



# Harvard-Smithsonian Center for Astrophysics

60 Garden Street, Cambridge, MA 02138



January 17, 2003

Philip R. Goode  
Director, Big Bear Solar Observatory  
BBSO, 40386 N. Shore Lane  
Big Bear City, CA 92314

Dear Dr. Goode,

This letter is in support of your proposal with Dr. Jeff Kuhn for NSF-ATM-MRI funding to help upgrade Big Bear's 65 cm solar telescope to a 1.6 m clear aperture instrument. This upgrade will make excellent use of an existing telescope at a superb site to build an extraordinary next generation instrument. I have looked carefully at the specifications of the new instrument, and believe that it will be a major new tool for solar research in the relatively near term. The combination of a large clear aperture, a superb observing site, and a high-order adaptive optics correction system should ensure that the telescope will deliver extraordinary angular resolution and thus lead to significant progress in our understanding of fundamental photospheric processes like magnetoconvection, and the chromospheric and coronal response. I am delighted at the prospect that such an instrument will be available to guest observers from the entire US solar community, and rightly so because this will be the way to maximize the scientific return from the instrument.

I wish you the very best for this proposal, and for this exciting new program.

Sincerely,

*Robert W Noyes*

Robert W. Noyes  
Professor of Astronomy  
Harvard-Smithsonian Center for Astrophysics