

## **Stanley Deser, 1931-2013**

It is with great sadness that we announce that Prof. Stanley Deser passed away in Pasadena, CA on Friday April 21.

Stanley was born to middle-class Jewish parents in Rovno, then in Poland. In 1935 the family emigrated first to Palestine and then to France. As WWII broke out, they fled to the US via Portugal (one of the families saved by Aristides de Sousa Mendes), eventually settling in Brooklyn. Stanley graduated Summa Cum Laude from Brooklyn College in 1949, and received his PhD at Harvard in 1953 under the supervision of Nobel Laureate Julian Schwinger. After postdocs at the Institute for Advanced Study (1953-55) and the Niels Bohr Institute (1955-57), and a lectureship at Harvard University (1957-58), he joined the faculty of the Physics Dept. at Brandeis in 1958, where he remained until he retired in 2005. After moving to Pasadena and a research appointment at Caltech, he stayed an emeritus professor at Brandeis, and continued to publish physics papers until this year (and an autobiography, *Forks in the Road*).

Stanley was a towering figure in theoretical high energy physics, classical gravity, and quantum gravity. His work cuts through mathematical complexity with deep physical insight. His first signature work, the Arnowitt-Deser-Misner (ADM) formalism, gave a Hamiltonian initial value formalism for general relativity. This work is the foundation of precise calculations in inflationary cosmology, needed to match cosmic microwave background observations; and in numerical relativity calculations needed to interpret the results of gravitational wave experiments. He leaves behind a lifetime of work in theoretical physics which remain foundational to contemporary physics, including co-inventing supergravity and formulating the dynamics of the superstring with Bruno Zumino; showing that general theories with massive gravity are inconsistent; and developing topologically massive gauge theories and gravity with Jackiw and Templeton.

Stanley was an important member of the scientific community. As Nobel laureate Rainer Weiss related, he played a major role in convincing the NSF to fund the LIGO gravitational wave detector. He was a member of the National Academy of Sciences and the American Academy of Arts and Sciences, and a foreign member of the Royal Society and the Torino Academy of Sciences; he was awarded the Dannie Heineman Prize in Mathematical Physics and the Einstein Medal, and the Guggenheim and Fulbright awards; and he held honorary doctorates from Stockholm University and the Chalmers Institute of Technology.

Stanley will be remembered for his wisdom and ready wit; delight and skill in acquiring languages; love of travel; a deep appreciation for art and literature; and emails and talks in which every sentence was packed with allusions, jokes, and double entendres;

Stanley was preceded in death by his wife, the artist Elsbeth Deser, and his daughter Eva. He leaves behind three daughters -- retired linguist Toni Deser, theater director Abigail Deser, and atmospheric scientist (and fellow NAS member) Clara Deser -- and grandchildren Ursula, Oscar, Louise, and Simon.