

2020 National Solar Observatory Users Committee Report

To: Dr. Valentin Martinez Pillet, Director National Solar Observatory

The National Solar Observatory (NSO) Users Committee (UC) met remotely on 24th and 25th September 2020 via Zoom.

All current committee members were present on both days:

Bain, Casini, Choudhary, Henney, Howe, Jess, Lin, McAteer (chair), Muglach

Note: When the chair McAteer and Henney had to leave the meeting 30 minutes early on the 24th September, Jess took over chair duties for the remainder of that day.

The terms for each of these committee members are

Casini, Choudhary, Lin, McAteer end in 2020

Jess, Muglach, Bain end in 2021

Howe, Henney end in 2022

Pending further actions, this will be the last year of service for Casini, Choudhary, Lin, and McAteer. However, any of the current members may serve another 3-year term at the discretion and request of the NSO Director.

NSO participants: 24th Alexov, Martinez Pillet, Pevtsov, Rimmele, Tritschler, Uitenbroek
 25th Bertello, Britanik, Card, Gusain, Jain, Hughes, Leibacher,
 Komm, Martinez Pillet, Pevtsov, Tripathy, Uitenbroek

NSF participants: 24th and 25th Boboltz, Black
AURA 25th Hammel

We are grateful to Jennifer Ditsler for her coordination of the remote meeting logistics, and to all NSO, NSF and AURA personnel for their presence on both days.

We thank Carl Henney for his lengthy and valuable contributions to the UC during his previous term, and we welcome him back in place of Rachel Hock-Mysliwiec who unfortunately was unable to take up a position on the UC.

The charter of the UC is to provide feedback and advice on status, desired enhancements, and future new developments of NSO facilities and operations. The aim of the UC is to provide such feedback and advice in this report as a bulleted list of recommendations and remarks, within 1 month of the meeting. We look forward to hearing back from the director in response to each recommendation provided. The recommendations should not be considered ranked in any particular order.

The chair remains, as always, available to the Director to discuss any items at any time during the year.

Submitted on behalf of the NSO Users Committee this 20th day of Oct, 2020

on behalf of the NSO UC

Dr R.T.James McAteer (chair)

UC recommendations arising from the Sept 2020 Users Committee meeting.

The UC provides the following recommendations for the NSO Director to consider at his discretion. We look forward to hearing back from the Director in regards to which recommendations have been accepted and which actions have been planned. In particular we note we would like to meet again before the end of calendar year 2020 to have a more focused discussion as noted below.

- **Recommendation on return to May dates for the 2021 meeting,**

We clearly could not do an in-person meeting in 2020, we agree with the need to have delayed the 2020 meeting to September, and we recognize that COVID-19 related issues may require similar arrangements in 2021. However, we recommend we return to planning for the usual mid-May 2021 dates for the in-person 2021 annual meeting. We recommend confirming dates during the week of May 10-14, 2021.

In order to make future UC meetings as efficient as possible, we recommend the presenters have a prior telecon discussion with the chair of the UC regarding the planned focus of their presentation.

- **Recommendation on DKIST Data Policy**

Data policy is present in the DSPAC document, but it should be summarized clearly on the NSO website, and announced to the community. The UC recommends against changes to the data policy at this time, and any changes to the data policy, or plans to allow for changes to data policy, should be announced well in advance.

- **Recommendation on a focused meeting on NISP in 2020**

The UC would like to have a follow up meeting regarding NISP this calendar year (2020). It would be useful to see a NISP roadmap at this meeting, showing how each of the NISP components (GONG, ngGONG, SOLIS, Space-based) piece together into a coherent package. The future success of NISP depends on a sound management plan acknowledging difficulties, risk mitigations, and a realistic timeline for future plans. We look forward to hearing about the development of a long-term successor to GONG, something that is clearly vitally important to many aspects of NSO and the entire solar physics community.

In order to make all meetings with the UC as efficient as possible, we recommend that presenters have a prior telecon discussion with the chair of the UC regarding the planned focus of their presentation.

- **Recommendation on a focused meeting on DKIST level 2 in 2020**

The UC would like to have a follow up meeting regarding the DKIST level 2 project in early 2021 (before the next full UC meeting). The level 2 project is a critical effort of NSO in preparing the USA community for DKIST data.

In order to make all meetings with the UC as efficient as possible, we recommend that presenters have a prior telecon discussion with the chair of the UC regarding the planned focus of their presentation.

- **Recommendation on SOLIS relocation**

Finalize the installation of SOLIS, and returning to nominal daily full-disk magnetograms observations as soon as possible must remain a key priority for NSO. The SOLIS transition timeline, presented to the committee several years ago, clearly grossly underestimated challenges at the BBSO site.

In the 2019 report we noted that

“We look forward to a successful SOLIS installation at Big Bear. We would like to receive ongoing status reports and updates from Dr Hill on any events that may change the date for when a User can expect to obtain data from SOLIS at BBSO.”

In the 2019 follow-up report we noted that,

“We recommend that the financial feasibility of relocating to BBSO is re-examined prior to commencing large-scale construction. If the cost implications of adhering to BBSO/CA laws are found to be impractical and/or expensive, then we recommend that relocating SOLIS to Sunspot/NM becomes a priority.”

The lack of high quality magnetograms from the VSM during solar minimum impacts the scientific potential of NISP. Unfortunately it appears that timelines are again beginning to slip for operations at BBSO. We look forward to seeing new SOLIS data in time for solar maximum. The UC recommends adopting and announcing a timetable with contingencies in order to meet that date.

- **Recommendation on membership of the UC**

With 4 members at the end of their current term, this presents an opportunity for the Director to change the membership profile and size at his discretion. We note that current members are available to serve another term. The current size of 9 members seems to work quite well, and we propose growing this by no more than 1-2 in the next year. Retaining some DKIST instrument PI membership and/or adding some SWG members on the UC may be useful. We recommended that membership be clarified by the end of calendar year 2020.

We recommend keeping one united UC and having the usual annual meeting, but allowing for breakout meetings throughout the year as requested for NISP, DKIST, or any other topic. These requests could be initiated by any NSO member of staff through the Director, or from any member of the UC through the chair. We suggest two of these breakout meetings above.

- **Recommendation on data center at NSO**

We recommend that NISP and DKIST consider running a joint back end data center. The DKIST data center will be a modern facility at the cutting-edge of data handling. As the synoptic solar data is relatively small-volume and low-throughput, there should be a renewed effort to have

one NSO data provision source. We recognize that a back-end change to the way in which users access GONG data would be initially disruptive, however the long term stability for user data access would be secured.

Other UC Remarks arising from the Sept 2020 UC meeting

We congratulate the DKIST team for the progress they continue to make in the face of problems created by COVID19 and the restrictions that had to be brought in. Despite these issues, the project is clearly moving forwards and we all eagerly anticipate working with data.

We remain concerned at, but fully understand, the delays in the VTF. We realize much of this has been caused by external problems, and we would like to remain informed of any future changes to the timeline as presented.

A common target grouping policy could be a means to relieve some observing time pressure at DKIST. Many submissions may request the same type of target, but we recognize that it will be difficult to find 100% overlap between solar targets, instrument setups, balance between instruments, types of observing (e.g., raster types for spectrographs, tiling modes for imaging, etc.).