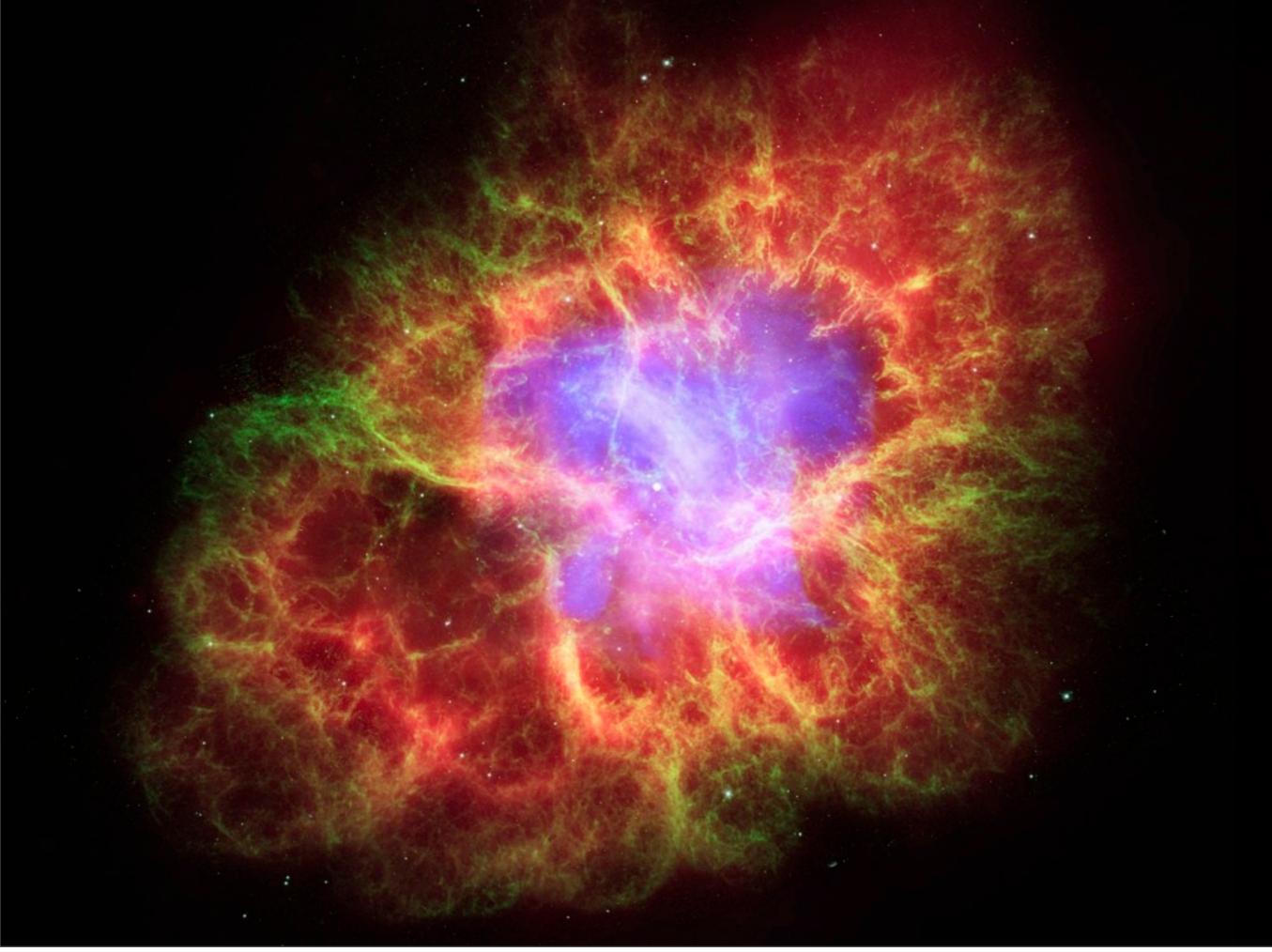
Tuesday, 28 February 2012



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#### CURRENT ISSUES

- \* ARE EARTH-LIKE PLANETS COMMON?
  - \* IS THERE EXTRA-TERRESTRIAL LIFE?
- \* WHY IS THE UNIVERSE ACCELERATING?
  - \* IS THERE A DARK ENERGY?
- \* HOW DID GALAXIES FORM?
  - \* WHAT IS THE DARK MATTER?

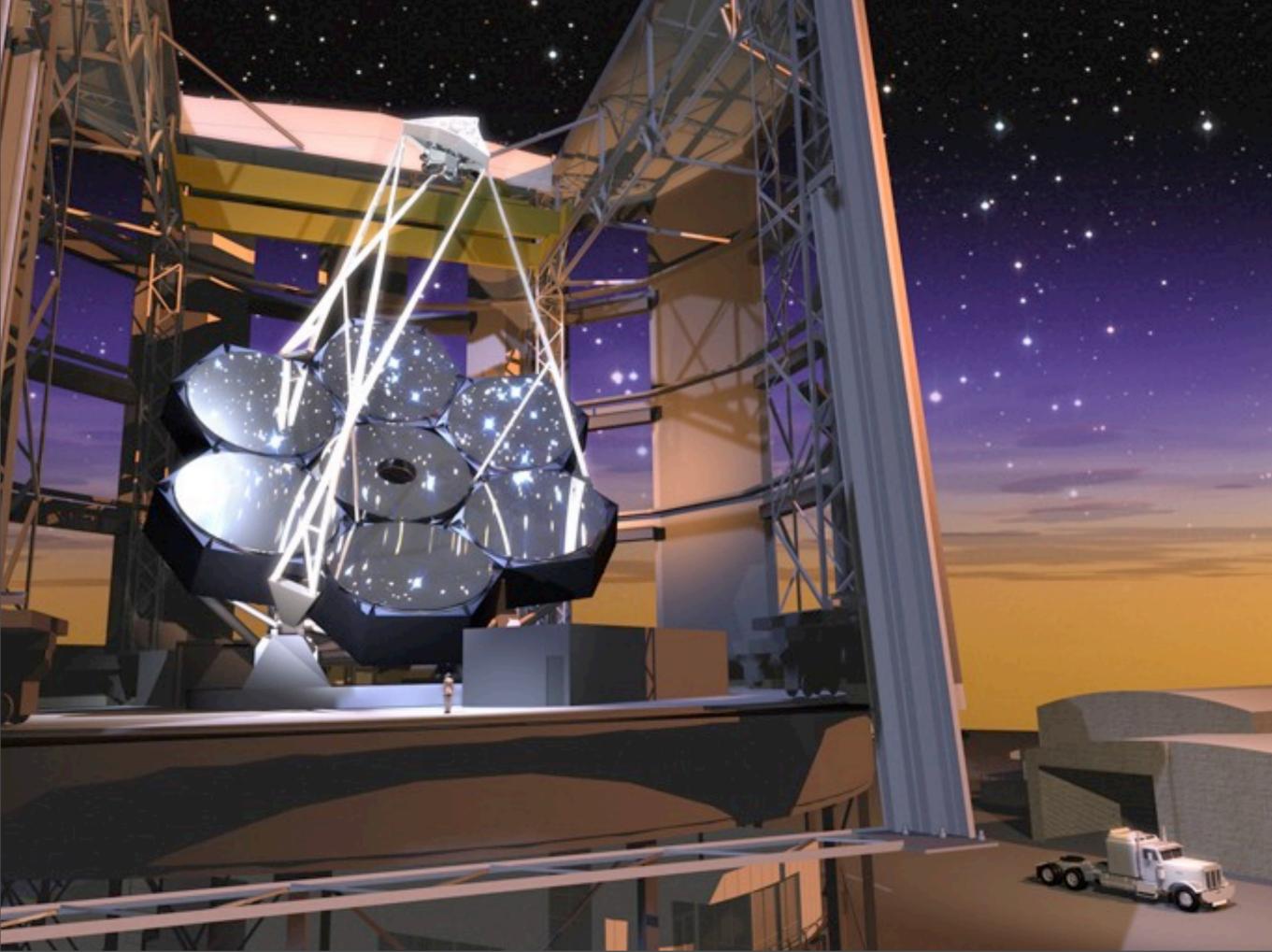
### EMERGING TECHNOLOGIES

1. OPTICAL

2. RADIO



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### AUSTRALIA TELESCOPE COMPACT ARRAY (NARRABRI)



# SQUARE KILOMETRE ARRAY



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Tuesday, 28 February 2012



# Further information

