



My first contact with John's work in the early 90s

No one heard the first tolling of Earth's funeral bell – not even the scientists who made the fatal discovery, far underground, in an abandoned Colorado gold mine.

Especially the Sun. Astronomers were confident that they understood the reactions powering the solar furnace, upon which all life on Earth ultimately depended.

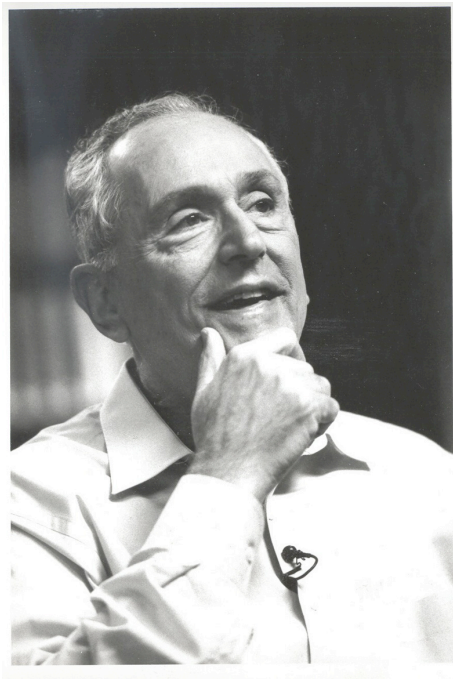
“The Songs of the Distant Earth”  
by Arthur C. Clarke

#### 4. TOCSIN

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It was a daring experiment, quite inconceivable before the mid-twentieth century. Once the neutrino had been detected, it was quickly realized that mankind had a new window on the universe. Something so penetrating that it passed through a planet as easily as light through a sheet of glass could be used to look into the hearts of suns.

Especially *the* Sun. Astronomers were confident that they understood the reactions powering the solar furnace, upon which all life on Earth ultimately depended. At the enormous pressures and temperatures at the Sun's core, hydrogen was fused to helium in a series of reactions that liberated vast amounts of energy. And, as an incidental by-product, neutrinos.

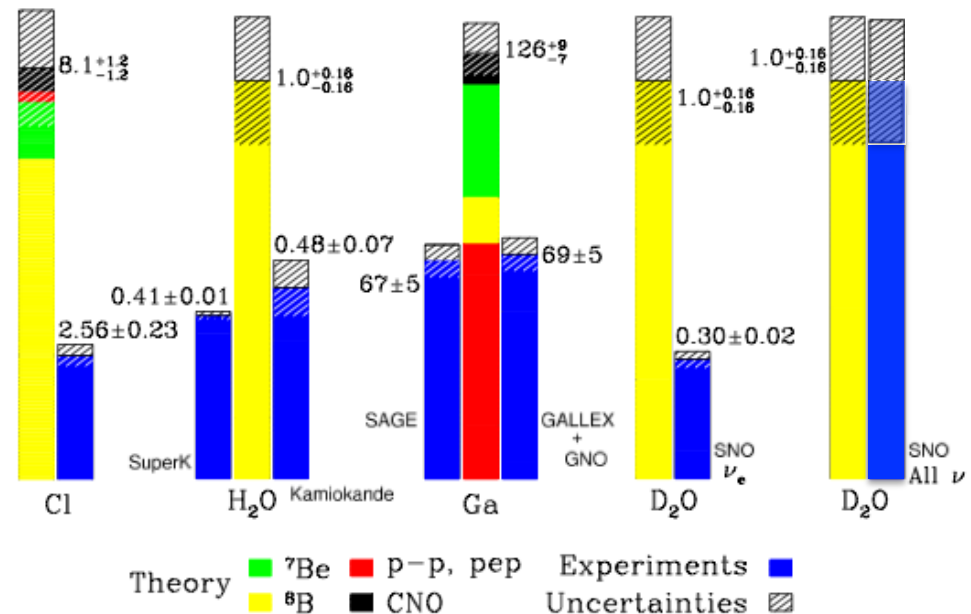
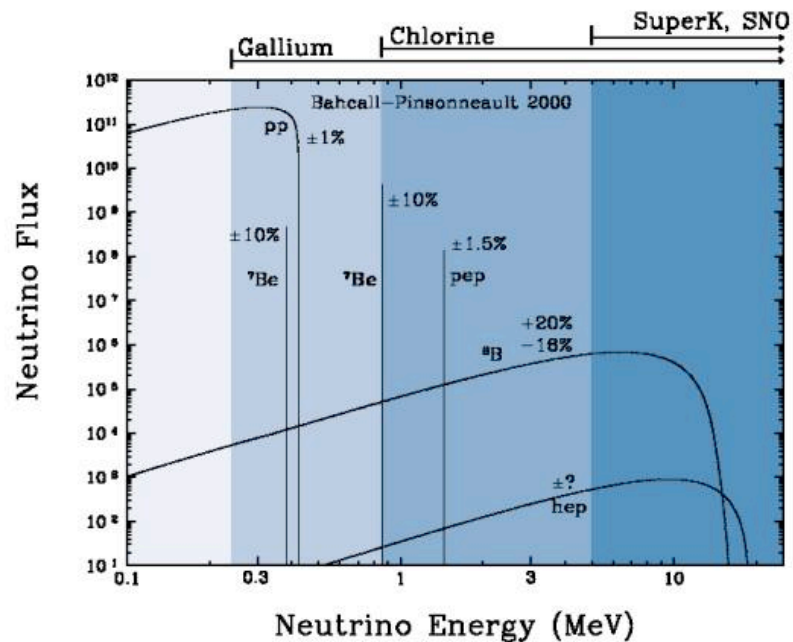


Direct contact with John's work at his ESO colloquium in 2003

The Earth had been saved and...

by the way, theory of stellar evolution confirmed and  
neutrino oscillations discovered

## Bahcall – Pinsonneault 2000 & SNO







IAS – an innocent looking  
paradise





Astro-ph coffee at IAS

It came to life, literally, in other institutions

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THE MASS OF THE CONVECTIVE ZONE IN FGK MAIN-SEQUENCE STARS AND THE EFFECT OF ACCRETED  
PLANETARY MATERIAL ON APPARENT METALLICITY DETERMINATIONS

M. H. PINSONNEAULT, D. L. DEPOY, AND M. COFFEE

Department of Astronomy, Ohio State University, McPherson Laboratory, 140 West 18th Avenue, Columbus, OH 43210-1173

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Many top range astrophysics Departments & Faculties in USA are populated by former SNS-IAS members

John's hand was everywhere: in the selection of the members, in contributing to their scientific development, and in helping them find good positions afterwards

It was his scientific “family” he was taking care off. In this, too, he is irreplaceable





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John, not less than any other, has contributed to the prestige of the IAS

said; 'If you could understand the quantum drive, you wouldn't be here—you'd be up on Lagrange One at the Institute for Advanced Studies.' And he gave me a useful comparison that helped me get to sleep again when I had nightmares trying to imagine what ten to the minus thirty three centimeters really means.



“The Songs of the Distant Earth” by Arthur C. Clarke

**300 1<sup>st</sup> author papers – covering a huge range of dissimilar topics**

**solar (& stellar) physics**

**galactic structure**

**quasars**

**x-ray binaries**

**extragalactic x-ray sources**

**dark matter**

**ultrahigh-energy neutrinos**

**neutron stars**

**black holes**

**dynamics of stellar systems**

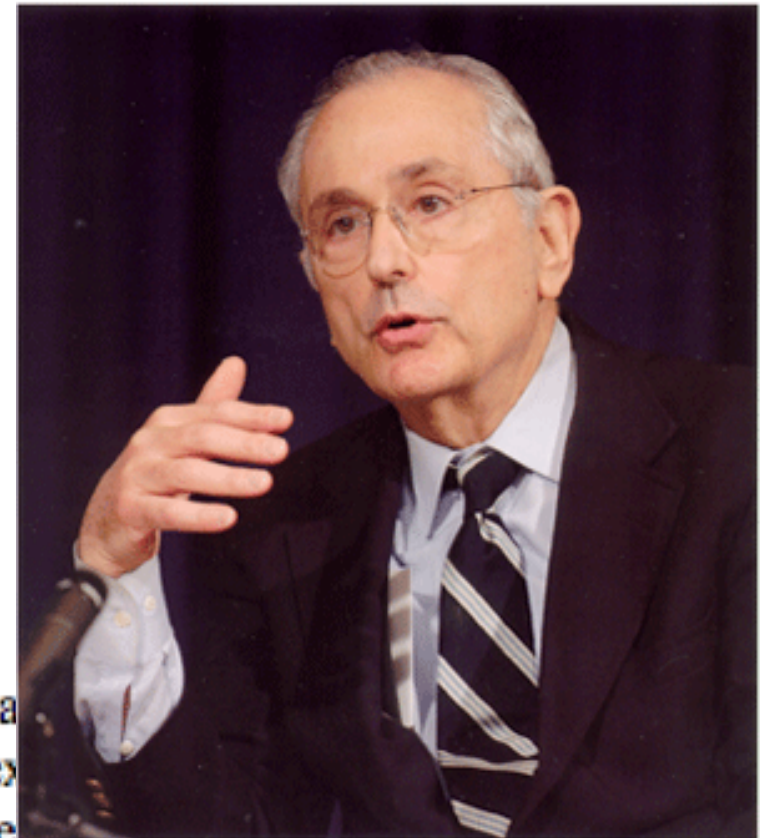
**John tried to bridge some gaps**

**Unique ability to bring people from different fields together to work for a common goal – as NG noted yesterday, not easy to do**

**He taught astrophysicists to take a more scientific approach: uncertainties are of fundamental importance, also for models.**



Extracted from the “Remarks at the Inaugural Press Conference for the Lyman Spitzer Space Telescope”



I would like to close with a few personal words that I want to share with you, the print and television journalists. Lyman Spitzer was an example of a man who was playful in spirit but respectful and courteous to everyone. He was a man of the support of all of his colleagues, indifferent to personal credit. He was a gentleman. I know that you journalists will continue to inform us, and to inform our children, about the future scientific revelations of the Spitzer Space Telescope. As you do so, I hope you will stress that great science can be done by a great human being. The human inspiration and values of Lyman Spitzer are as important for us to appreciate as the technical discoveries.

# The Many Lives of John N. Bahcall

