

Realizing Einstein's Dream

Exploring Our Mysterious Universe

A Slide Show

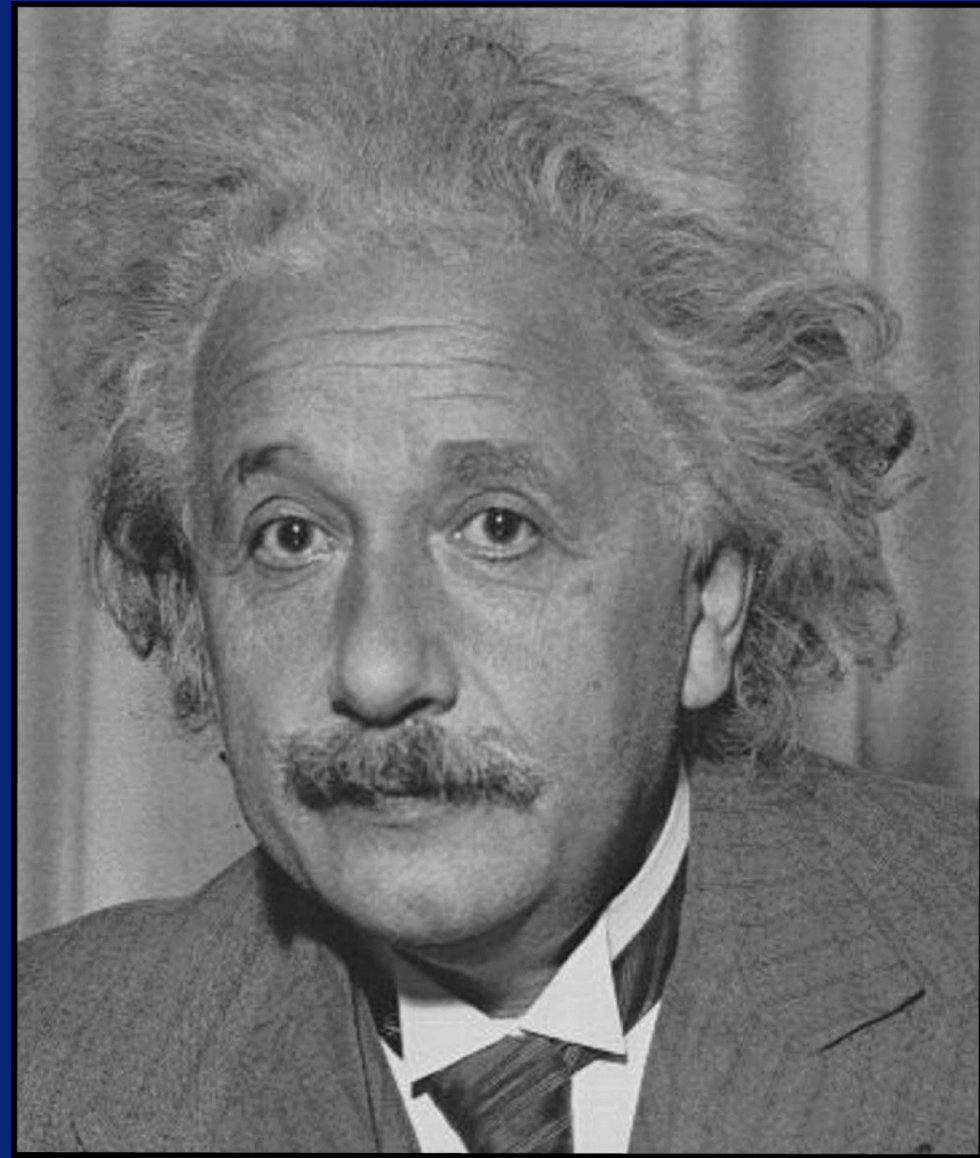
Presented as prelude to public lecture

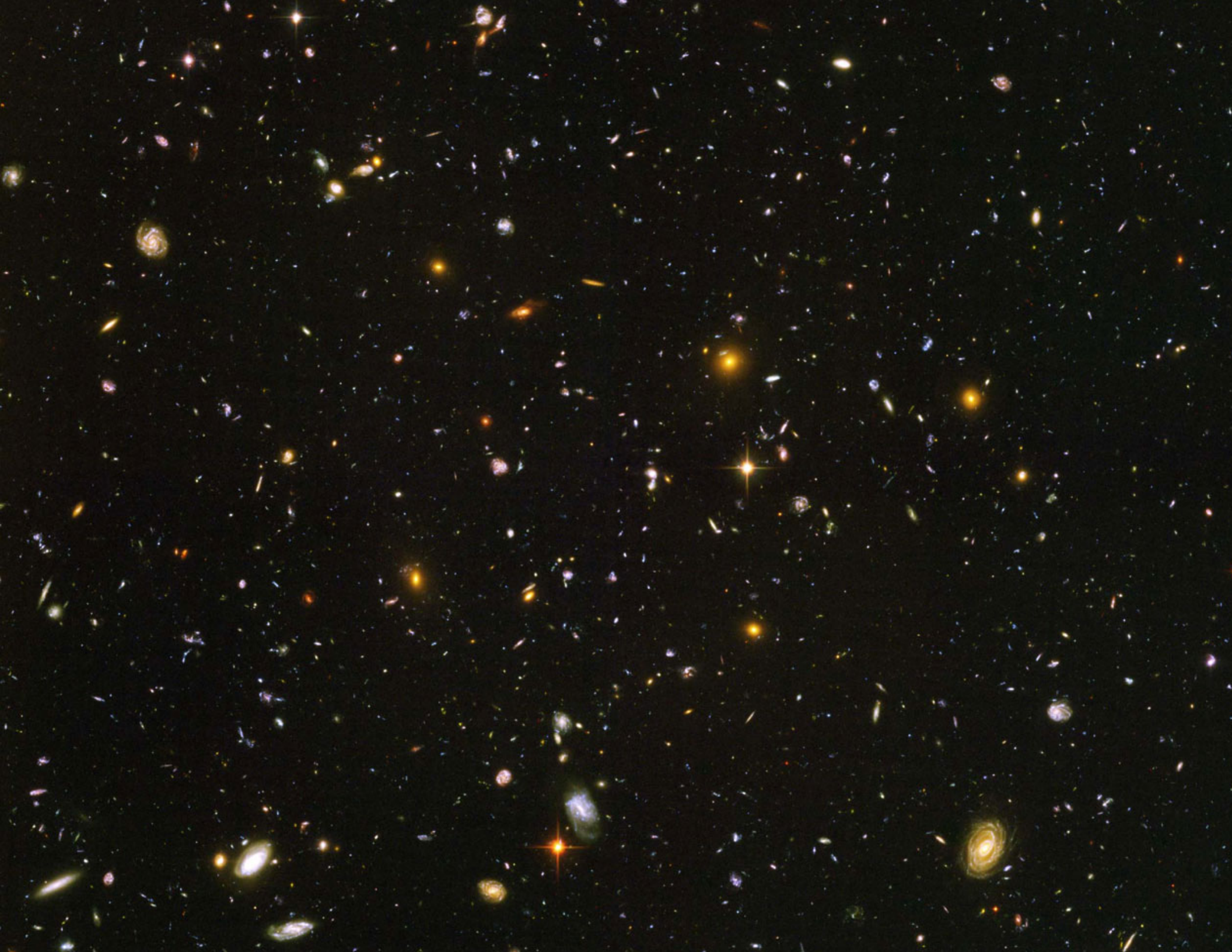
James Brau

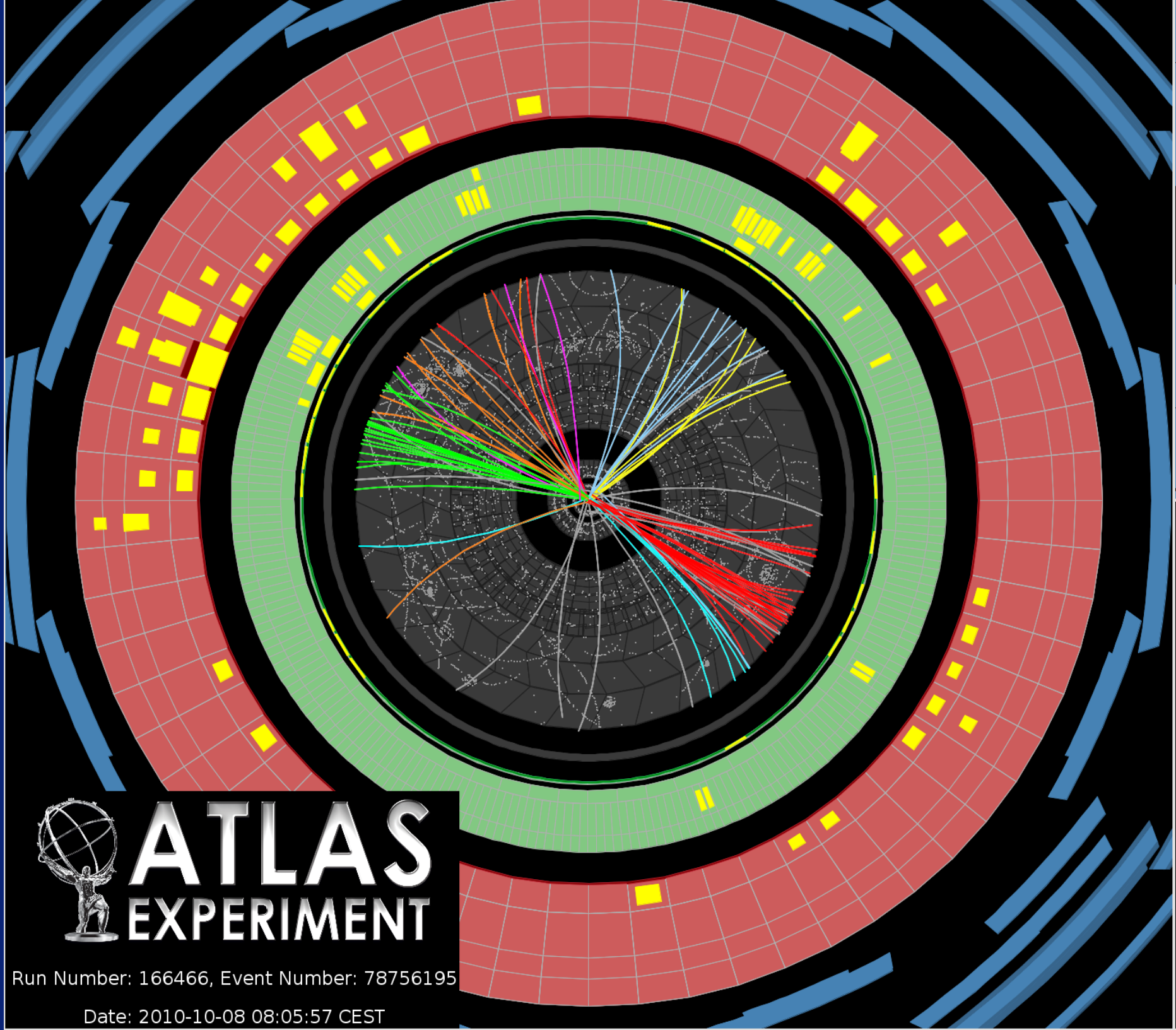
November 23, 2010 - Thomas Jefferson Laboratory

(Based on show first presented in Celebration of World Year of Physics, 2005)

*One thing I have
learned in a long life:
that all our science,
measured against
reality, is primitive
and childlike
—and yet it is the
most precious thing
we have.*







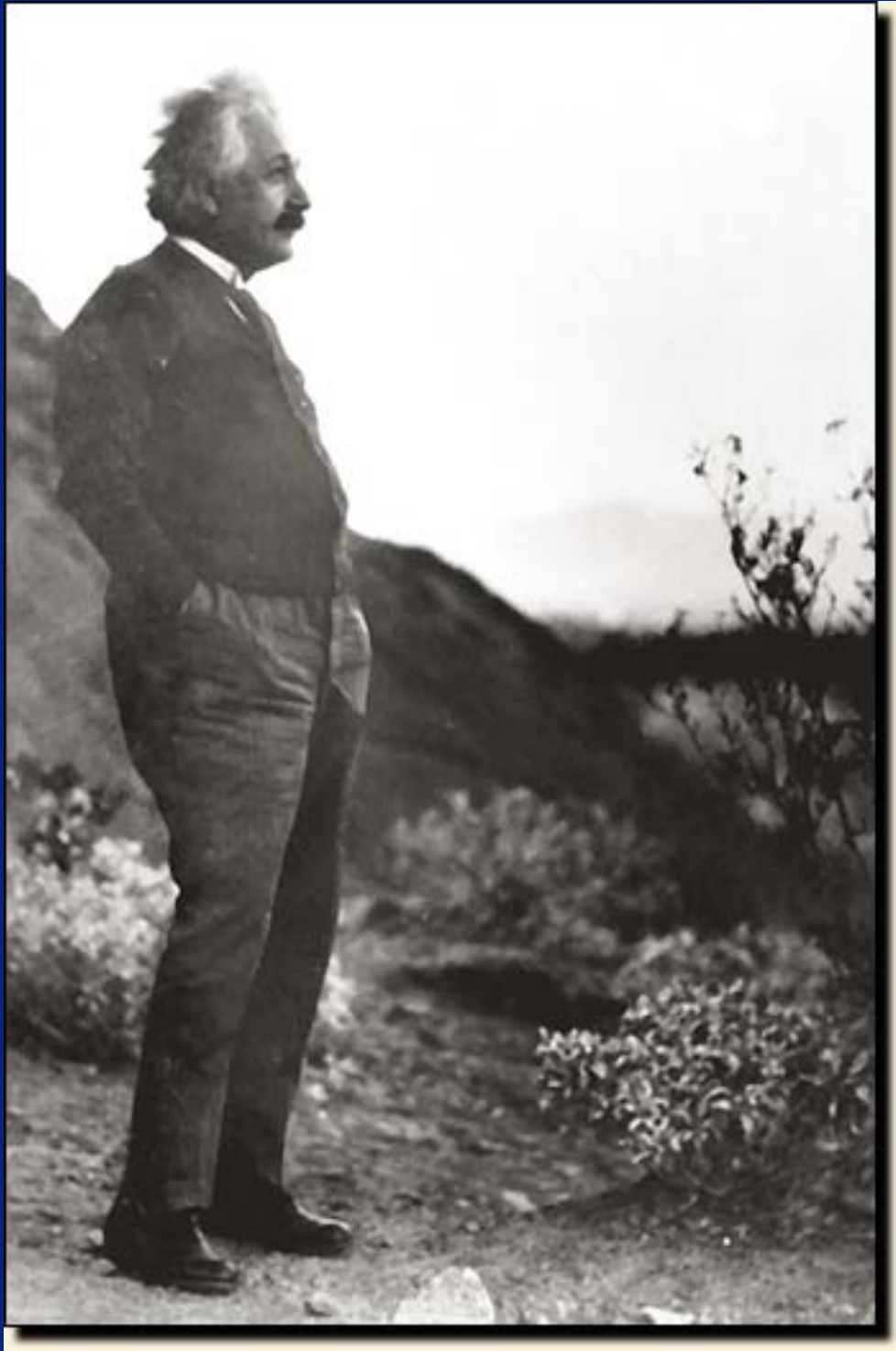
ATLAS
EXPERIMENT

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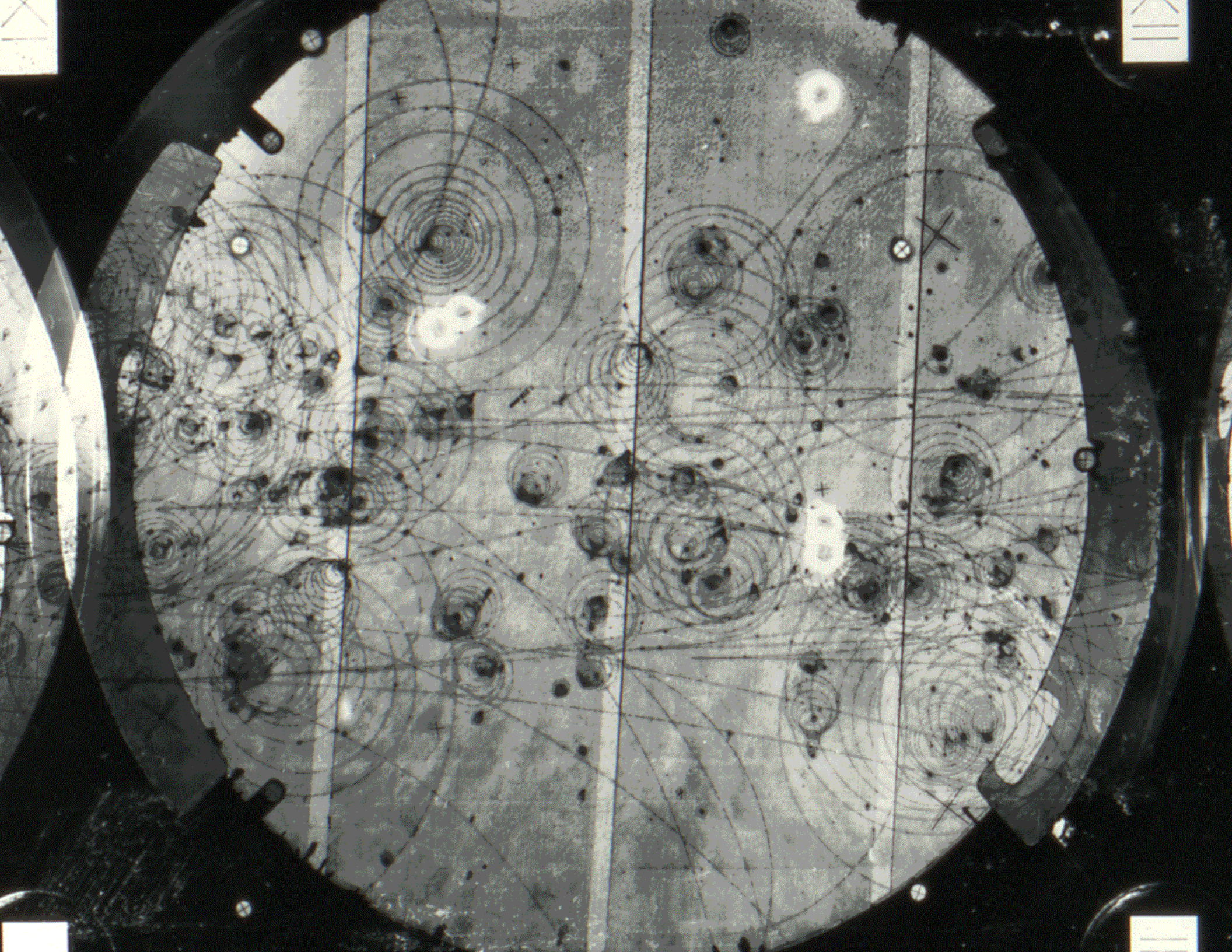




The most beautiful
experience we can
have is the
mysterious.

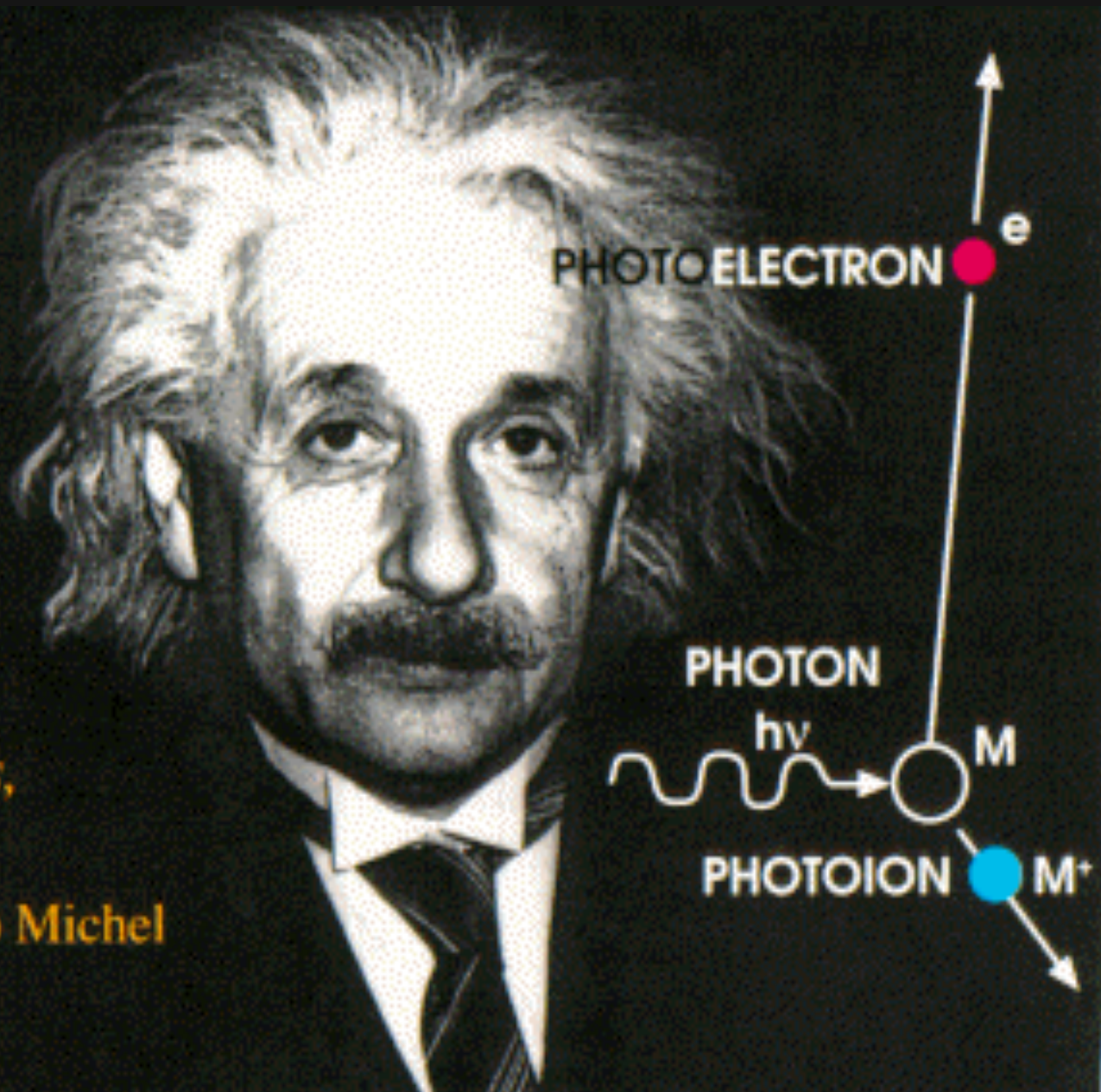
It is the fundamental
emotion which
stands at the
cradle of true art
and true science.





*"All these fifty years
of conscious brooding
have brought me
no nearer to the
answer to the
question 'What are
light quanta?'
Nowadays every
rascal thinks he knows,
but he is mistaken."*

— Albert Einstein, letter to Michel
Besso, 1951.







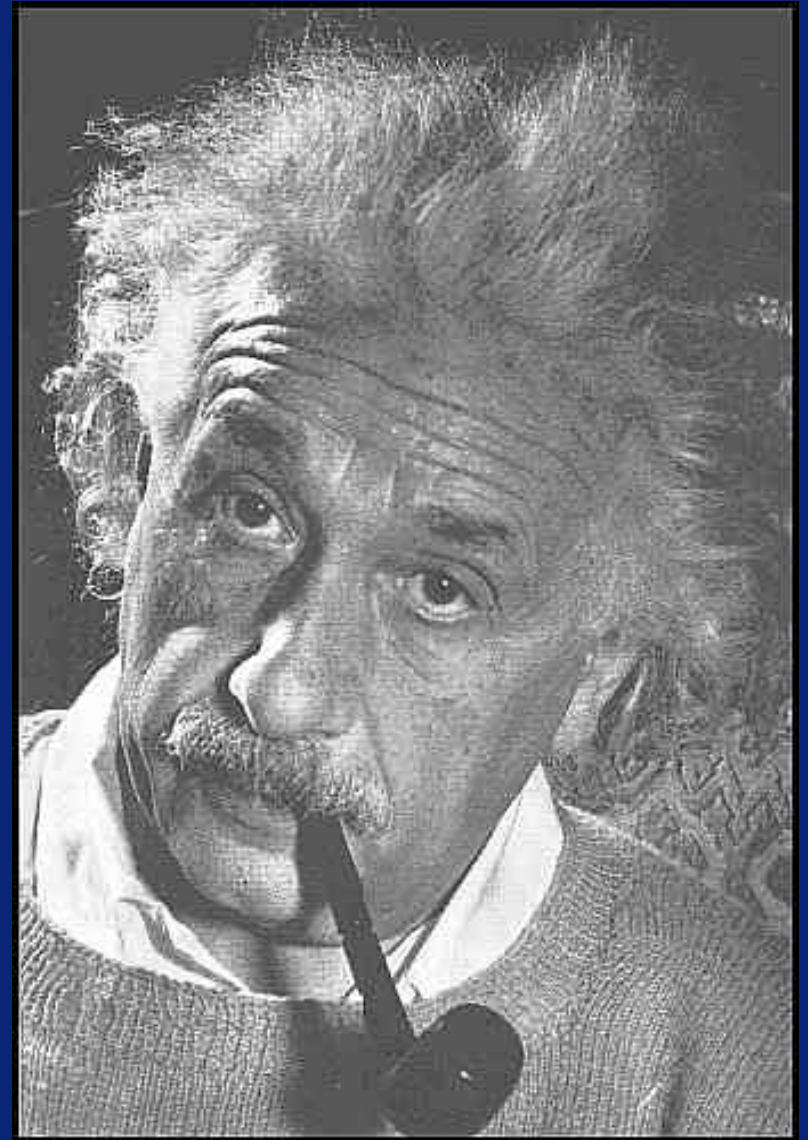


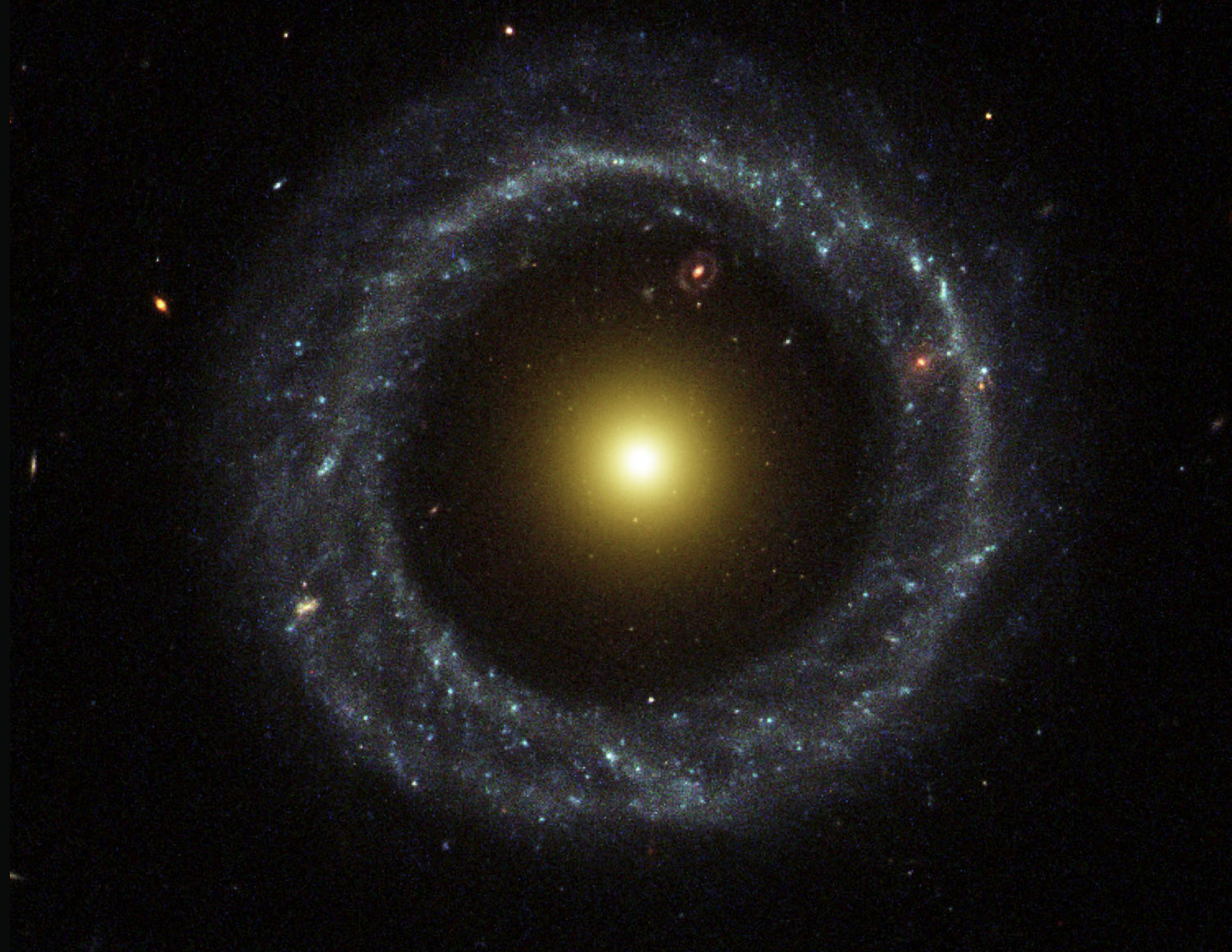


I think and think for
months and years.

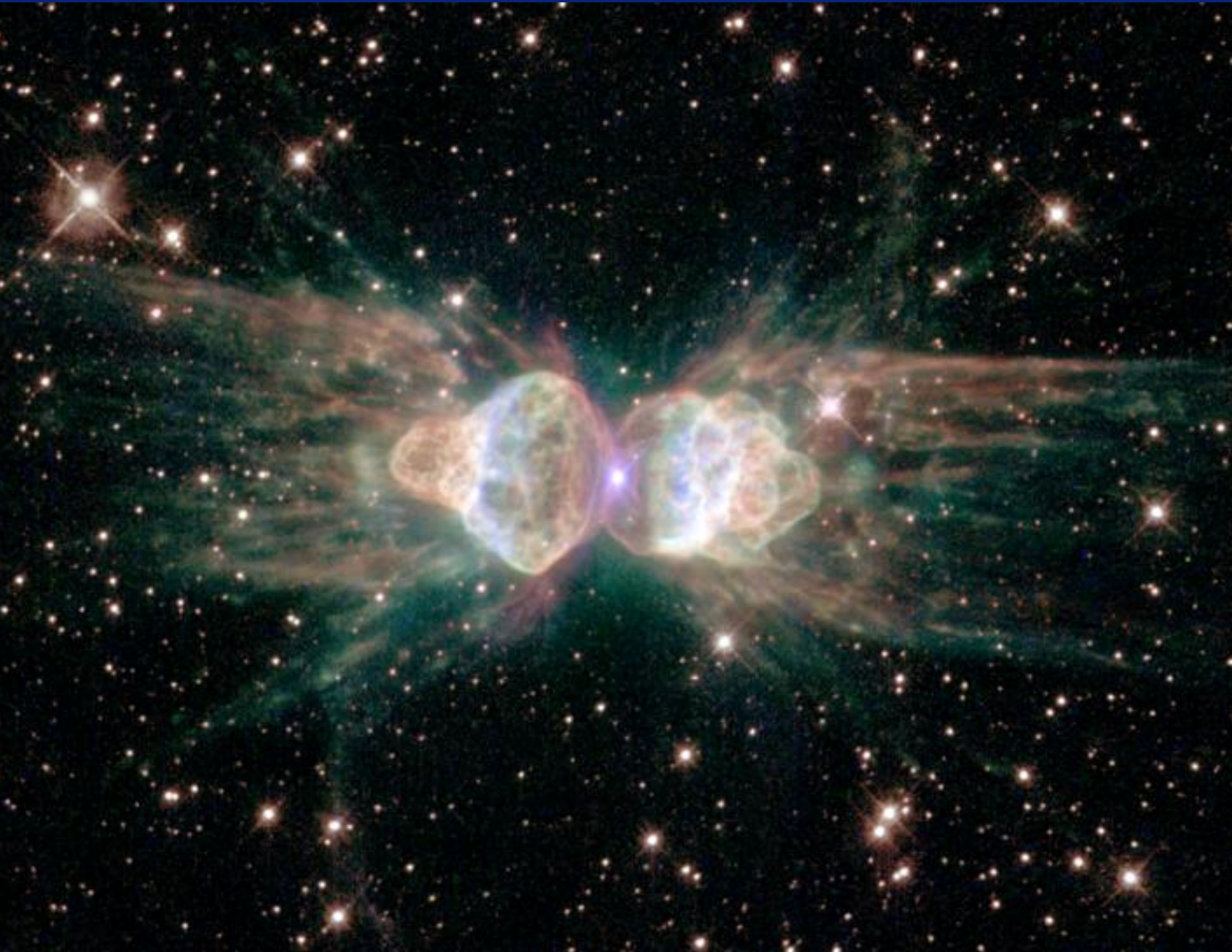
Ninety-nine times,
the conclusion is false.

The hundredth time
I am right.

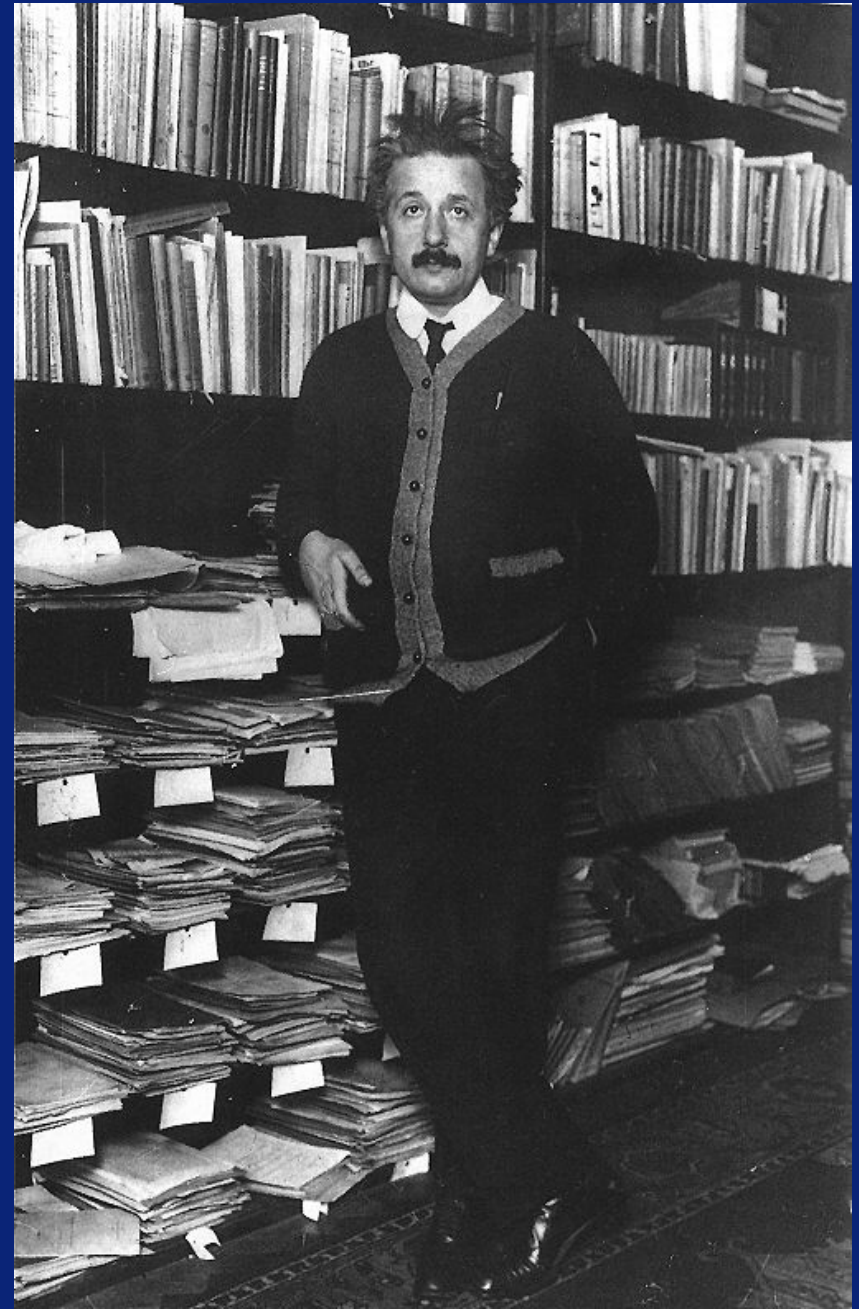








The grand aim of all science is to cover the greatest number of empirical facts by logical deduction from the smallest number of hypotheses or axioms.



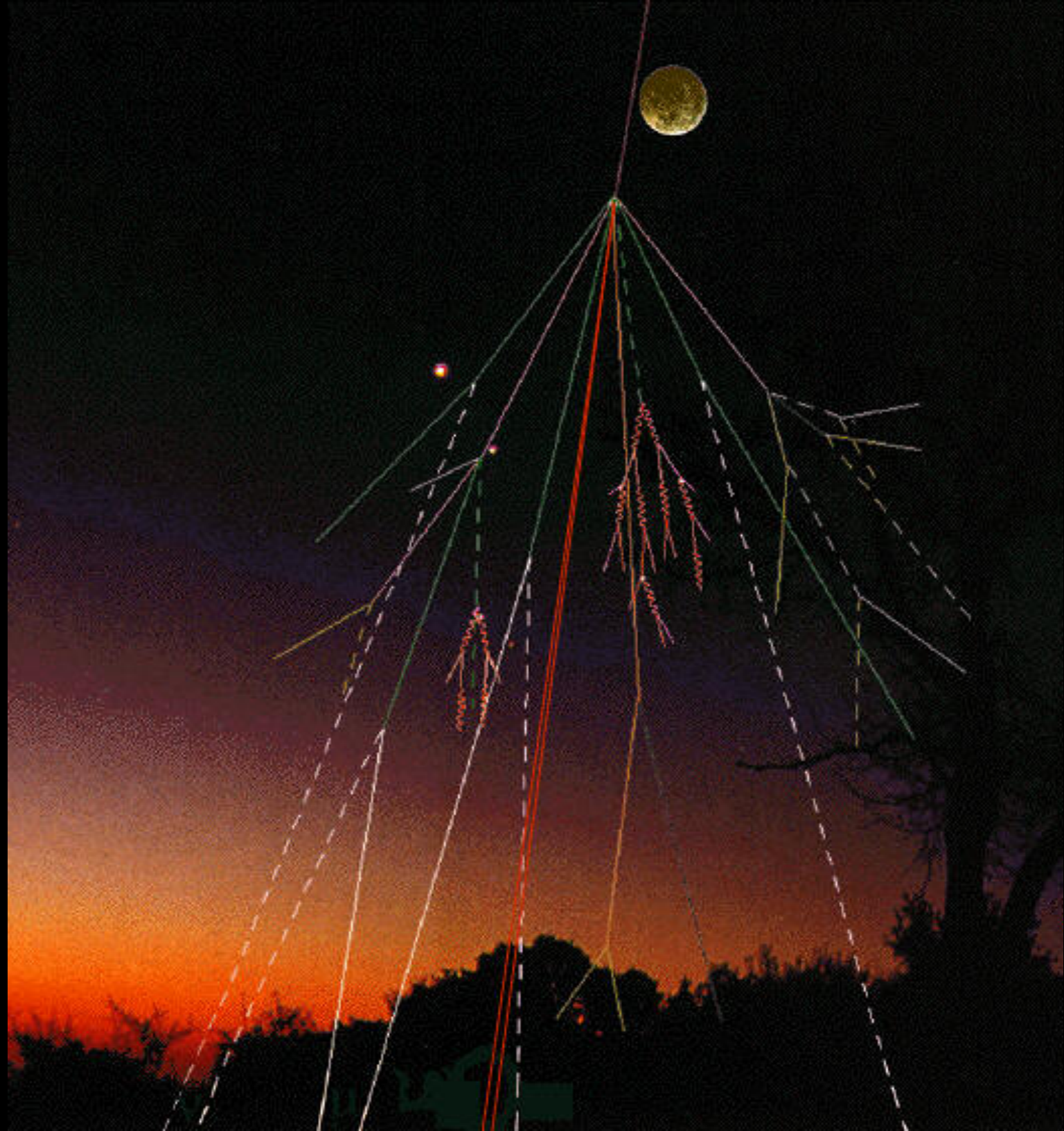


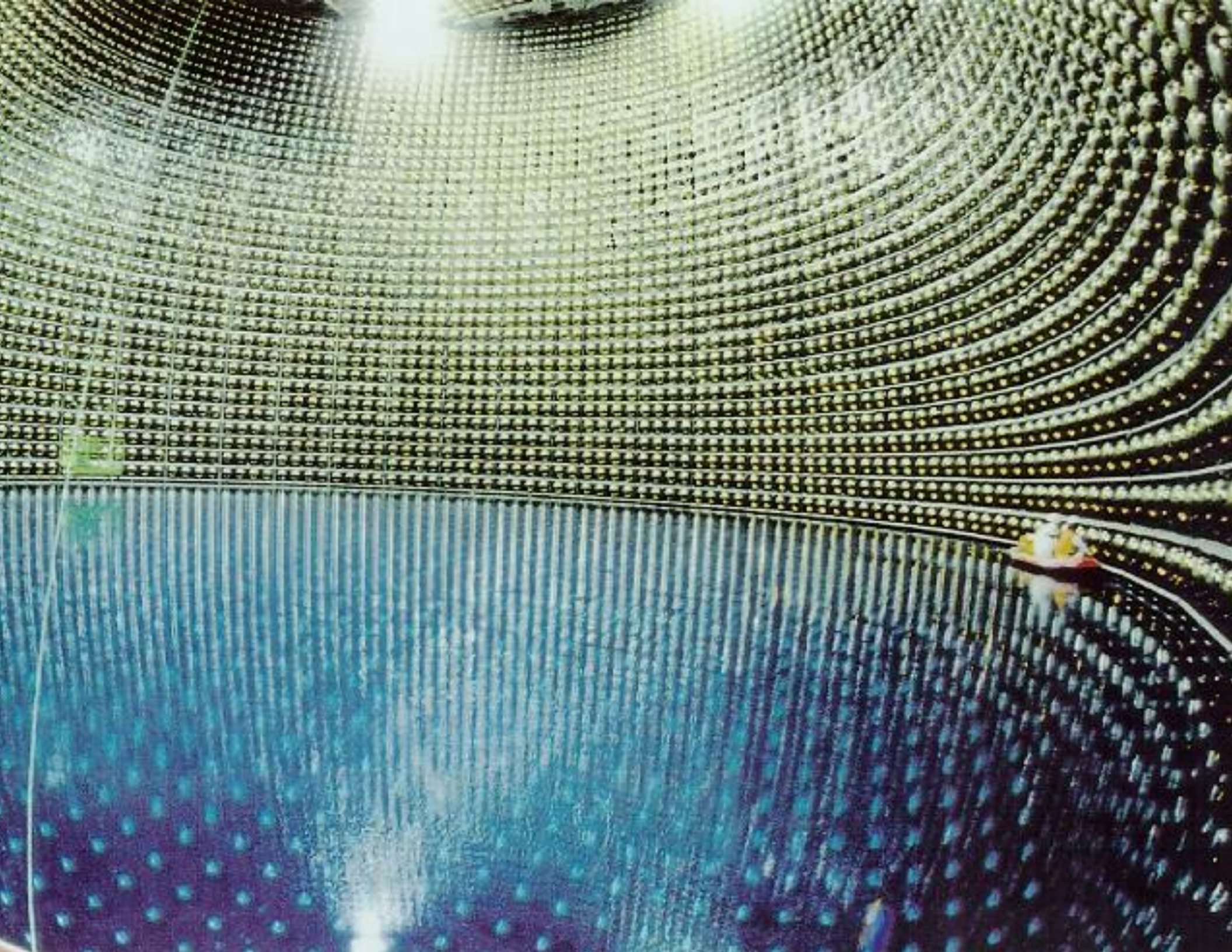


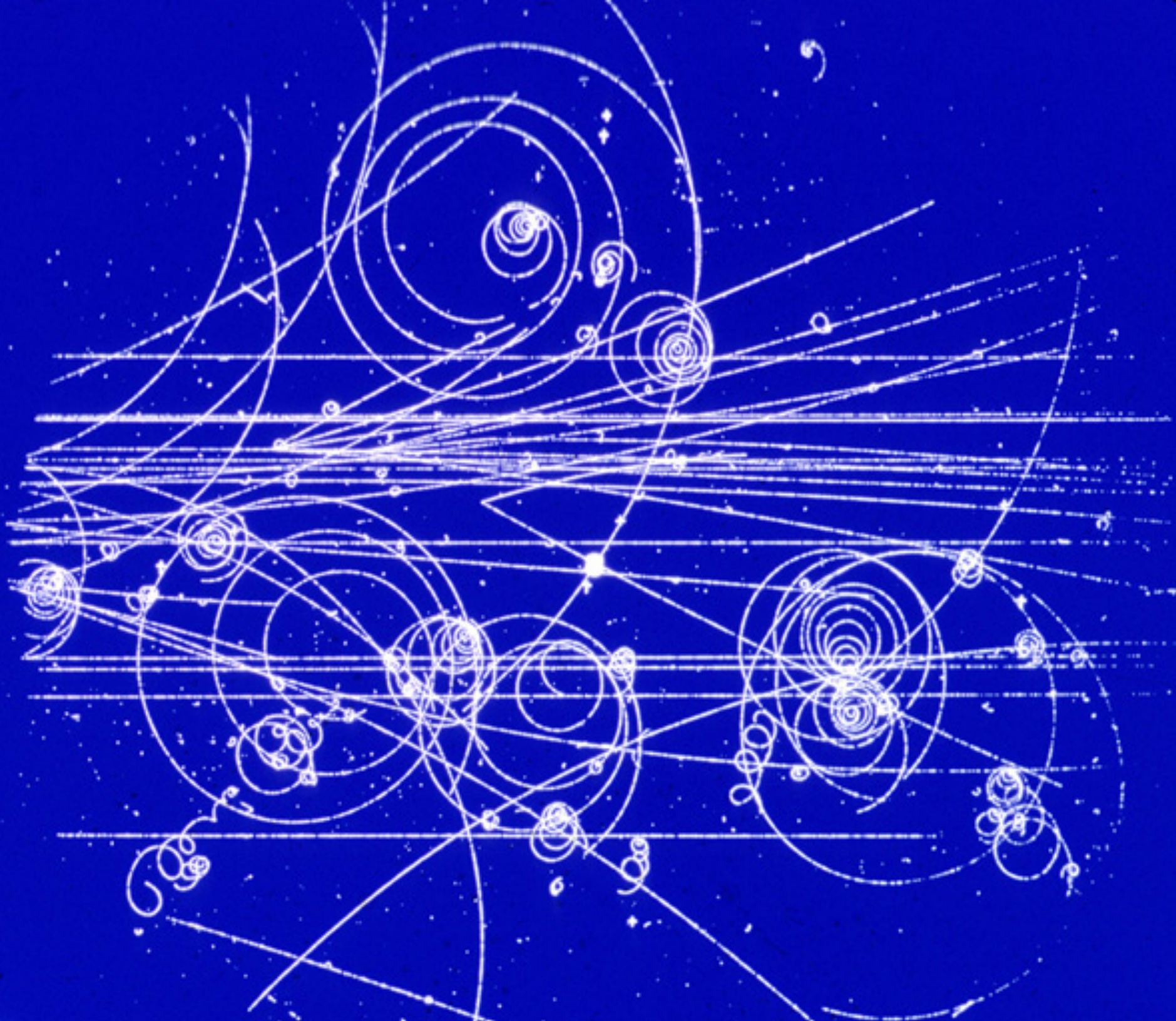


When I examine
myself and my
methods of thought,
I come close to the
conclusion that the
gift of fantasy has
meant more to me
than my talent for
absorbing positive
knowledge.





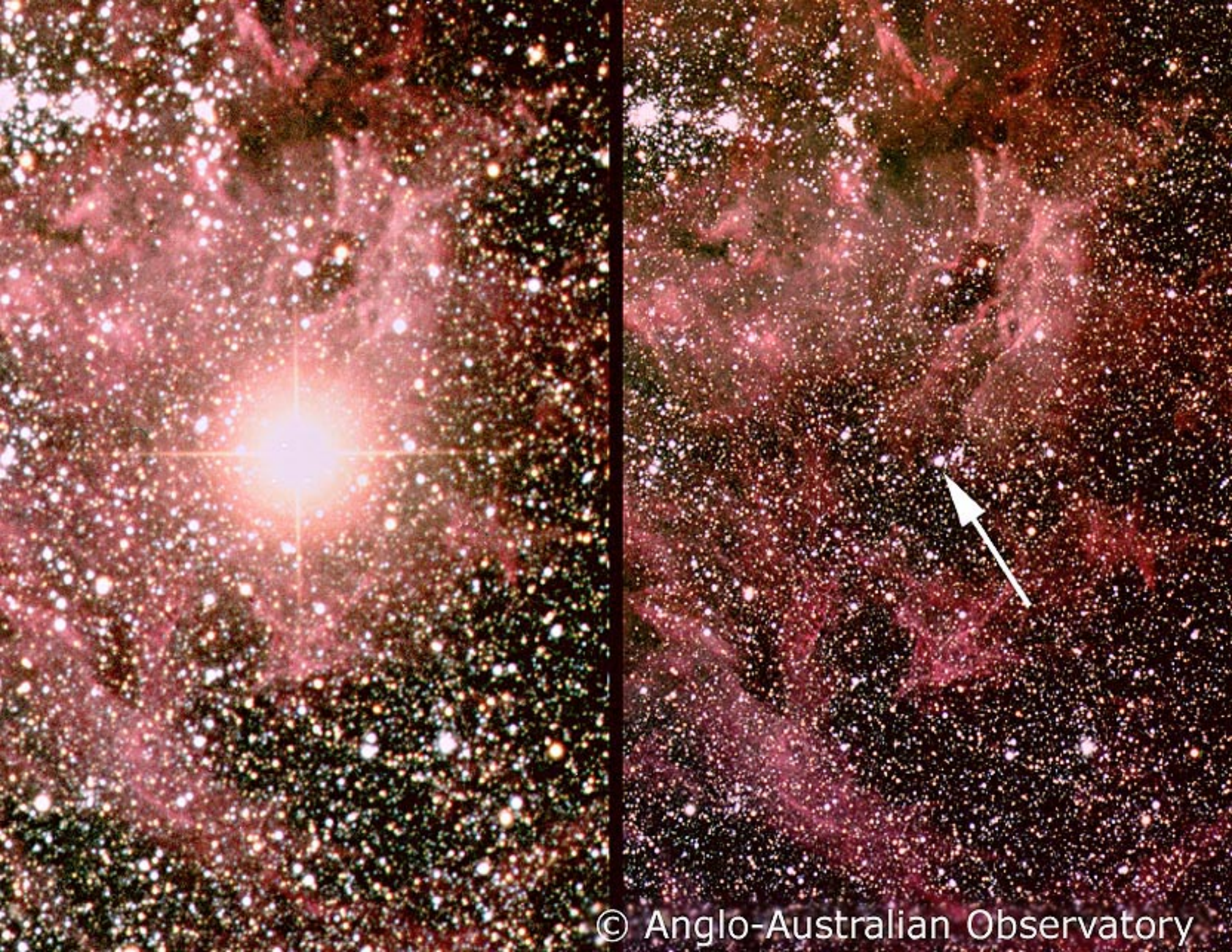




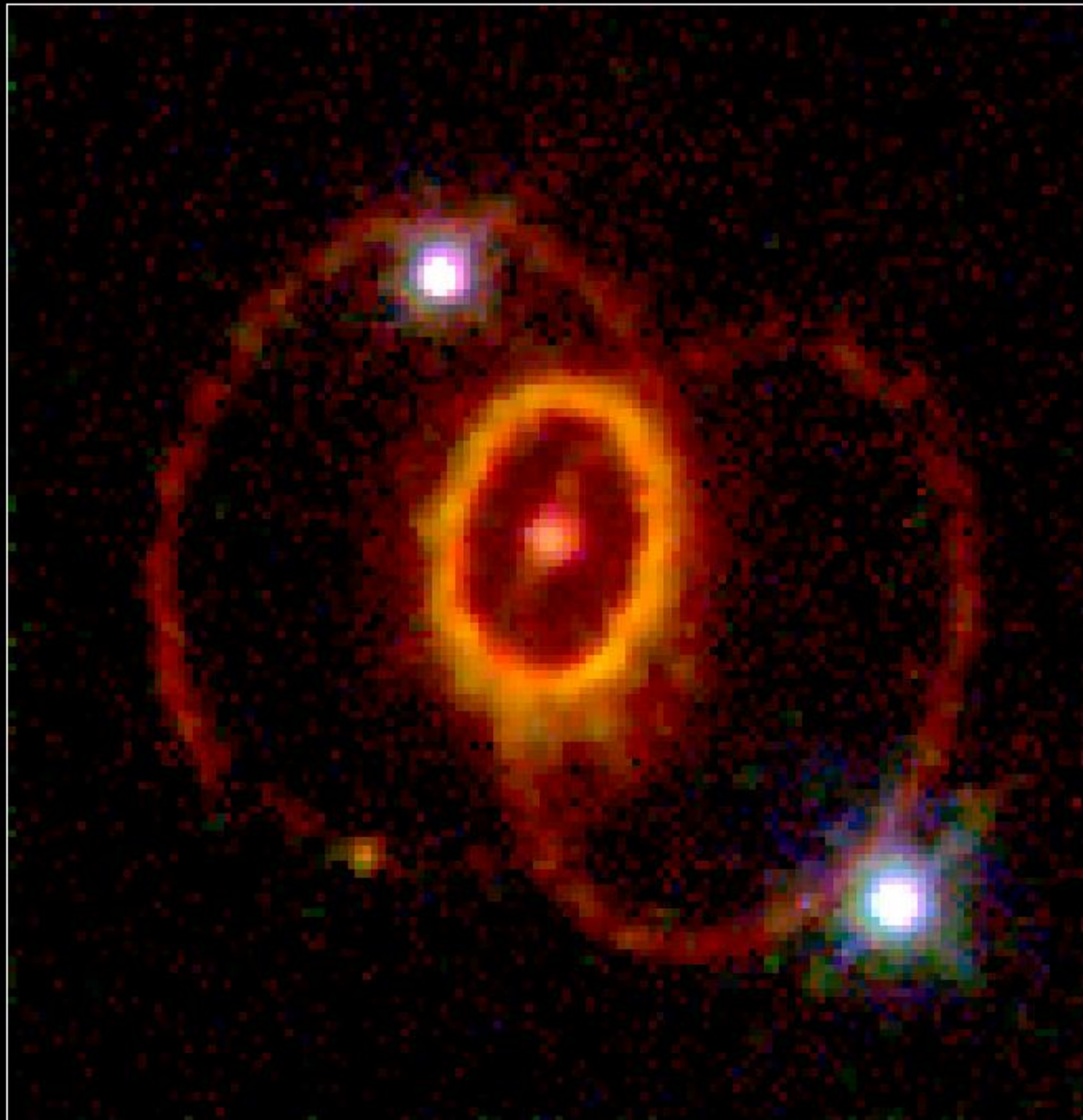
A hundred times every
day I remind myself that
my inner and outer life
are based on the labors
of other men,
living and dead,
and that I must exert
myself in order to give
in the same measure
as I have received and
am still receiving.







Supernova 1987A Rings



Hubble Space Telescope
Wide Field Planetary Camera 2

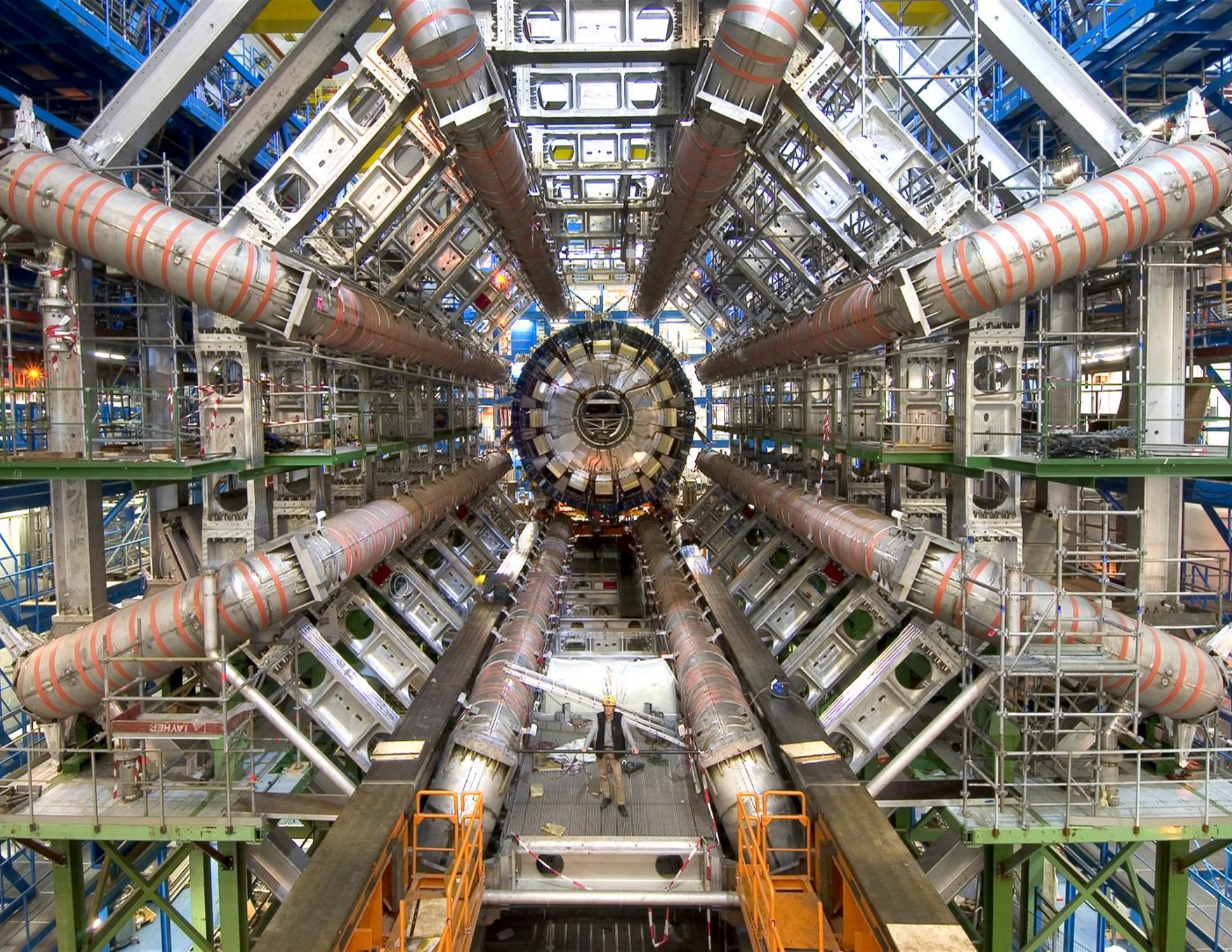
When a man sits with
a pretty girl for an
hour, it seems like a
minute.

But let him sit on a
hot stove for a
minute—and it's
longer than any
hour.

That's relativity.

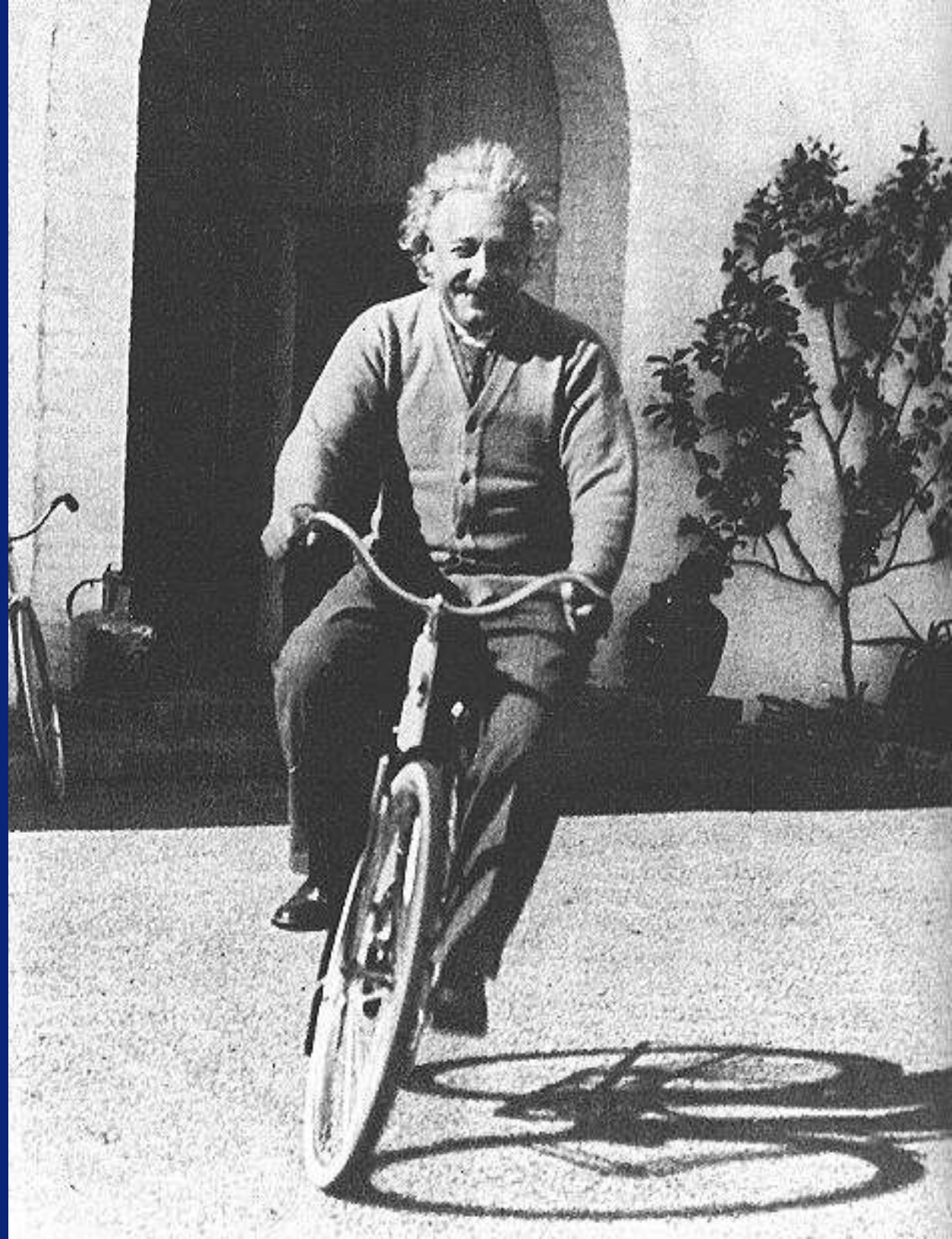








**The whole of
science is
nothing
more than
a
refinement
of everyday
thinking.**

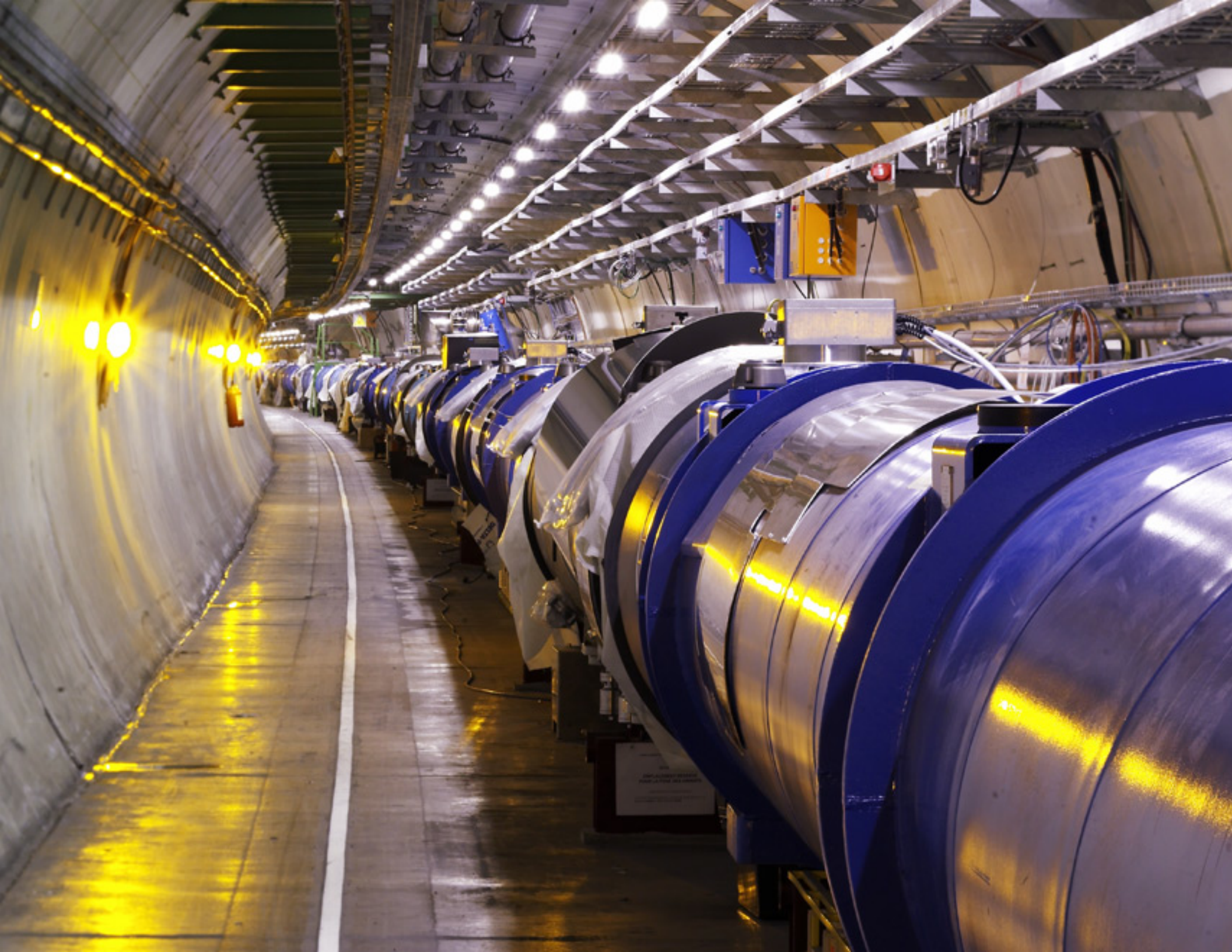






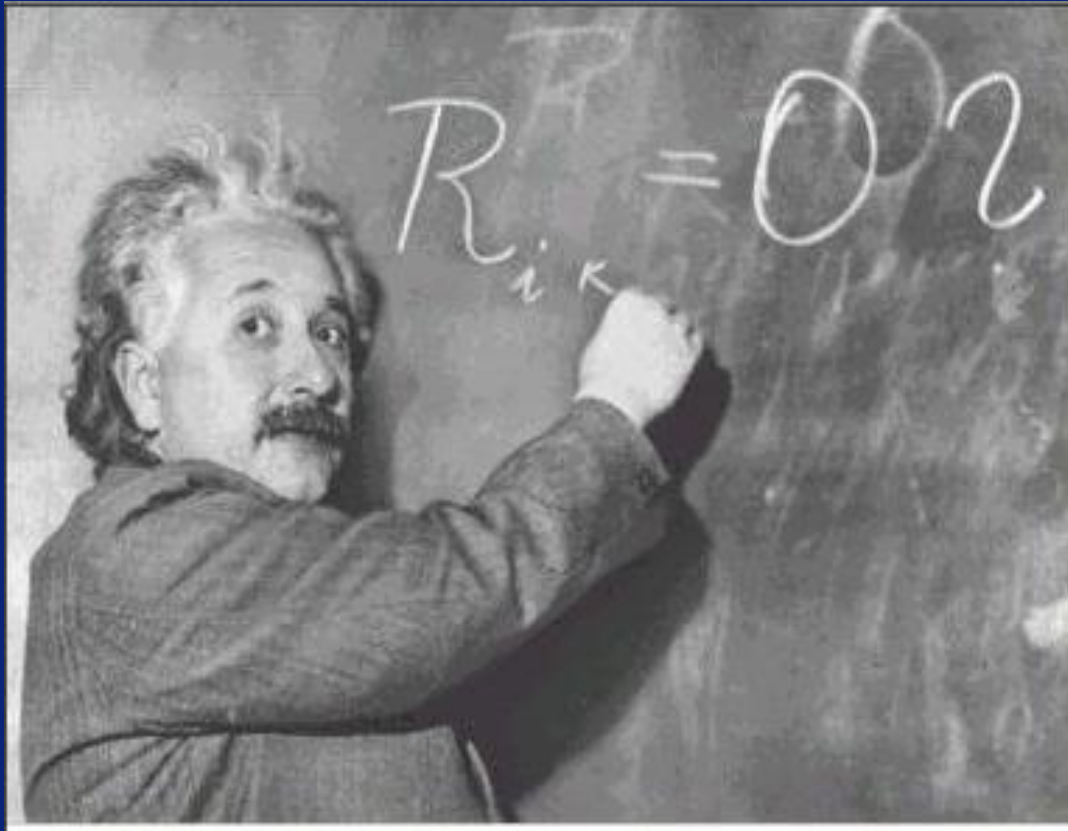
It is the supreme art
of the teacher to
awaken joy in
creative expression
and knowledge.



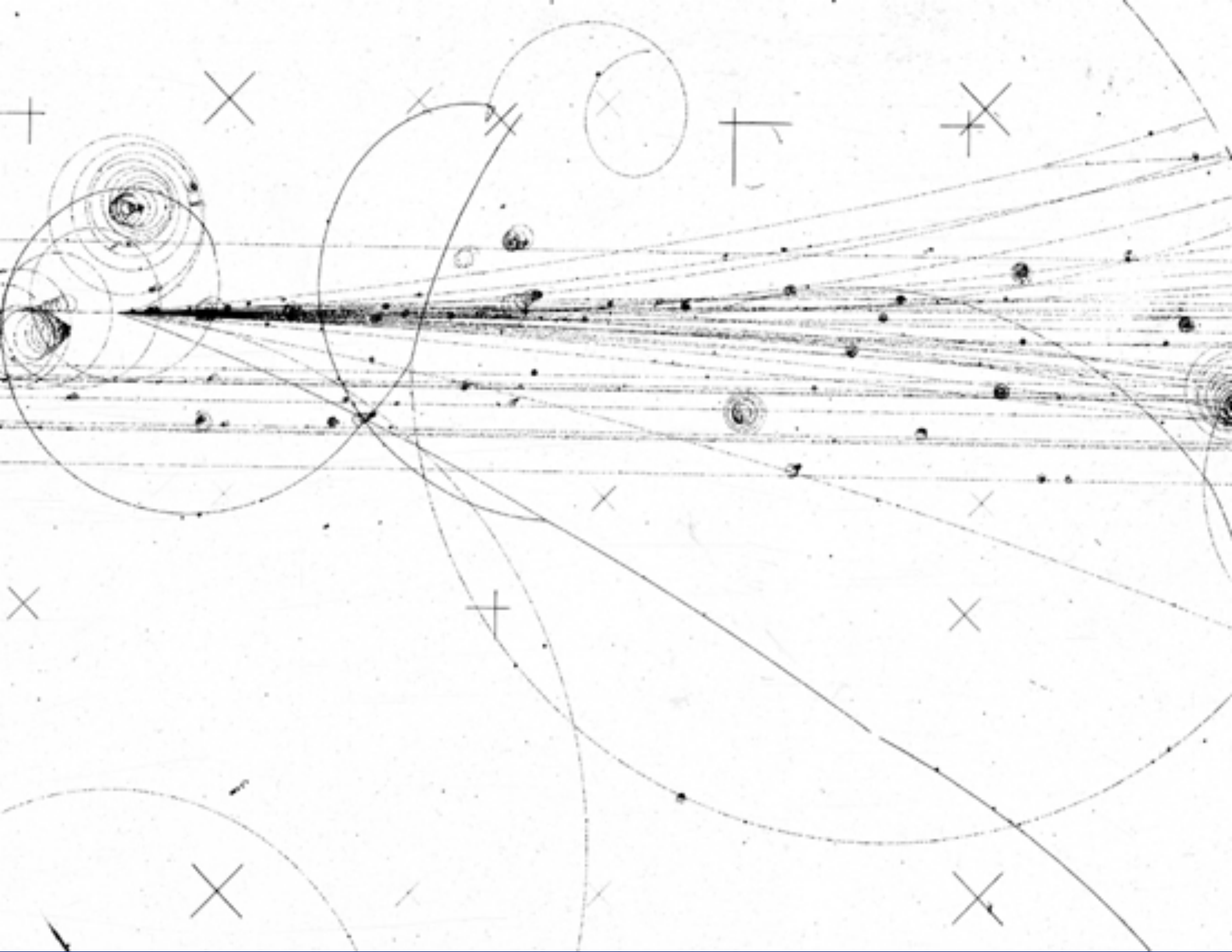


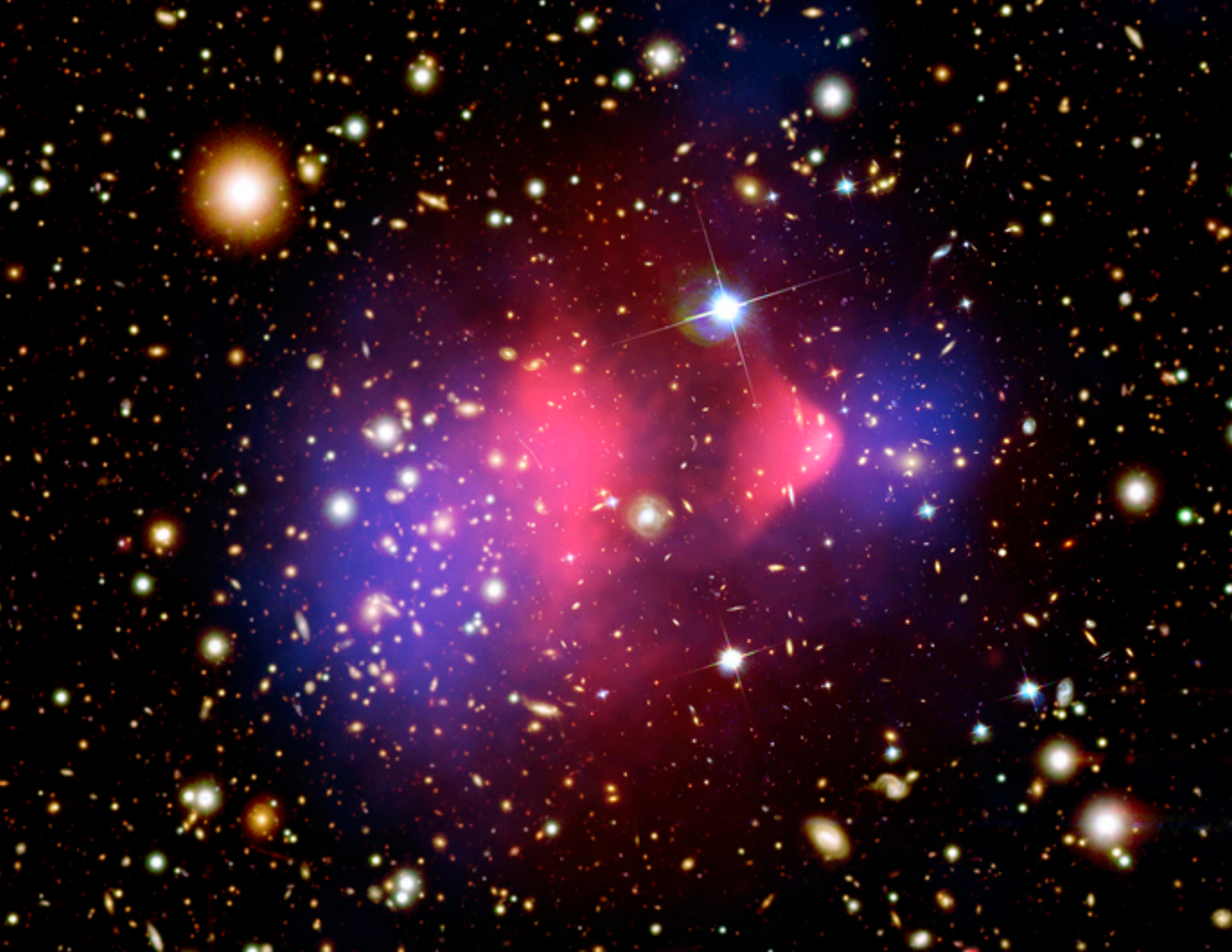




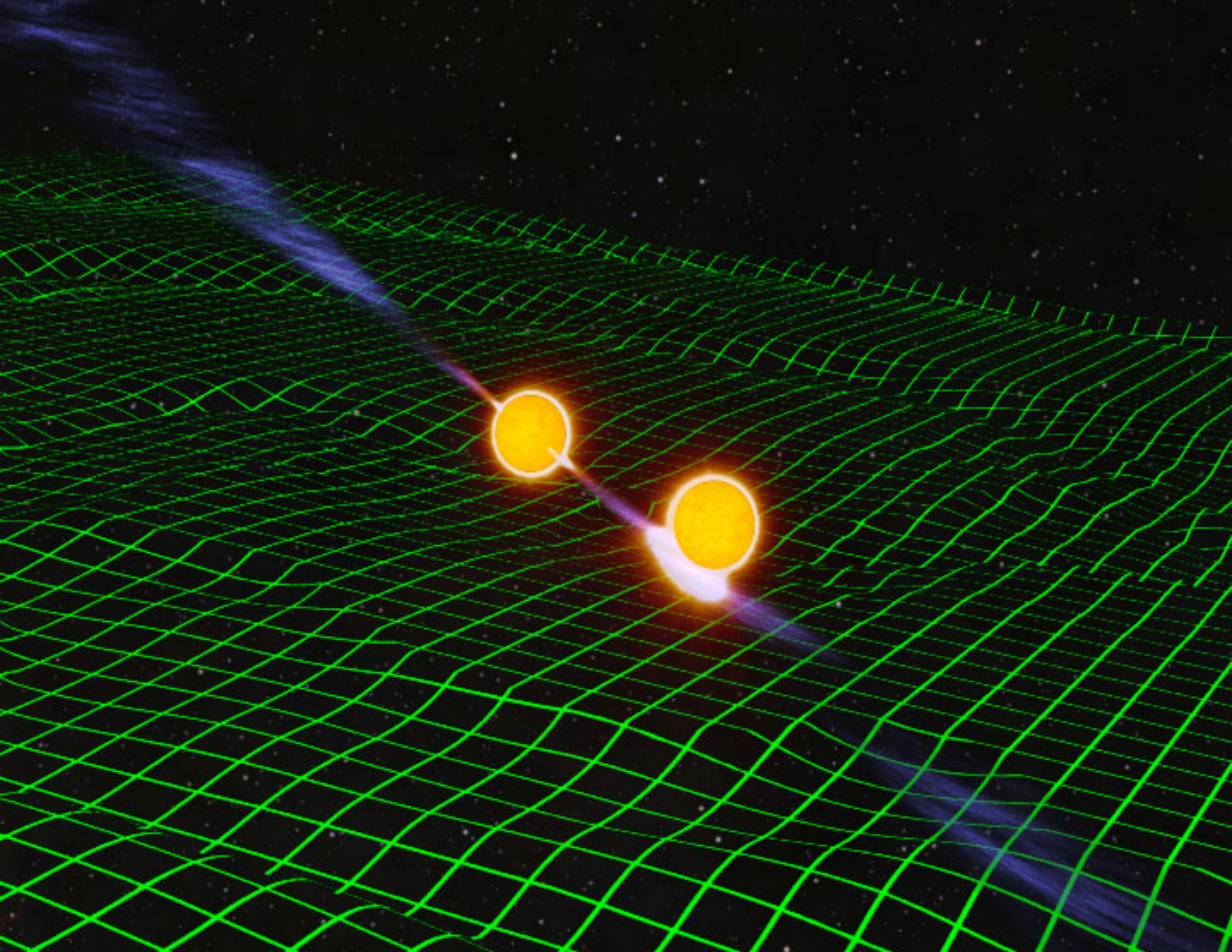


In so far as the statements of geometry speak about reality, they are not certain, and in so far as they are certain, they do not speak about reality.



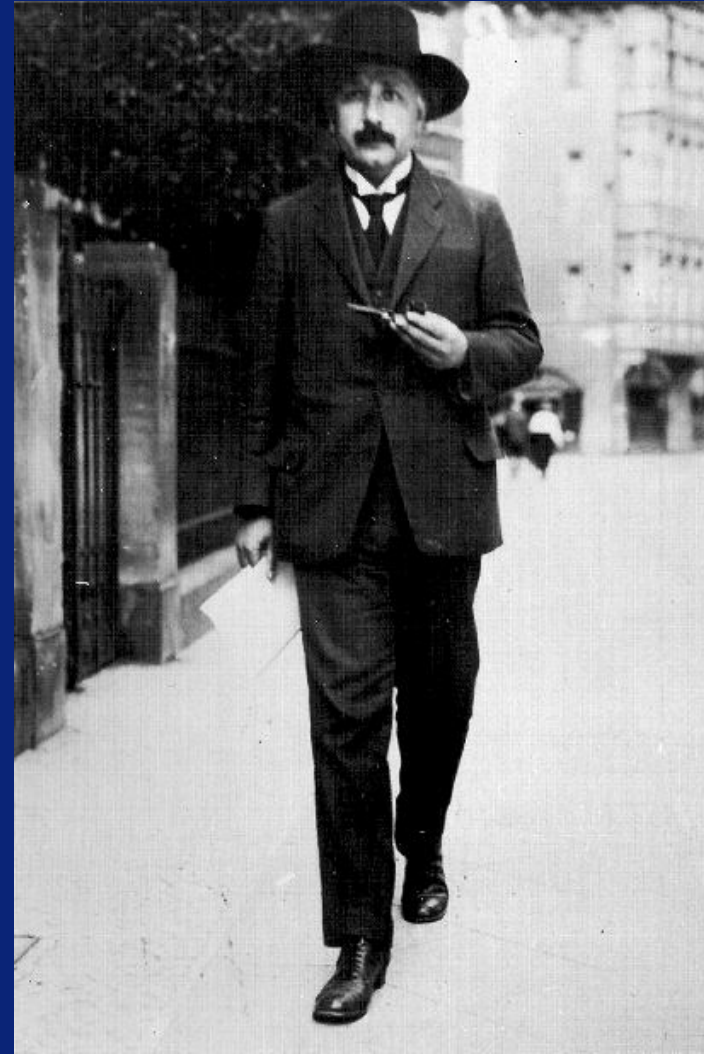


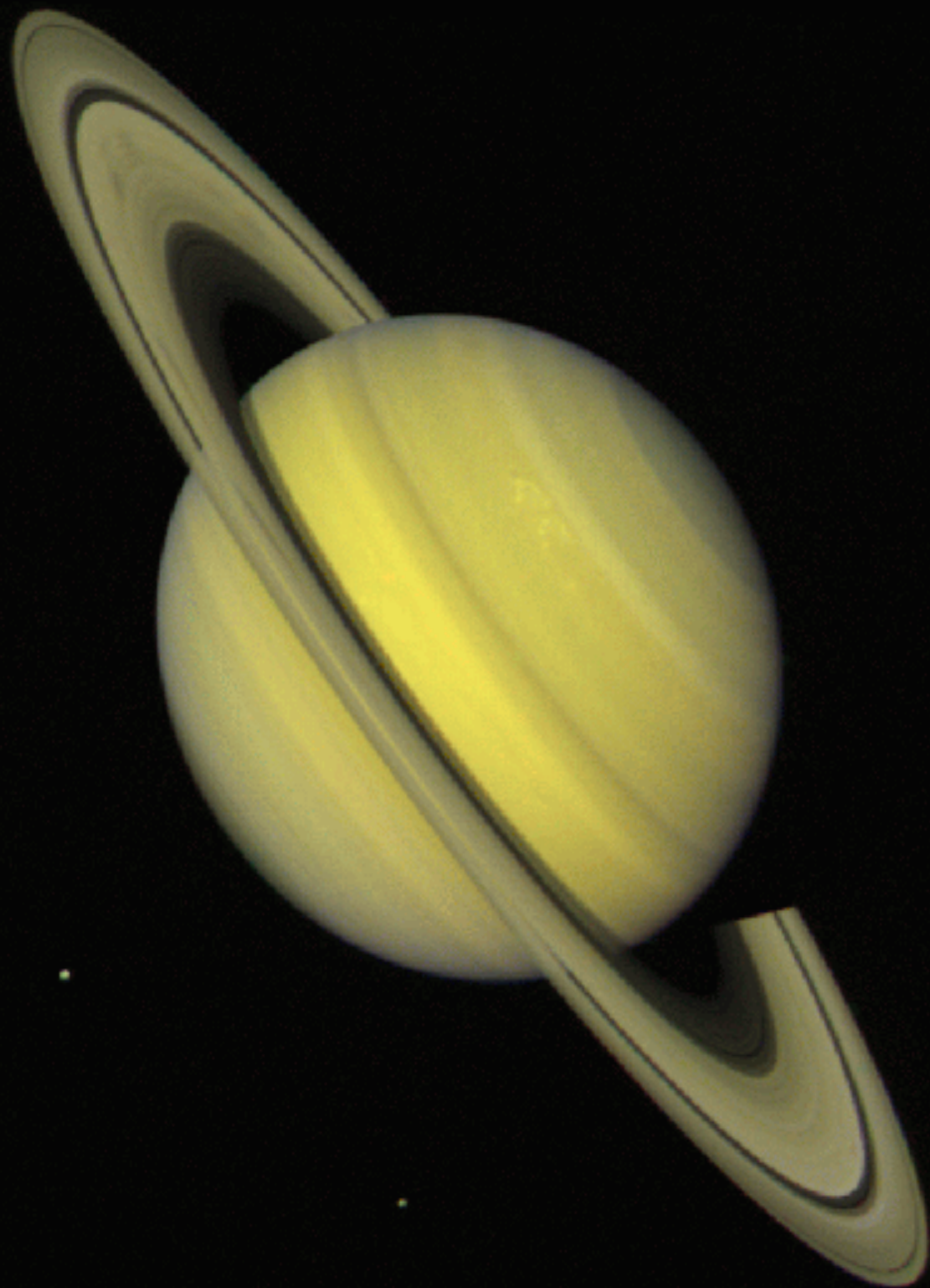




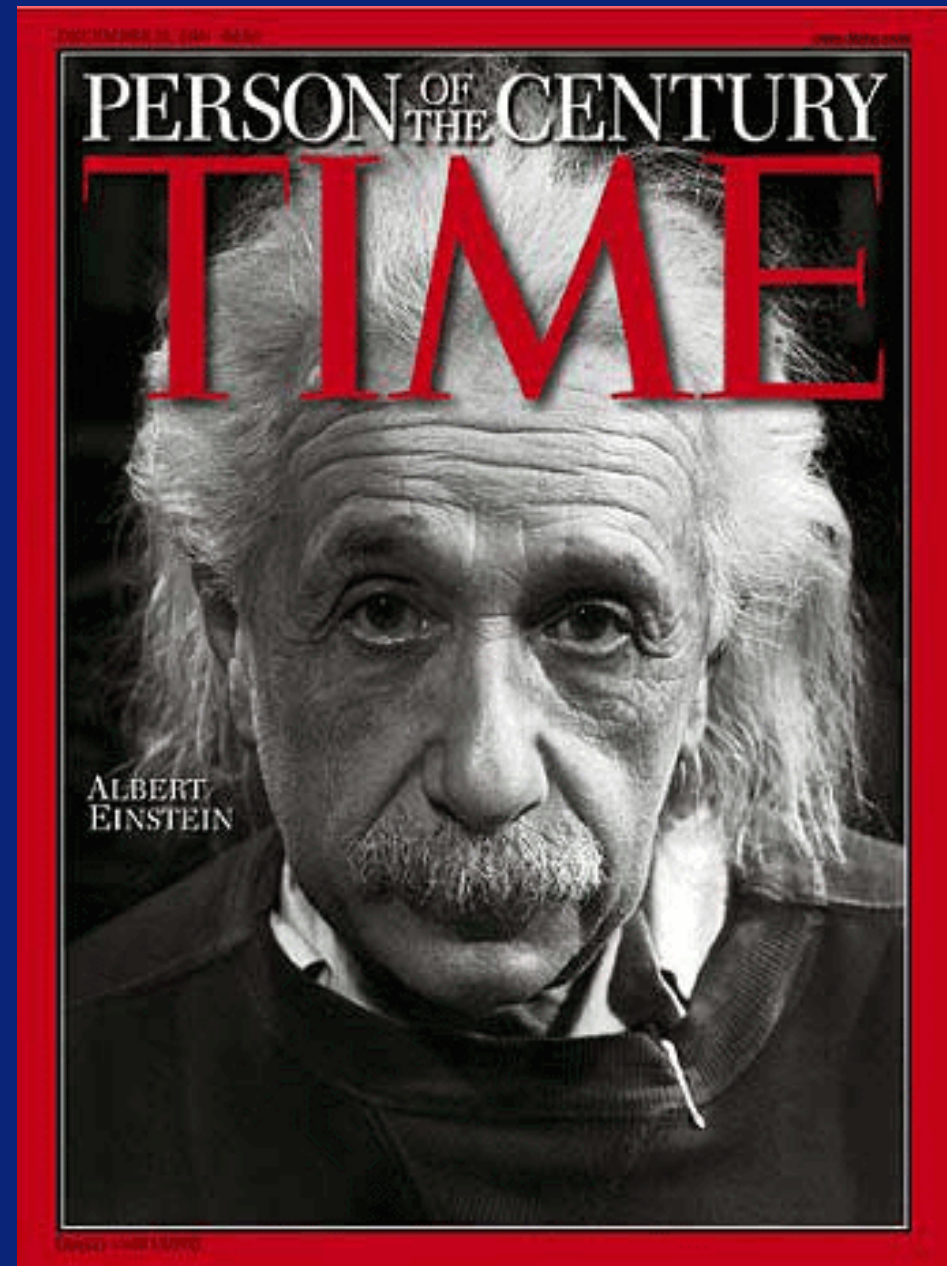
It is not enough that you
should understand about
applied science in order
that your work may
increase man's blessings.

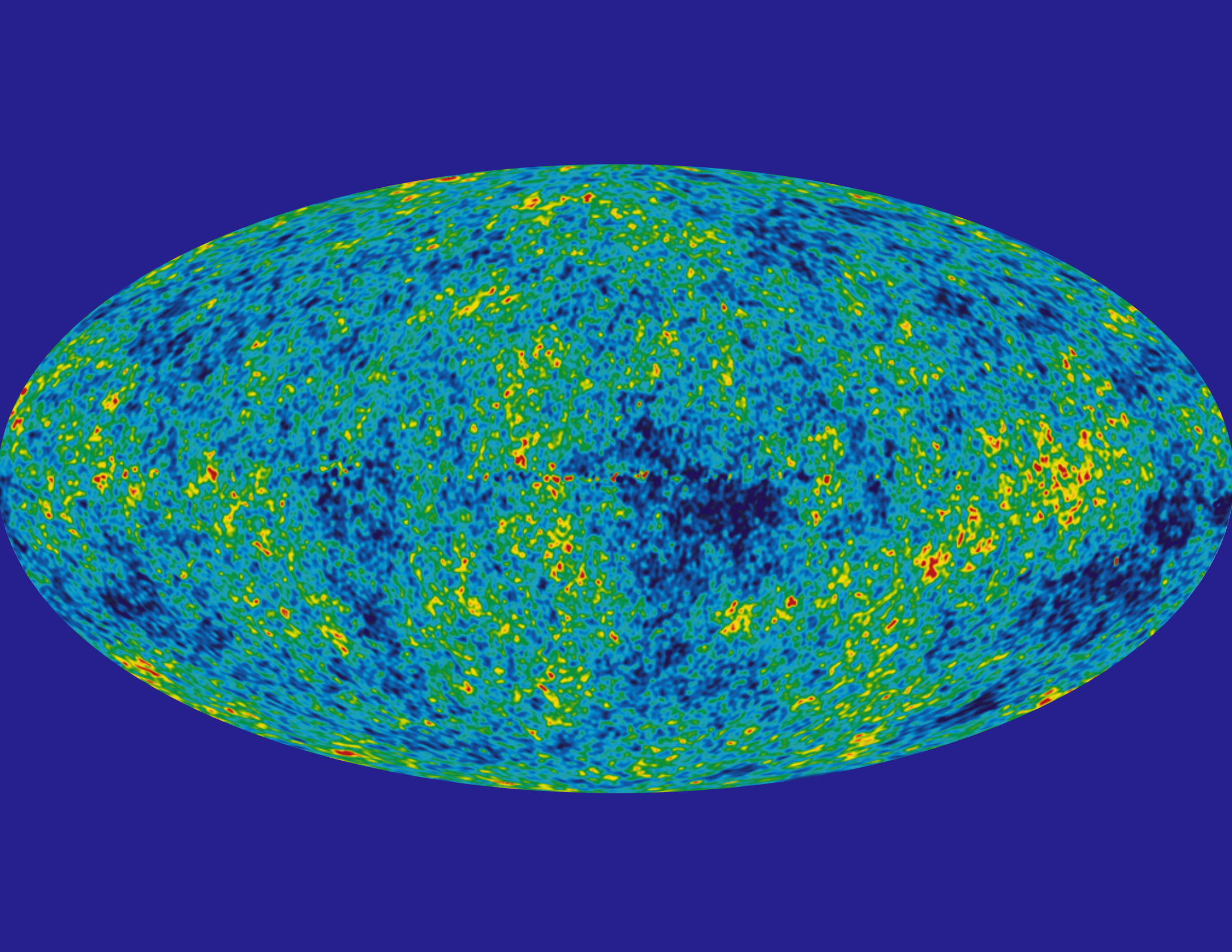
Concern for the man himself
and his fate must always
form the chief interest of
all technical endeavors.

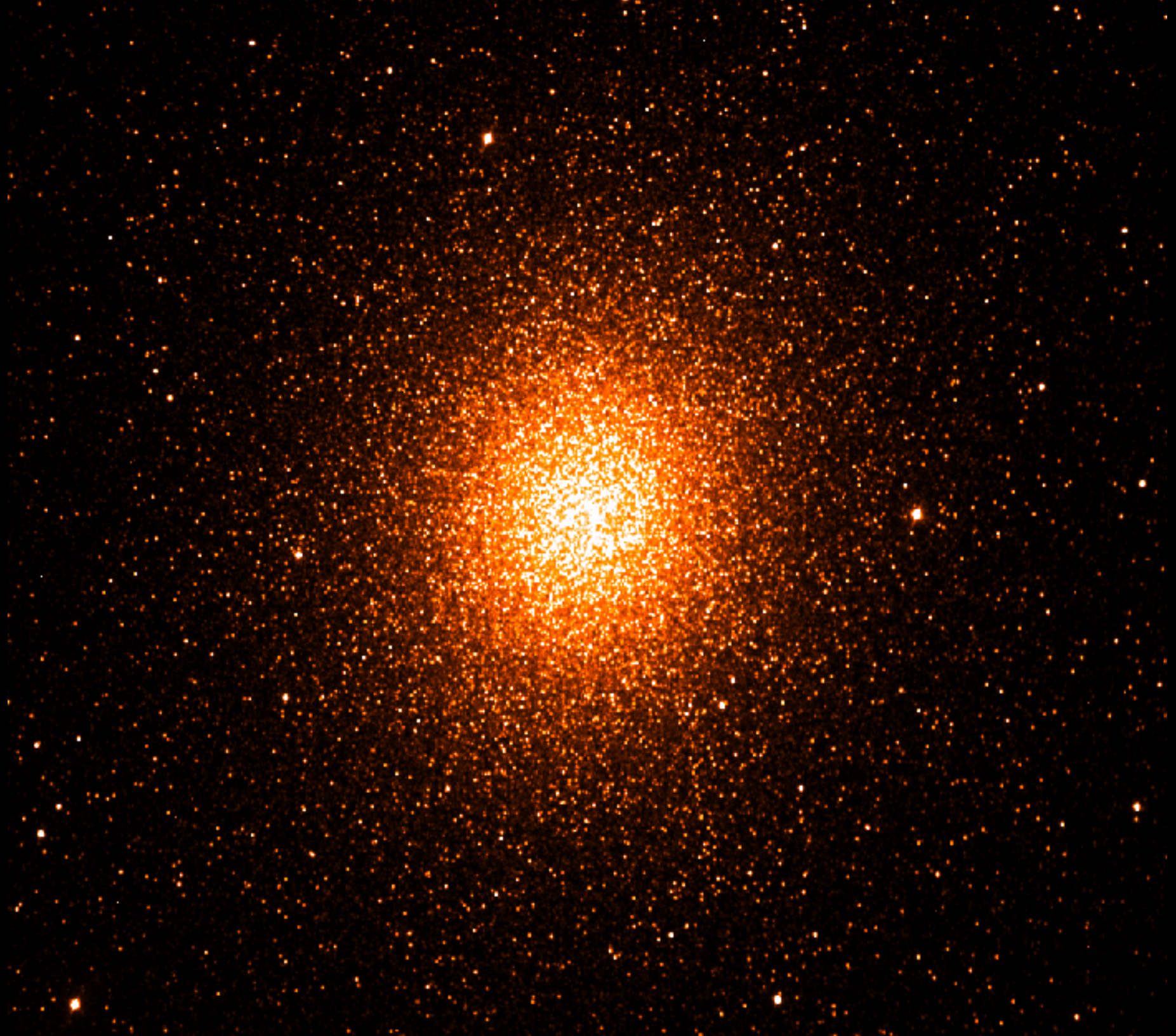


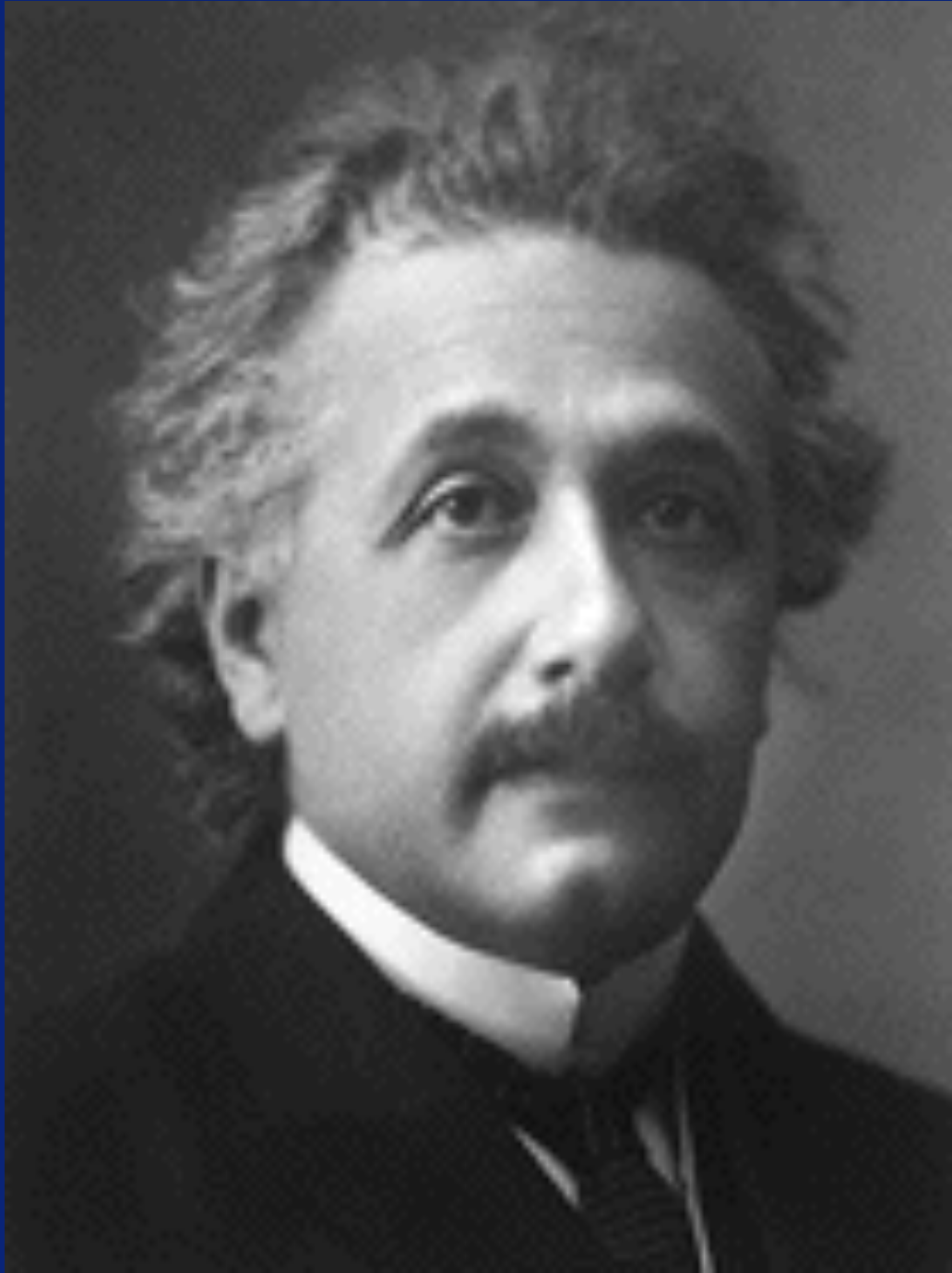




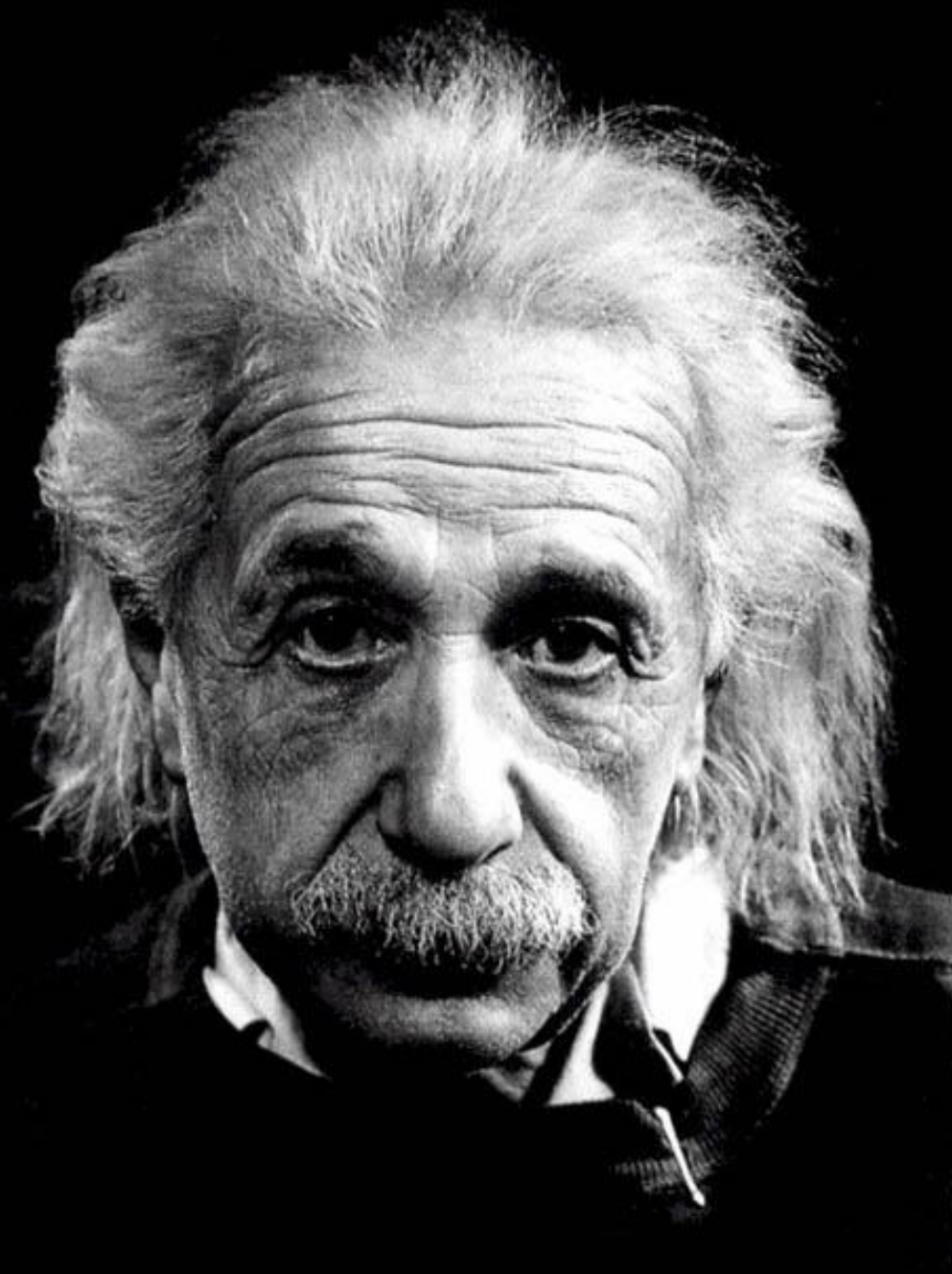








Make
everything
as simple
as possible,
but no
simpler.



CREDITS

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Gustaf Holst, *The Planets*, “Venus, the Bringer of Peace”
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Produced by James Brau

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