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Interactive comment on "OCTOPUS: An Open Cosmogenic Isotope and Luminescence Database" *by* Alexandru T. Codilean et al.

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Dear Todd

I apologise that my previous response was very short and rather dismissive. Carefully reading a manuscript is something that people used to do in the past – but don't do anymore – and your short comment, like all other comments, deserves a proper response.

Issue #1: Web interface is incredibly clunky and limited in functionality

A. We have chosen a minimalist approach to designing the web interface since its main purpose is to allow selection and download of data.

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Discussion paper

The web interface does actually work and since launching OCTOPUS there were 88 logged download requests. The majority of requests are for one or a handful of studies, while a few people downloaded the entire compilation.

Section 3.2 of the manuscript is dedicated to describing how the web interface works. We also include two figures (Fig. 2 and 3) to explain what is where and to show the steps that need to be taken to download the data.

While I do not know exactly what went wrong, I speculate that the problem might have been at your end (either with the user or the computer), and so there is not much I can do here. Good that there was somebody nearby who could help. . .

The user interface is not perfect, and we have identified one bug that we will fix once the discussion phase is closed (the last thing we want right now is to take the website offline and end up with irate comments on this forum). When the webpage is viewed on a small screen (e.g., that of a mobile phone) or when the browser window is too small, the download button disappears. This problem is very easy to fix and given that we use large screens it took a while to identify.

B. Links to the requested data are sent via an email – one link for each study. There are many reasons why we chose to set this up this way, and I will touch on this in more detail in my response to Greg Balco's review. A single file download for something as large as 42GB, for example, would not be practical and sending a list of individual links makes things more manageable both on the server side and also on the user's side. Should you have been presented with one link, I am confident that you would have had the same irate reaction as when presented with 160 different links.

The web interface was designed with those users in mind who would wish to download a handful of studies rather than the entire compilation. The WFS capability on the OCTOPUS server allows for the entire database (less the raster and csv files) to be downloaded directly. In section 3.1 we provide details about the database and server setup (see also Fig. 1), however, as picked up by Greg Balco, we fail to provide suffi-

cient details for those users who are not familiar with OGC web map servers. This was a shortcoming on our side and the revised manuscript will include these details.

C. See B above. Also, you were looking in the wrong place. The CSV files are only necessary to run CAIRN and recalculate denudation rates. The actual data is located in the attribute table of the polygon shapefiles for the CRN data and point shapefiles for the OSL/TL data.

Fig. 4 in the manuscript provides details on the folder structure of the downloaded bundles. See also Section 4 for a detailed description of what is where. The manuscript also includes a supplementary table with details of all the fields in the attribute tables.

Issue #2: Longevity of the database.

The collections that make up OCTOPUS were issued with DOIs and in the process of doing so the University of Wollongong (UOW) Library has committed to archiving the data in perpetuity. UOW has very clear policies on research data management and archival and these are as stringent as those found at any other University. All research data produced in Australia or with Australian Government funds must be stored on data servers that are physically located in Australia. This means that Pangaea or other offshore data warehouses were out of the questions from the conception of OCTOPUS.

Notwithstanding, I am pretty confident that the UOW Library system will be around for a while and its chances of surviving the next thermo-nuclear apocalypse are as good as those of Geoscience Australia (one of our national long-term data warehouses) and probably better than those of Pangaea or other offshore systems – mainly due to the distance.

The minting of DOIs means that our database meets the data storage and archival requirements of ESSD.

Issue #3: User submission of the data.

We do not have, to date, a plan on user submissions of data. With other words, we

do not intend on adding a section to the web interface through which users can upload data. There are many reasons for this and I will not go into details here. Given the (lack of) responses we had from the community when requesting that we are sent catchment shapefiles, in most cases it will likely be easier to harvest the data from publications at our end than rely on user submissions.

Previous compilations have quickly become outdated because they did not offer the ability for users to recalculate the data. OCTOPUS is different in this regard, in that even if we decide that we have had enough of the positive feedback from the community and wish to quit and do something else, the current instance of the CRN collections can be kept up-to-date by users as they have the ability to recalculate the denudation rates. Granted that the database will no longer be up-to-date, but the current instance will stay reusable.

We do have a plan on how to keep OCTOPUS alive over the long-term and also how to fund the recalculation and ingestion of new studies. However, I do not think that these plans need to be elaborated in the current manuscript.

Issue #4: The source code of the web interface should be available

The actual source code of the interface is trivial, and all the components of the server are based on off-the-shelf open source software.

Comment: “I’ll refrain from making any comments on the data processing and quality of the compilation – other highly qualified reviewers in this area have submitted comments”

This is sad, as to date ***absolutely none*** of the comments / commentators on the EESDD forum have dealt with the data. Not even Greg Balco – to date the only reviewer on the forum – comments on the data.

The recalculation of the CRN data took almost one entire year. We have produced a dataset that is internally consistent and fully reproducible using software that is open

source and available for download. Our work will never have to be redone. This alone is a tremendous contribution to the community, contribution that is sadly trivialised by whinging about missing features on a web interface or having to download too many files.

Thank you once more for the opportunity to respond

Tibi

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