

KIEPENHEUER-INSTITUT FÜR SONNENPHYSIK

Stiftung des Öffentlichen Rechts des Landes Baden-Württemberg
Mitglied der Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz



Prof. Dr. Oskar von der Lühe

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Prof. Dr. Phil Goode
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Dear Prof. Goode,

It is with great interest that we have learned about your plan to install the 1.6m off-axis solar telescope NST at the Big Bear Solar Observatory. I believe that this is an excellent plan to advance the study of the solar photosphere at high angular resolution, a goal that we share for many years. I note with particular satisfaction your continuing efforts to improve your facilities. They have clearly placed the BBSO in a forefront position which is recognized world-wide during the past few years.

We are impressed by the scope of the NST project. The scientific justification is clear and well presented. Of course, the science goals which demand the combination of an aperture significantly exceeding today's sub-meter-class telescopes with spectro-polarimetric instrumental capability are essentially the same for our 1.54m GREGOR telescope which we are currently constructing in Tenerife. High polarimetric precision is needed to disentangle the connection between the different layers in the solar atmosphere, mediated by magnetic fields, and requires higher collecting power even if we desire to study only the currently resolvable scales of the order of 100 km. The recent success of the new 1m Swedish telescope suggests that there will be a lot to be discovered at even smaller scales which can be observed with a 1.6m telescope.

The NST and GREGOR have a lot in common, apart from some notable conceptual differences. Both telescopes replace existing ones, building on existing infrastructure. It is therefore little surprising that technical and financial scope are pretty much alike. I would be more than happy to share with you our results of our investigations on thermal control of a solar telescope, as well as any other information which may further your program. In the long range, I believe that there will be more areas of common interest where we can collaborate. In particular, having two telescopes of comparable size and capability separated by eight hours in longitude offers a large potential for collaborative scientific investigation.

I wish you all success in finding the budget needed for realizing the NST and I am looking forward to further collaboration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Oskar von der Lühe'.

(O. von der Lühe)