

Correspondence with Science Regarding Posting Second Zenodo File

Oct 8, 2020

Dear Charlie and Roman,

I hope all is well.

As you know, I was cc'd on Sergey Frolov and Vincent Mourik's emails to you and Dr. Katsaros. Sergey followed up with me today to say that they've heard from you and that you pointed them to the Zenodo repository that's referenced in your paper. However, they're requesting that you supply them with a wider data set.

Specifically, they are requesting access to the data from all measured devices (and not only those shown in the paper). For each device, they are requesting access to the entire dataset starting from first characterization at low temperature up to the end of the experiment. The datasets should include the entire parameter space in which the device was measured.

We feel that this request is reasonable and in line with our editorial policies, which you can find at <https://www.sciencemag.org/authors/science-journals-editorial-policies>

It might also be a good idea to supply them with the statistics of the experiment, as you have done in response to one of the reviewers (I am attaching the document).

Ideally, we would like you to upload the additional data to the same Zenodo repository where the data from the paper are currently deposited so that they can be accessed by other researchers as well.

Questions/comments are welcome.

Best regards,

Jelena

Oct 22, 2020

Dear Jelena

Thanks for your email.

We were careful to include in the Zenodo repository all of the data that was used in the analysis of the paper or that was relevant for drawing conclusions either in the paper or the supplemental material. We believe that making this data available is consistent with Science's policy that: "All data used in the analysis must be available to any researcher for purposes of reproducing or extending the analysis."

Reviewing Science's editorial policies, we do not think that data from "all" measured devices or all parameters is consistent with those standards. The request from Mr. Frolov and Mr. Mourik does not appear to be meaningful or reasonable. We do not consider flat lines from dead devices, preliminary tests of alternative device designs not used in the paper, data from fabrication practice runs or calibration runs, data for subsequent experiments on different devices that have since been published elsewhere or may be published later, to be relevant or appropriate to include. Such data was not used in the analysis of our

paper and is accordingly not necessary to reproduce or extend the analysis. We did not include the table from the referee response because it is not available in the paper. It is unclear for what purpose Mr. Frolov and Mr. Mourik are requesting this data, or how the request advances Science's editorial guidelines.

Moreover, it would create a considerable resource drain to retrieve the requested information and make it available. We are also concerned that requiring the production of this data sets a precedent for which there is no identifiable limiting principle. This presents definitional and other challenges that extend for both authors and Science well beyond the request presented here.

However, if you feel that the table of device statistics (or some other specific data) should be posted, even though it did not appear in the paper, please let us know and we will do our best to retrieve and prepare it. I am available to discuss this with you further if you would like and happy to jump on a quick call.

Sincerely,

Charlie Marcus, Roman Lutchny

Oct 22, 2020

Dear Charlie and Roman,

Thanks for your response.

The data you posted on Zenodo satisfied our requirements for data transparency at the time of publication. However, our editorial policy also allows for post-publication requests for additional data from readers, and authors are expected to make a good-faith effort to comply with such requests.

We are not expecting you to release data from subsequent devices that were not part of this project, or flat-line data from non-working devices. However given that we are aware that there were additional working devices that were part of this project but not presented in the paper (based on your referee response), we do ask that you make the data for those additional devices available, as well as data for parameter regimes not shown in the paper. Releasing the statistics for the devices along the lines of the table in the referee response would also be helpful.

If you would prefer not to make these additional data part of the paper repository, you could also make them available to the requestors in another manner. However, a public release would send a stronger message and would be of more use to the community.

I can't speak for Drs. Frolov and Mourik, or their motives. From our perspective, their request is not unreasonable and whether or not they are satisfied with what you end up releasing, I think it's important to make an effort to be as transparent as possible.

Let me know your thoughts as well as the time frame for any data release.

Best regards,
Jelena

Oct 24, 2020

Dear Jelena,

Thanks. We will put together additional data, along the lines you suggest, and post it to Zenodo.

We agree that the best way to handle this request is to make the data available to all.

It will take a bit of digging to put the data together. I would expect that we can have the job done in about two weeks. Best,

Charlie

Nov 9, 2020

Dear Jelena,

Thank you for your patience. We have now uploaded additional data to the Zenodo archive, closely following your recommendations. The as-published link to the Zenodo file will show both old and new data sets, denoted Version 1 and Version 2.

As described in the overview file "summary.pdf", we provide a table summarizing all measured devices and data for the 25 working devices. These 25 devices comprise 9 NIS junctions and 16 Coulomb islands.

Of the 25 working devices, 12 (4 NIS junctions and 8 Coulomb islands) were discussed in the main text or supplementary materials document. For them, we provide the complete parameter ranges measured. We also provide data for 13 additional devices (5 NIS junctions and 8 Coulomb islands) not presented previously.

This additional data is organized into more than 130 new or expanded data sets, containing 300 MB of numerical data. The summary.pdf file describes how the files are organized. We also provide jupyter notebook files containing python code to load and plot all the datasets.

We hope that readers will find these additional data informative.

Regards,

Saulius Vaitiekėnas,
Bernard van Heck,
Georg Winkler, Charles
Marcus on behalf of all
authors.

Nov 9, 2020

Dear All,

Thanks very much, this is greatly appreciated.

Best regards,

Jelena