

# Messages from the Pale Blue Dot

[oneearthmessage.org](http://oneearthmessage.org)

Look again at that dot. That's here. That's home. That's us. On it everyone you love, everyone you know, everyone you ever heard of, every human being who ever was, lived out their lives. The aggregate of our joy and suffering, thousands of confident religions, ideologies, and economic doctrines, every hunter and forager, every hero and coward, every creator and destroyer of civilization, every king and peasant, every young couple in love, every mother and father, hopeful child, inventor and explorer, every teacher of morals, every corrupt politician, every "superstar," every "supreme leader," every saint and sinner in the history of our species lived there—on a mote of dust suspended in a sunbeam.

Carl Sagan, Pale Blue Dot, 1994

This will be a message from and to the Earth. The very act of creating it will be a powerful reminder that we all share the same, small planet. We truly are One Earth.  
Jon Lomberg, Project Director, 2016

# One Earth is working to keep the legacy alive

## Planetariums around the globe can help Jon Lomberg spread the excitement

By Sharon Shanks  
Editor

Planetariums across the globe have an awesome chance to take part in a “new message in a bottle” being proposed for the New Horizons extended mission. The craft, after its successful and exciting flyby of Pluto in July 2015, is now heading through the Kuiper Belt and eventually leave the solar system.

It will be the fifth craft to leave the gravitational attraction of the sun; two Pioneer crafts and two Voyagers also have made this trek.

The difference? The four earlier spacecraft bore with them physical “messages” from Earth; plaques for the Pioneers and golden records for the Voyagers. The messages were Carl Sagan’s passion for sharing scientific knowledge made tangible and open for the entire world to take part.

Now Jon Lomberg, longtime artistic colleague and illustrator for Sagan and a member of the team behind the Voyager Gold Record, is working to secure a digital message to be uploaded to New Horizons so that the legacy of messages to the cosmos continues.

The project is called One Earth Message; Lomberg is the project director and has gathered an international advisory board to help carry it out.

The message will be from all people. It represents our hope for the future, that we will go on and that our memories will go on. It also is an affirmation that, although we have no data

to support it, we are not alone in the universe; we’re saying, *al la Horton Hears a Who*, that “we are here, we are here, we are here.”

“The Voyager record turned out to be a much more popular and profound activity than we expected,” Lomberg said. This tremendous interest showed to Lomberg and others that an “awfully high percentage of people are interested in space.”

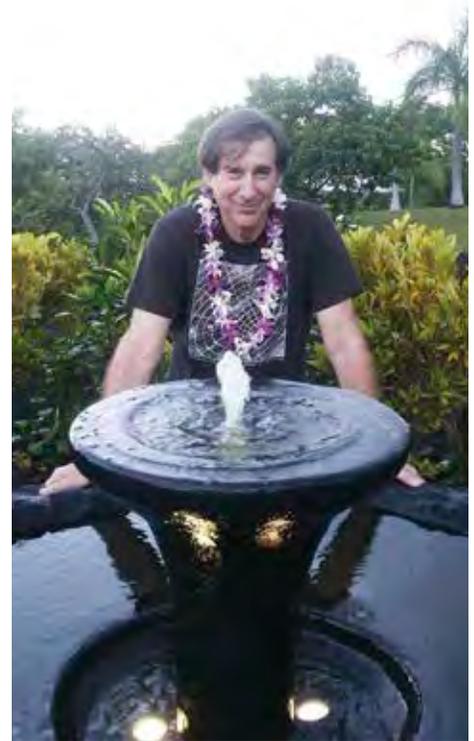
To put something on a message on a spacecraft, “a message for extraterrestrials, that’s exciting,” he said. The message actually was for two audiences: for us, the people of Earth, and for an extraterrestrial that we’ll never know about.

“Sagan pointed out that the message (on the Voyager record) was not from NASA or the US, but from all of us. Global participation is important. Small countries with no space program” will have a voice in space, Lomberg said.

There are several hooks from which planetariums can hang the One Earth Message. The first is generational. “The record was in 1977; it’s time for something else to inspire the rising generation,” Lomberg noted.

Another significant difference is “everybody can be involved; everyone will have a say in what we can send.” This active participation opens up the process; “it gets people

<sup>1</sup> *Horton Hears a Who*, by Dr. Seuss, tells the story of an elephant who finds a tiny world on a speck of dust.



Jon Lomberg at his black hole fountain, located at the center of his Galaxy Garden ([www.galaxygarden.net](http://www.galaxygarden.net))

thinking about what’s important to say about Earth.”

### How can planetariums take part?

Planetarium programs, perhaps connected to already-scheduled Pluto shows, can spread the word and show people how they can participate. “Wide participation—outreach is the key to that. We envision workshops and activities for students, like how to take pictures to share.”

Another possibility would connect schools from different countries. One class could write a message and send to another group for re-view, and vice versa.

Participation is as easy as connecting to the One Earth Message website at [oneearthmessage.org](http://oneearthmessage.org), or emailing Lomberg directly at [newhorizonsmessage@gmail.com](mailto:newhorizonsmessage@gmail.com)

Planetariums can help their audiences realize the time scale of the messages that Earth has sent into our galactic neighborhood.

The record aboard the Voyagers will last for billions of years, for example.

“With digital, we have no idea how long it will last. One hundred thousand years? With different technology, maybe a million years?” Lomberg said.

A video made for the initial fundrais-

Facing Page: This narrow-angle color image of the Earth is a part of the first ever “portrait” of the solar system taken by Voyager 1. From Voyager’s great distance, Earth is a mere point of light, less than the size of a picture element even in the narrow-angle camera. Earth was a crescent only 0.12 pixel in size. Coincidentally, Earth lies right in the center of one of the scattered light rays resulting from taking the image so close to the sun. This blown-up image of the Earth was taken through three color filters—violet, blue and green—and recombined to produce the color image. The background features in the image are artifacts resulting from the magnification. NASA/JPL  
This image inspired the title of Carl Sagan’s 1994 book, *Pale Blue Dot: A Vision of the Human Future in Space*.

(One Earth Message, continued from page 15)

ing effort can be see at [www.youtube.com/watch?v=1dOifJ-5QbA](http://www.youtube.com/watch?v=1dOifJ-5QbA).

“A new video could be based on this, remixing that to include images from the actual Pluto encounter, and produced expressly for dome presentation,” Lomborg suggested. “Perhaps production of that could be one of the roles planetarians can play?”

### There’s enough time to do it right

There is plenty of time for the project to gather data for the Earth Message before any uploading can take place. It will not be transmitted until all the mission science is complete.

Although a Kuiper Belt Object (2014 MU69) has been selected as New Horizon’s next target, NASA is still reviewing the expected mission extension. One aspect of the extension is troubling: the proposal will not include EPO (education and public outreach, a typical inclusion in most NASA funding).

Despite this, Lomborg said that “NASA is currently reviewing the project with great interest.” New Horizons Principle Investigator is supportive of the One Earth project, and also is a member of the One Earth advisory board.

“We will be in touch with (New Horizons) for 50 years or more. The original participants will have kids and grandkids by then, and will still be connected.”

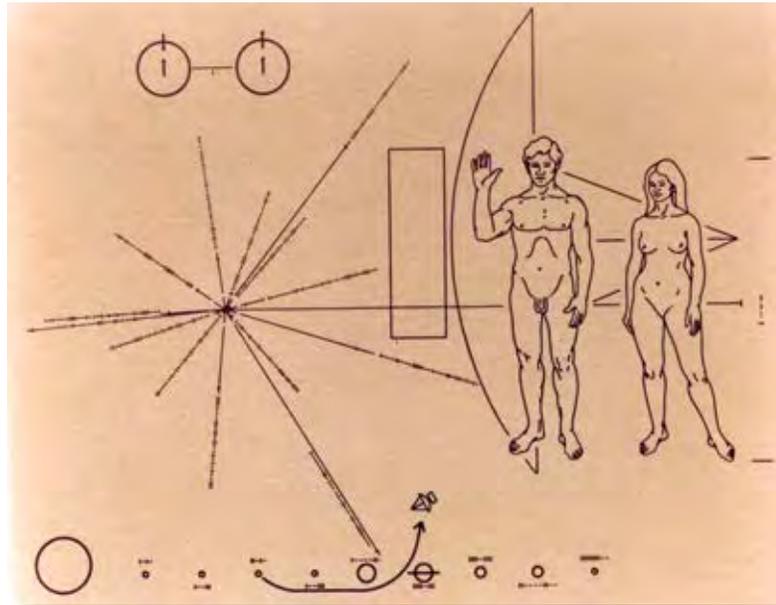
People who are interested in taking part, especially those who would like to be a local representative in their country, are encouraged to contact the One Earth project.

“The message should be made by people who want to make it,” Lomborg noted.

Already on the advisory board are several names familiar to IPS: Kaoru Kimura, affiliate representative for the Japan Planetarium Association; Ian McLennan, representative for the Canadian Association of Science Centres; and Derrick Pitts, directory of the Fels Planetarium at the Franklin Institute in Philadelphia.

Also on the board: Paul Curnow, lecturer at the Adelaide Planetarium and a council member of the Astronomical Society of South Australia.

You can learn more at [www.jonlomborg.com](http://www.jonlomborg.com) and [oneearthmessage.org](http://oneearthmessage.org). ☆

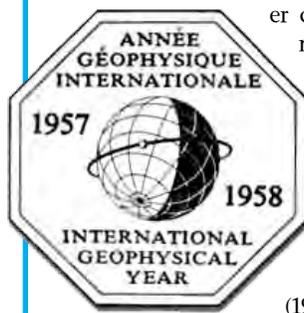


The plaque secured to one of the Pioneer craft. Wikimedia Commons/NASA.



## Before the golden record, there were Pioneer golden plaques

We always hear about Pioneers 10 and 11, the craft designed to leave the solar system.



There were many other craft named Pioneer, however, that we barely remember today. The Pioneer program was initiated for the International Geophysical Year (1957-58) and assigned to the Air Force Ballistic Missile Division and the Army Ballistic Missile Agency. The program was adopted by NASA upon its formation in 1958.

These first pioneers in space had difficulty getting to their assignments, primarily orbiting the moon. The first seven Pioneer/Able craft, each bearing var-

ious number and letter combinations, either were lost in launch failures or failed to achieve orbit.

Pioneer 4, launched on March 3, 1959, became the first US probe to escape Earth’s gravity. It successfully flew by the moon before reaching heliocentric orbit; it was still there as of 1969.

Various other Pioneer missions were sent to interplanetary space to take magnetic and solar particle readings, sending back the first useful data about solar storms.

Pioneer 10, launched in March 1972, was the first mission to the outer planets. It achieved escape velocity from the sun shortly after its flyby of Jupiter. It was 80 AU from earth when radio contact was lost in 2003.

Pioneer 11 was tasked with studying the asteroid belt, the space around Jupiter and Saturn, solar wind, and cosmic rays. It launched on April 5, 1973; last contact was in 1995.

Both Pioneer 10 and 11 bore the gold-anodized aluminum plaques bearing the same pictorial message.

Additional Pioneer probes were sent to orbit and land probes on Venus. ☆

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