

# C16 and C17 Follow-up Guidelines

Hi everyone,

As you know, C16 and C17 are extragalactic focused forward-facing K2 campaigns, providing an exciting synergy between the Kepler high-cadence light curves and simultaneous ground-based multi-wavelength observations. As a community, this is a chance to obtain a unique data set, and we hope we can encourage a collaborative effort with friendly competition of the whole community, in order to maximize the opportunity.

Competition is good for science, and we don't want to discourage it! There will be similar data sets from different groups, and it is completely fine that then there will be competing papers. However, there will also be many instances where data sets are complementary, and collaborating will increase the scientific output, and we strongly encourage that.

- Acknowledge each other's work
- If you use data from other people, consider offering co-authorship even if it is public.
- Play fair! Don't be an ass!

We truly hope that we can make this a positive experience with as much collaboration as possible.

**Observation Log:** We think it is important that everyone has a rough idea what observations have been taken when and with which instrument. This will help to optimize observations, and it will make it easier to figure out who might have complementary data sets (fostering collaborations). Therefore we will have a google docs, where people can dump their observations, with info like SN name, telescope, instrument set up, PI/contact person, e.g. "SN XXXXxx, PS1, griz, Rest". For each transient, we will create google calendar in which we will put this information after curation. Brad Tucker will send out more details and a link.

**SNEx:** We will also work with LCOGT and their SNEx platform for sharing data. Andy Howell and Iair Arcavi will send out more details. We encourage people to upload their data (imaging, spectra, and spec-pol). The rule is that nobody can use the data without the explicit agreement of the owner of the data, and we expect common sense to prevail if the availability has helped you. For example, if features in an uploaded spectrum triggers follow-up observations, proper credit should be given to the owners of the spectra. Basically, don't abuse the system, be fair and use your common sense.

**Paper Announcement:** The time at which groups should announce that they are actively working on a specific analysis/paper is of course a touchy subject. Obviously groups will be hesitant to do this too early, while at the other hand it is unfortunate when a paper is circulated one day prior to submission. A possible middle ground is to emphasize that anyone wishing to use some other dataset for a study should request this to the observer at the **start** of their work.

This will give the observer the chance to say either 'ok' or 'that's an analysis we will do on our data first', before anyone has invested too much effort. The observer will then also have some amount of overview about whether a certain analysis is being performed by multiple groups at the same time.

**Object Marshall:** We will assign a marshall for each object. The marshall will coordinate the study of the object. We will attempt to choose someone who is reasonable unbiased and does not have a horse in the race for that particular object. Therefore each group that works on this object can and should disclose this to the marshall asap. If there is an issue, the marshall is the first one that can be asked to resolve this issue in a fair manner.

**Mediation Panel:** We really hope that we don't need it, but we will set up a 3 person mediation panel, just in case people are not happy with the marshall's mediation and the proposed solution. The mediation panel will have one person from the K2 office (TBD), and two veterans of the transient field (Dave Arnett, Claes Fransson, Stephen Smartt, Brian Schmidt, or Nick Suntzeff) who are not leading papers nor have datasets integral to the object. Their decision will be final.

We want to set a good example, therefore we (KEGS) commit to the following:

- All PS1, ATLAS, DECam, and SkyMapper alerts are made public immediately through email to [k2sn@googlegroups.com](mailto:k2sn@googlegroups.com), [kegs@anu.edu.au](mailto:kegs@anu.edu.au), registration with the TNS, and through PSST and ANTARES.
- The ZTF survey is currently commissioning, and official observations and alerts are still to be approved. However, even prior complete alerts, we will circulate detections through the [k2sn@googlegroups.com](mailto:k2sn@googlegroups.com) list as quickly as possible.
- We also commit to produce well-calibrated, science ready PS1 difference image light curves by the end of C16, and make these light curves available through SNE<sub>x</sub> to everyone who also commits to this collaborative effort.
- As soon the K2 C16 raw data is available, we will provide preliminary reductions based on raw, unprocessed Kepler data of all known transient and make them available asap (1 - 2 weeks) through SNE<sub>x</sub> to everyone who also commits to this collaborative effort. Final reductions will be available after Kepler office processing which normally occurs a few months after data download.

**Co-authorship/Acknowledgements:** There are a lot of people/projects/groups who have spent a significant amount of time to make C16 and C17 happen as a service to the community (Kepler and NASA lobbying, target selection, K2 light curves, Alerts, TNS, SNE<sub>x</sub>, Follow-up organization, dedicated PS1 time, community proposals). We hope that these people will be recognized (co-authorship, acknowledgment or whatever is appropriate) if their work significantly contributed to the scientific papers. **We leave this to the discretion of the first author/group lead (there is no obligation!).** For reference, below is a table that outlines some of these contributions, with the point-of-contact in boldface. If you've have been inadvertently

missed, please email kegs-core@anu.edu.au. We encourage the first author/group lead to contact the point-of-contact if there are any questions.

Name	People	Description
KEGS	<b>Armin Rest</b> (arest@stsci.edu), Peter Garnavich, Dan Kasen, Steve Margheim, Ed Shaya, Brad Tucker	<ul style="list-style-type: none"> <li>• Inception of forward-facing campaign</li> <li>• NASA and Kepler lobbying</li> <li>• Target list vetting</li> <li>• Dedicated PS1 time for public alerts</li> <li>• Follow-up organization</li> <li>• Community time proposals</li> <li>• KEGS K2 light curves</li> <li>• PS1 light curves</li> </ul>
PSST with PS1/ATLAS	<b>Stephen Smartt</b> , Ken Smith, D. Young, D. Wright (PS1)	<ul style="list-style-type: none"> <li>• Alerts</li> </ul>
ASAS-SN	?, [FILL]	<ul style="list-style-type: none"> <li>• Alerts</li> </ul>
ZTF	<b>Jakob Nordin</b> , Matteo Giomi, David Cook	<ul style="list-style-type: none"> <li>• Alerts</li> <li>• CLU target selection</li> </ul>
ANTARES	<b>Gautham Narayan</b> (gnarayan@stsci.edu) Monika Soraisam, Tom Matheson, Abi Saha (NOAO)	<ul style="list-style-type: none"> <li>• Use ML to identify targets from PSST/PS1/ATLAS/SkyMapper/DECam that are in Kepler field</li> <li>• Prioritize objects that were discovered early for spec followup</li> <li>• Issue alerts to interested collaborators</li> </ul>
TNS	<b>Ofer Yaron</b> (ofer.yaron@weizmann.ac.il), Avishay Gal-Yam	<ul style="list-style-type: none"> <li>• Name Server</li> <li>• Email alerts (to registered TNS users who request to receive these for cross-matches with C16-galaxies)</li> </ul>
SNEx	<b>Iair Arcavi</b> (arcavi@gmail.com), Andy Howell, Curtis McCully, Griffin Hosseinzadeh	<ul style="list-style-type: none"> <li>• Data Exchange, SNEx builders</li> </ul>
Kepler/K2	<b>Geert Barentsen</b> (geert.barentsen@nasa.gov) Jessie Dotson Michael Gully-Santiago Jeff Van Cleve	<ul style="list-style-type: none"> <li>• Kepler/K2 observations</li> <li>• Provision of dedicated PS1 time for public alerts</li> <li>• Kepler visibility API</li> <li>• K2 data analysis support</li> </ul>

We think that this will be a true legacy data set for K2, and we hope that everyone will work towards maximizing the scientific output.

## The Keggers

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Please add your name (and if relevant your instrument/facility) here if you agree with these guidelines

Armin Rest

Brad Tucker

Steven Margheim

Gautham Narayan

Jakob Nordin (ZTF)

Ed Shaya

Iair Arcavi (SNEEx, LCOGT)

Peter Garnavich

Daniel Kasen

Stephen Smartt (PSST)

Saurabh Jha (SALT, but can only access C17 field)

Peter Brown (Swift UVOT)

Brian Hayden

Andy Howell

Nathan Smith (MMT, Bok, LBT, Magellan)

Jozsef Vinko (Konkoly 1m RCC, HET)

Frank Timmes

Nicholas Suntzeff

Alfredo Zenteno

Ken Smith (PSST/ATLAS)

Jesper Sollerman (NOT)

Maria Drout (Magellan, du Pont, Swope, Gemini-under specific circumstances)