

## As Far Out as Uplifting Moments Can Go

Written by Alex Baer

Sunday, 05 August 2012 12:25

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The human species keeps experiencing threshold moments. At times it seems everything's right on the brink. This time, there's a nice change: It's a good thing. There's even a love story here, as sincere and big-hearted as space.

**First, the news:** Fans of sci-fi and science fact are coming up on a special moment: knowing an object of human origin is about to move into interstellar space.

Nearly 35 years after launch, two Voyager spacecraft, sent aloft less than three weeks apart, in the summer of 1977, are thrumming along fine, and continue to send back intriguing accounts of their journeys.

Voyager 1 is now 11 billion miles from the Sun; Voyager 2 is on its tail, of a sort, a billion and two-thirds miles back, just 9 and a third billion miles from our sun.

ScienceDaily notes a report from Jet Propulsion Laboratory, a division of California Institute of Technology, which continues to operate both vehicles. Scientists have said there have been rapid changes in two of the three key signs that would signal a shift into interstellar space.

Changes in those two key signs have changed faster in one day than at any other time in the previous seven years. Clearly, something new is afoot -- or at hand, as you prefer.

Some hints that threshold of change is approaching: a 5 percent jump in cosmic rays coming from outside our solar system, along with a 50 percent drop in lower-energy particles coming from inside our system.

Both changes occurred in one day. To put a human face on things, the spacecraft are leaving home, and starting to wave goodbye.

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The third of the three key signs they have crossed over will be the direction of the magnetic field changing. Scientists are now checking over that data, already received from the spacecraft.

Scientists are not yet prepared to smash a bottle of bubbly on mankind's maiden voyage into another star system. While not quite ready to pop the cork on the champagne and announce both spacecraft have left home, already on their way to new lives, scientists are openly pleased.

Edward Stone, the Voyager project scientist at CIT, says, "These are thrilling times for the Voyager team as we try to understand the quickening pace of changes as Voyager 1 approaches the edge of interstellar space."

He adds, "We are certainly in a new region at the edge of the solar system where things are changing rapidly."

Suzanne Dodd, Voyager project manager at JPL, agrees: "We know they will cross into interstellar space. It's just a matter of when."

A preliminary analysis of the magnetic field data is expected next month.

As for that love story you were promised: It's quite amazing, and involves key participants who were involved in creating the greetings humans have sent off into space, Carl Sagan and Ann Druyan.

It's a shame he cannot be here next month, when the announcement is made humanity has crossed the threshold into interstellar space.

But, remembering him right about now -- his and Ann's phenomenal story (in the links below) -- and their truly cosmic love story, is pretty darned wonderful, too.

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Some would say *heavenly*, framed together, among all those stars.

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### The News:

*The ScienceDaily Report:*

<http://www.sciencedaily.com/releases/2012/08/120804082858.htm>

### The Science-and-Love Story:

*NPR's Valentine's Day story a while back:*

<http://www.npr.org/2010/02/12/123534818/carl-sagan-and-ann-druyan-s-ultimate-mix-tape>

*The original RadioLab report, for a bit more detail:*

<http://www.radiolab.org/blogs/radiolab-blogland/2008/jul/21/ann-druyen-on-the-space-episode/>

*And, for more detail still, just choose the Carl-and-Ann selection:*

<http://www.radiolab.org/blogs/radiolab-blogland/2012/feb/14/radiolabby-valentines-set/>

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*And, for a wider view, into space:*

<http://www.radiolab.org/2007/oct/22/>

*More from Carl Sagan:*

<http://www.carlsagan.com/>

*More from Ann Druyan:*

[http://anndruyan.typepad.com/the\\_observatory/2006/12/ten\\_times\\_aroun.html](http://anndruyan.typepad.com/the_observatory/2006/12/ten_times_aroun.html)

*And, of course, please Google for more.*