


The Sixth Annual
Von Braun
Exploration Forum



**Life in the
Universe**

TUESDAY, SEPTEMBER 21, 1993
8:15 PM
VBCC CONCERT HALL

THE SIXTH ANNUAL
VON BRAUN
EXPLORATION FORUM

Life in the Universe

PROGRAM AGENDA

"Islands"
(by John Denver)
performed by John Denver

Introductions
Dr. Charles Richard Chappell

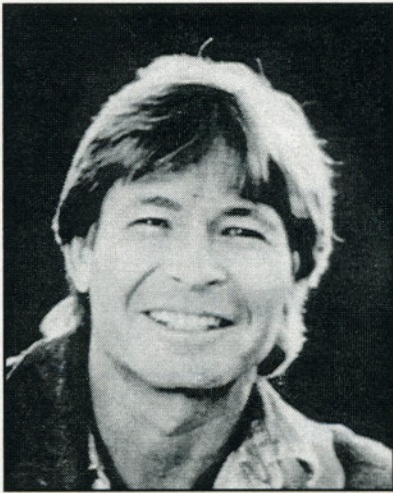
Remembrances of Dr. von Braun
Mr. Ed Uhl

Life in the Universe
Dr. Jill C. Tarter

Images of Life

"Children of the Universe"
(by Joe Henry & John Denver)
performed by John Denver

"The Wings That Fly Us Home"
(lyrics by Joe Henry, music by John Denver)
performed by John Denver



JOHN DENVER

In a career that has spanned more than two decades, John Denver has earned international acclaim as a songwriter, performer, actor, and activist. He began his career in the 1960's as an aspiring folk musician in the clubs of Los Angeles. His first hits, "Take Me Home, Country Roads", "Rocky Mountain High", "Sunshine On My Shoulders", and more, solidified his position as one of the top stars of the decade. Since the early 1970's, his record sales achievements include 14 gold albums and 8 platinum

albums in the U.S. alone. He is one of the top five recording artists in the sales history of the music industry.

Denver's concert tours have reached millions globally, from the U.S. and Canada throughout Europe, Australia and New Zealand, the Orient and the United Kingdom. In 1984 he was invited by the Soviet Union of Composers to perform in their country. The success of that visit led to a concert tour of the U.S.S.R. as the first performance by an American artist since the suspension, at that time, of cultural exchanges between the U.S. and the U.S.S.R.

More than a performer, Denver's music clearly reflects the conscience of a concerned citizen, a man working for the improvement of the quality of life for all peoples – environmentally, socially, and politically. He was asked to serve as a member of the Presidential Commission on World and Domestic Hunger. He was one of the five founders of The Hunger Project, and co-founded the Windstar Foundation, a non-profit environmental education and research center. Denver was awarded the Presidential "World Without Hunger" Award, and is a supporter of the National Wildlife Federation, Save the Children, and the Cousteau Society, to name but a few.

Besides his love of the out-of-doors, everyone knows of Denver's two passions: flying and outer space. He is not only a licensed pilot, but an aerobatics pilot, and is licensed to fly gliders. He has flown Air Force F-15 fighters and the Space Shuttle simulator. NASA has awarded him its public service medal for helping "increase awareness of space exploration by the people of the world."

One of the world's best-known and best-loved performers, John Denver can reach audiences despite problems of geography, economics, politics and language. He is the true international figure dedicated to world peace and the solution of hunger.



JILL TARTER

Jill Tarter was raised and educated in the public schools of Eastchester, New York. She attended Cornell University on a full scholarship earning a Bachelor of Engineering Physics Degree with distinction. Her fifth-year project involved spatial calibration of a cosmic ray spark chamber using the 2 GEV synchrotron accelerator. She began graduate work in theoretical physics at Cornell, but interrupted her studies to relocate to California and change her field of interest. She earned a Master's degree

and a Ph.D. in Astronomy from the University of California at Berkeley.

As a graduate student at UC Berkeley, she became involved in a small commencing search for radio signals from extraterrestrial civilizations using the Hat Creek Observatory's 85-foot telescope. The project SERENDIP underwent many stops and starts (and is still ongoing) and provided a natural introduction to the newly formed SETI Program Office at NASA Ames Research Center while Dr. Tarter was pursuing an NRC Resident Associateship at Ames. The transition to the SETI team was accomplished via a cooperative agreement between UC Berkeley Space Sciences Lab and NASA Ames, to fund Dr. Tarter as a research astronomer. Her main focus is the implementation of high spectral resolution searches for extraterrestrial radio signals.

Dr. Tarter now serves as the Project Scientist for NASA's High Resolution Microwave Survey (HRMS), formerly known as NASA's Search for Extraterrestrial Intelligence Microwave Observing Project (SETI MOP). As such, she has the opportunity to meld together old and new engineering skills with a knowledge of the observable universe in order to conduct and plan for thorough observations of the sky through a set of narrowband and pulse sensitive filters never before systematically employed by astronomers.

Dr. Tarter enjoys the opportunity provided by HRMS to study topics in biology, geophysics, chemistry, paleontology, and many other fields that are related to the question of the existence of life elsewhere in the universe, but which she earlier ignored in favor of physics and mathematics. In 1989 Dr. Tarter received the Lifetime Achievement Award for her contribution to the field of exobiology, and in particular to the search for extraterrestrial intelligence, by Women in Aerospace, a professional association in Washington, DC. In 1993 she received two Public Service Medals from NASA (one at Ames Research Center and one at NASA Headquarters in Washington, DC) and a Group Achievement Award for the HRMS Project.



ED UHL

Edward George Uhl is retired chairman of the board and chief executive officer of Fairchild Industries. He joined the corporation as president and CEO in 1961, was elected chairman in 1976 and retired in 1985.

Before joining Fairchild, Uhl was vice president of Ryan Aeronautical Company in San Diego, California. Prior to that, he was vice president and general manager of the Orlando, Florida division of the Martin Company which he joined

as a research engineer in 1946 following his honorable discharge from the Army.

During World War II, Uhl served as a regular Army officer in the Ordnance Corps., U.S. Army, where he was co-inventor of the Bazooka anti-tank rocket. He left the service at the end of 1946 with the rank of Lieutenant Colonel.

Uhl was born in 1918 in Elizabeth, New Jersey. He is a 1940 Phi Beta Kappa graduate of Lehigh University, where he earned a bachelor's degree in engineering physics, and was awarded the honorary degree of Doctor of Science by Lehigh in 1975.

He became a member of the Lehigh Board of Trustees in 1979 and served as chairman of the board from July 1, 1985 to June 30, 1990. He is also Director Emeritus of Johns Hopkins University. He is the 1965 recipient of the Hamilton Holt Award-Rollins College, a fellow of the American Institute of Aeronautics and Astronautics, a member of the Air Force Association, the American Defense Preparedness Association, Society of Automotive Engineers, Phi Beta Kappa, Tau Beta Pi, and others, and was nominated to the Aviation Hall of Fame.

Currently, Uhl lives in retirement at his farm on the Chesapeake Bay. He owns a Ford dealership in Easton, Maryland which is operated by his son.

RICK CHAPPELL

Dr. Charles Richard Chappell is the Associate Director for Science at NASA's Marshall Space Flight Center. He is chief scientist for the center advising the Center Director on all science and university programs. He has directed research in solar terrestrial physics and has been a principal investigator on several satellite missions. Prior to joining NASA in 1974, Dr. Chappell was a research scientist with Lockheed Missiles and Space Company where he conducted investigations of the Earth's space plasma environment.

From 1976 to 1985, Dr. Chappell was the mission scientist for Spacelab 1, responsible for the science management of the payload. From his position in the Payload Operations Control Center in Houston, he coordinated the more than 70 scientific investigations. In 1985, he was selected to train as an Alternate Payload Specialist for STS-45, which was carried out in 1992.

Dr. Chappell is a magna cum laude graduate in physics from Vanderbilt University with a Ph.D. in space science from Rice University. He is the author of over 100 published scientific articles and has served on numerous advisory committees for NASA and the National Academy of Science. He has twice received the NASA Medal for Exceptional Scientific Achievement and has represented NASA in a variety of public appearances including commentaries on CNN, NBC's Today Show, ABC's Nightline, and the BBC. Dr. Chappell has spearheaded the committee for developing the Von Braun Exploration Forum since its origination in 1988.

JOE HENRY

Although formally educated, Joe Henry attributes much of his learning to his many years as a laborer, rancher, and professional athlete. He has written lyrics to some sixty recordings performed by a wide variety of recording-artists. His work has also been featured in films and numerous television specials, and in *One World/One Child*, a book of international photography whose profits are given to organizations working to improve the quality of children's lives.

Henry's powerful works for the stage (*Prelude to Lime Creek*, *Lime Creek Christmas*, and *Lime Creek Compendium*) were devised from his lyrics and poetry and his novel-in-progress, "Lime Creek," by distinguished actor Anthony Zerbe, who has performed in each production along with such recording-artists as John Denver, Garth Brooks, Michael Johnson, and John Jarvis. He recently received the 1993 Governor's Award for Excellence in the Arts, the highest honor awarded in the arts in Colorado.

Henry's writing comes from his perspective of the commonality of all life--not how different, but rather how alike we all are. Having never satisfied his own hunger to participate in the Space program, as a poet and communicator he sees the journey out as a perfect symbol for the journey within, which we all ultimately must risk. This is the fourth Von Braun Exploration Forum to use Joe Henry's work in the evening's presentation.

ISLANDS

Islands call out to me
Like the highlands that I always see
In my dreams of home
I am never alone when I'm there

Islands like so many dreams
Are like canyons but off the main stream
And there's no one there
The dreamer is always alone

And the mighty blue ocean
Keeps rolling on every shore
Like the spirit that binds us together
We are so much more than islands

Islands belong to the sea
Like the dark sands of my memory
When the morning comes
They are stepping stones to the sun

And the mighty blue ocean
Keeps rolling on every shore
Like the spirit that binds us together
We are so much more than islands

by John Denver

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CHILDREN OF THE UNIVERSE

A heritage of vision
Was given to us all
To smell the rose's fragrance
To hear the songbird call

To watch the distant moonlight fill
The coming of the tides
To understand that life is more
Than always choosing sides

And some have seen what can be seen
Of sailing ships and kings
And some are given feet of clay
And some are given wings

Some must struggle just to breathe
Some have a golden spoon
And some will never leave the nest
While some walk on the moon

And don't you know the life that lives
Within the silent hills
Is just as rich and beautiful
And just as unfulfilled

As man with all his intellect
His reason and his choice
Oh who's to say the nightingale
Has any less a voice

The silver dolphins twist and dance
And sing to one another
The cosmic ocean knows no bounds
For all that live are brothers

The whippoorwill, the grizzly bear
The elephant, the whale
All children of the universe
All weavers of the tale

So palomino lie back down
And dream yourself to sleep
The hawk flies with the mourning dove
The lion with the sheep

As far away as you may go
We'll never be apart
It's in your dreams that you will know
The seasons of the heart

by Joe Henry & John Denver

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THE WINGS THAT FLY US HOME

There are many ways of being in this circle we call life
A wise man seeks an answer, burns his candle through the night
Is a jewel just a pebble that found a way to shine
Is a hero's blood more righteous than a hobo's sip of wine

Did I speak to you one morning on some distant world away
Did you save me from an arrow, did you lay me in a grave
Were we brothers on a journey, did you teach me how to run
Were we broken by the waters, did I lie you in the sun

I dreamed you were a prophet in a meadow
I dreamed I was a mountain in the wind
I dreamed you knelt and touched me with a flower
I awoke with this: a flower in my hand

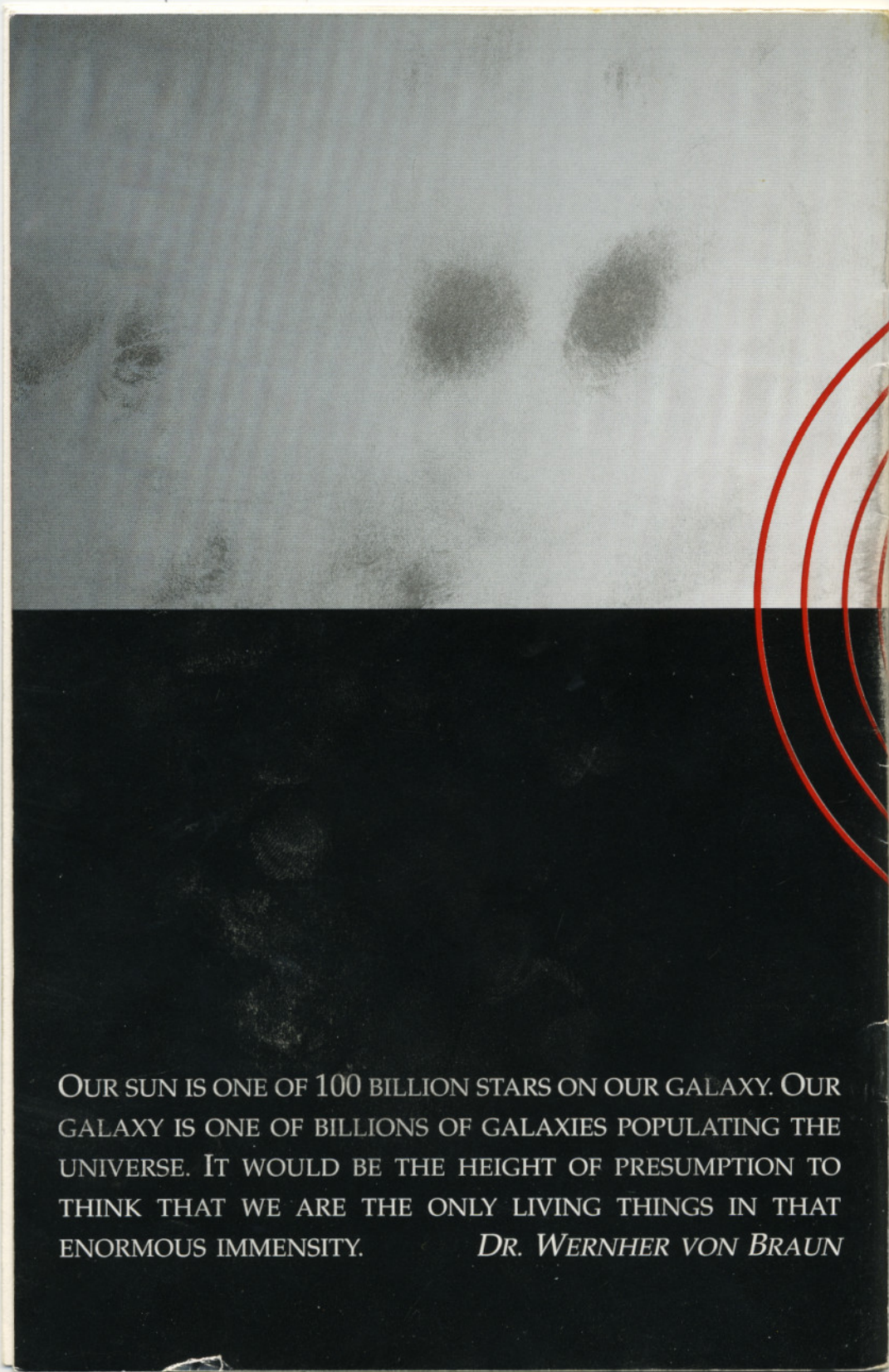
I know that love is seeing all the infinite in one
In the brotherhood of creatures; who the father, who the son
The vision of your goodness will sustain me through the cold
Take my hand now to remember when you find yourself alone

And the spirit fills the darkness of the heavens
It fills the endless yearning of the soul
It lives beyond a star too far to dream of
It lives within each part and is the whole
It's the fire and the wings that fly us home

lyrics by Joe Henry, music by John Denver

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OUR SUN IS ONE OF 100 BILLION STARS ON OUR GALAXY. OUR GALAXY IS ONE OF BILLIONS OF GALAXIES POPULATING THE UNIVERSE. IT WOULD BE THE HEIGHT OF PRESUMPTION TO THINK THAT WE ARE THE ONLY LIVING THINGS IN THAT ENORMOUS IMMENSITY.

DR. WERNHER VON BRAUN