

**THE ISRAELI CENTER FOR ASTRONOMY**

**and**

**THE 10-M CANARY ISLANDS TELESCOPE**

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**Professor Hagai Netzer  
Professor Yoel Rephaeli  
Professor Dan Maoz  
Professor Elia Leibowitz  
Professor Tsevi Mazeh  
Dr. Sara Beck  
Dr. Noah Brosch  
Professor Amiel Sternberg**

**School of Physics and Astronomy, Tel Aviv University**

## Executive Summary

We propose to establish a national Center for Astronomy, at Tel Aviv University, which will be based on Israeli partnership in the construction and operation of a large 10 meter telescope, in the Canary Islands, Spain. The telescope is under construction and will be completed in 2003. Israeli participation in the project requires a one-time 10-million dollar payment and about half a million-dollar annual operating costs. The work will be carried out in several stages, starting with the establishment of the Israeli Center for Astronomy and the signing of the agreement of cooperation with the appropriate Spanish authorities, and continuing into scientific collaboration with other research institutions in Israel.

The science of Astronomy has undergone a major revolution in the last few years. New telescopes, on Earth and in space, have brought us unprecedented insight into the birth of the Universe and galaxies, on possible locales for other forms of life, and on the strongest energy sources in the Universe. This revolution is based, among other advances, on a new generation of giant telescopes with 8-10 meter diameters that have been built recently. This striking improvement in observational capability has brought with it an enormous rate of astronomical discoveries, many of which have made headlines. The front line of astronomical research today belongs to those scientists in the United States, Japan and Europe who have direct access to these large telescopes. Others, including scientists in Israel, are forced to work with much less. It is now time for Israeli astronomers to establish their place at a world-class telescope.

We are convinced that participation in the 10-m Canary Islands project will bring about a unique collaboration between institutions in Israel, based at Tel Aviv University, that observations with the new telescope will lead to important Israeli contributions to science in an area where the modern world is making great strides forward, and that the Center will be a fruitful ground for collaboration between Israeli academia and industry on projects of 21<sup>st</sup> century technology.

