



# MEETING

**Meeting Date** 28 October 2021

Ref MoMAAUG#7

ESDC-GEN-MOM-0029

**Meeting Place** WebEx

Chairperson Natalie Webb

**Minute's Date** 30 April 2022

## Participants

**AAUG Members:** Natalie Webb (AAUG Chair), Hervé Bouy, Christopher Conselice, Ioannis Georgantopoulos, Søren Larsen, Sandra Savaglio.

**In attendance :** Guido de Marchi (ESDC Science Lead), Bruno Merín (Head of ESDC), Jan Tauber (Planck Project Scientist and ESA Astronomy Study and Project Scientist's representative), Nuria Alverez (ESASky Support Scientist), Hector Canovas (Gaia Archive Support Scientist), Jos de Bruijne (Gaia deputy Project Scientist), Rene Laurejjs (Euclid Project Scientist), Elena Jimenez Bailon (XMM-Newton Support Archive Scientist), Arnaud Masson (Heliophysics Archives Science Lead), Sara Nieto (Euclid Mission Technical Interface), Monica Fernandez (PLATO Mission Technical Interface).

**Absent:** Eva Villaver (AAUG member) sent her apologies.

**Subject** Minutes of the Astronomy Archives User Group (AAUG) meeting #7.

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Description	Action	Status
AAUG members to investigate one EU project each, investigate the type of data products from ESA missions that the project will be creating, advise ESDC what to ask the project PI, and if there is enough information at this point, recommend if the data should be added to any of the ESA science archives.	2019-02-13/13	IN PROGRESS
D. Baines and G. de Marchi to undertake the replacement for the 8 <sup>th</sup> member of the AAUG. In meeting #6 the AAUG agreed to give suggestions for new AAUG members to ESDC by end of April 2021. ESDC to also poll the AWG and JWST and Euclid colleagues for names.	2020-10-02/01	IN PROGRESS
ESDC to send the Gaia statistics on the number of queries received through the different modes of accessing the archive (UI, cone search, astroquery).	2020-10-02/02	IN PROGRESS



Description	Action	Status
ESDC to begin contacting the PIs of the identified EU projects to gauge their interest in ESA preserving their project data.	2020-10-02/06	IN PROGRESS
AAUG members to poll their communities before each AAUG meeting for any feedback, suggestions, comments that they would like to be raised in the upcoming meeting.	2021-04-14/01	CLOSED
N. Webb to gather and contact the astronomy lists for ESA countries that do not have an AAUG member representative and poll these communities for any feedback to be raised in the upcoming AAUG meeting.	2021-04-14/02	CLOSED
ESDC to also contact the PIs for the five recently identified EU H2020 and FP7 projects (action linked to Action 2020-10-02/06).	2021-04-14/03	OPEN
ESDC to report the ESASky feedback to the ESASky team and to add each them to the ESASky backlog.	2021-10-28/01	
ESDC to circulate a doodle to find dates for the next AAUG meeting, to be held in Spring 2022.	2021-10-28/02	



## WELCOME:

N. Webb and G. de Marchi opened the meeting on Thursday 28<sup>th</sup> October 2021 by welcoming everyone and summarising the main topics to be discussed during the meeting. The meeting was held as a hybrid meeting, both in person at ESTEC and via telecon due to the global COVID-19 pandemic.

## ADOPTION OF THE AGENDA:

The agenda of the meeting was presented and adopted by the AAUG members.

## REVIEW OF ACTIONS:

The actions from the previous meeting were reviewed. Five actions remain open. Three of these actions are related to the EU H2020 and FP7 projects. The actions and their status are the following: **Action 2019-02-13/13**: AAUG members to investigate one EU project each, investigate the type of data products from ESA missions that the project will be creating, advise ESDC what to ask the project PI, and if there is enough information at this point, recommend if the data should be added to any of the ESA science archives. This action is in progress and will continue when feedback is received from Action 2020-10-02/06. **Action 2020-10-02/06**: ESDC to begin contacting the PIs of the identified EU projects to gauge their interest in ESA preserving their project data. This action is ongoing and was reported in the previous meeting. **Action 2021-04-14/03**: ESDC to also contact the PIS for the five recently identified EU H2020 and FP7 projects (action linked to Action 2020-10-02/06). This action is still open.

The two other open actions have the following status: **Action 2020-10-02/01**: D. Baines and G. de Marchi to undertake the replacement for the 8<sup>th</sup> member of the AAUG. The ESDC are still looking for a replacement. A number of people have been contacted. The AAUG suggest to contact colleagues from the JWST and Euclid missions and to also contact colleagues from other countries not represented in the current board. **Action 2020-10-02/02**: ESDC to send the Gaia statistics on the number of queries received through the different modes of accessing the archive (UI, cone search, astroquery). This action is in progress and will be collated by the ESDC Gaia archive team.

## PRESENTATIONS:

The following presentations and discussion sessions were held on 28<sup>th</sup> October 2022:

1. Community feedback collected by User Group members (All)
2. Update on Gaia archive and preparation for Data Release 3 (H. Canovas)
3. Preliminary analysis of role of “archival” papers across missions (G. de Marchi)
4. Demo on ESASky and Multi-Messenger Events (N. Alvarez)
5. Archival Research Visitor Programme status (G. de Marchi)
6. AOB
7. Date and time of next meeting (All)
8. Closed session

The slides of the presentations are available on the ESAC Science Data Centre (ESDC) public web site, under the heading Archives User Groups, Astronomy: <https://www.cosmos.esa.int/web/esdc/aaug/meeting7>.

## DISCUSSIONS:

Discussions took place during and after each presentation. This section presents a summary of the discussions and is ordered by the above presentations and sessions list.

### 1. Community feedback collected by User Group members

As given in Action 2021-04-14/01, the AAUG members polled their communities before this meeting for any feedback, suggestions and comments that they would like to be raised in this meeting. The feedback was the following:

- The exercise is not only useful for collecting feedback, but also to publicise the ESA Astronomy archives to the community. ESASky is being used as a hub to access different databases, particularly for X-rays.
- One user commented that XMM-Newton Flare-filtered data is not distributed anymore, and it could be useful for science. N. Webb commented that she was also contacted by the user, the data is available in the XSA and she will reply to the user with the details.
- People know well the Archives.
- Feedback from a few Gaia users: most of them are happy with the Archive. The Python interface and Topcat tool are mostly used by younger users (e.g., PhDs, postdocs). Senior scientists use Vizier (it is likely that these users are not too used to ADQL).
- Feedback from a selection of high-energy students: ESASky is very popular among young (PhD) students, they really like it.



Other members contacted their communities but so far have received no replies. As already mentioned, it was noted that contacting the community is a good exercise to disseminate information about the ESA Astronomy Archives and the AAUG.

## 2. Update on Gaia archive and preparation for Data Release 3

H. Canovas gave a presentation on the Gaia archive and preparation for Data Release 3. The main discussion points after the presentation were the following:

- A general positive feedback and congratulations about the Gaia Archive was given by the AAUG members.
- The AAUG asked about the possibility of having Datalink products accessible via ESASky.
- Specific questions about DR3 content were asked (e.g., QSO tables).
- The AAUG asked about the possibility of loading external catalogues to the Archive. ESDC replied that the tools are available for that (external TAP search and simple table upload).
- The AAUG asked if the functionalities of the Gaia Archive are being exported to other ESA Archives? See **Recommendation 2021-10-28/04**.

## 3. Preliminary analysis of role of “archival” papers across missions

G. de Marchi presented his preliminary analysis of the role of “archival” papers across the ESA missions. A discussion followed with the main points:

- The AAUG expected more citations for multi-mission papers.
- A general discussion was held about how to identify archival papers, but no clear conclusion was reached as each Archive/Observatory behaves differently. For example, there is higher pressure to write PI papers from HST data as the PI receives money when a proposal is accepted.
- General concern that missions having their cumulative PI-publications reaching an horizontal growth may be closed.

## 4. Demo on ESASky and Multi-Messenger Events

N. Alvarez presented the latest version of ESASky, released on 20<sup>th</sup> October 2021, that includes new features such as multi-messenger events from gravitational waves. A discussion followed about ESASky, including reporting some bugs, suggesting new features and updates. The following feedback points were given and will be reported to the ESASky team and added to the ESASky backlog for the team to work on (**Action 2021-10-28/01**):

- Include Vizier into ESASky.
- Before the users are able to do a query, by just copying and pasting, for example, a J0045 number or similar, they have to put the spaces between the hours, minutes and seconds and degrees, minutes and arcseconds. This can be irritating therefore the suggestion is to fix this.



- Include the Swift X-ray telescope point source catalogue (2SXPS).
- There is already an eROSITA public Data Release, it is panchromatic and includes spectroscopic redshift (called eFEDS, 200 square degrees on the sky, around the area of the ATLAS field, includes thousands of sources and it's multi-wavelength because they included the optical data spectroscopic redshifts). The AAUG suggest to start with this release and then add the new one into ESASky. The next release will be the results from the all-sky survey.
- Make a cone search available, and include a column that has the distance of each object from the central coordinates of the search.
- Many people looking for the gravitational wave counterparts do this by looking for variability of an object by comparing images taken at different times. And therefore it would be very nice if users could upload and display their own images on the sky.
- It would be nice to add the HCV catalogue and link to the HCV explorer tool (<http://hst.esac.esa.int/hcv-explorer/>).
- Make possible to deactivate the purple cross in the centre of the image to take nice screenshots without it.
- Prepare to include data from the SKA and EUCLID in ESASky.
- To encourage users to acknowledge ESASky and the ESA Astronomy Archives, the AAUG suggests that a message could appear on the screen during an ESASky session, reminding users to include the acknowledgement and provide a standard sentence that could be copied and pasted into the publication (see **Recommendation 2021-10-28/03**).

## 5. Archival Research Visitor Programme status

G. de Marchi presented a short recap and status about the Archival Research Visitor Programme. The programme aims to increase the scientific return from ESA missions by inviting scientists to ESAC and ESTEC who are interested in pursuing research based on publicly available data in the ESA Space Science Archives. The programme was launched at the beginning of March 2021 and announced through many channels (ESDC newsletter, mission newsletters, professional societies, job registers, space agencies, etc.). The following points were discussed:

- At this moment there are less applications than last time (but the deadline is not yet closed).
- G. de Marchi asked the board if they want to participate in the review process. The AAUG recommended that it continues to involve all of the AAUG members to evaluate the proposals (see **Recommendation 2021-10-28/05**).
- A discussion on renaming the program to Archival Data visitor program. Following these suggestions, the AAUG then recommended retaining the original name which they felt communicates the aim of the programme in a succinct and clear manner (see **Recommendation 2021-10-28/01**).



## 6. AOB

B. Merin presented a slide with questions to the AAUG members on external satisfaction metrics for the ESA Science Archives. The presented ideas are, for logged -in users, to send a post session message to ask for their specific feedback. And for non-logged-in users, possibly offer a five-star rating function and feedback box after downloading data. The AAUG responded that a feedback button is a nice option (as is offered in ESASky) and they prefer this over sending emails to logged-in users. The AAUG also noted that the five-star rating function seems doable and low invasive. Plus, there could be an option to provide more feedback, for users who wish to do this, and if the ESDC have specific questions they want to ask the users, they could provide them there.

N. Webb suggested, related to this, that it may be time to start thinking about sending a new survey to the community.

## 7. Date and time of next meeting

May 2022 appeared to be the best month for the next meeting. It was agreed that a doodle will be sent to the AAUG and ESDC members by the end of the week to fix the dates for the next meeting (**Action 2021-10-28/02**). It was mentioned that there is also the possibility to hold the meeting in person at an AAUG member institute, possibly Toulouse for a future meeting.

## RECOMMENDATIONS

The following recommendations were formulated by the AAUG:

### *The Archival Research Visitor Programme*

**Recommendation 2021-10-28/01:** The Archival Research Visitor Programme has proved to be a great success, with many, high quality proposals submitted for the first round, promising excellent science and raising the profile and knowledge of the ESA archives. Following suggestions to change the name of this programme, the AAUG recommends retaining the original name which they felt communicates the aim of the programme in a succinct and clear manner. Further, changing the name at this stage, after the programme has started to gain visibility, may lead to unnecessary confusion.

**Recommendation 2021-10-28/02:** A second recommendation with regards to the Archival Research Visitor Programme concerns those that can apply. Currently this is limited to ESA member states and collaborating countries. One of the major advantages of this programme is that it both raises the profile and the knowledge of the ESA archives. There is a distinct advantage to allowing people from all countries to apply for this programme, as it will publicise the archives more widely and will foster excellence by enlarging the number of applications. For this reason, the AAUG is in favour of allocating up to one excellent and highly ranked programme from a non-member state, each round. Further, it would be worth investigating if other outstanding proposals emanating from non-member states could also be funded through other programmes, such as the Faculty Visitor Programme.

### *Ongoing Developments of ESASky*

**Recommendation 2021-10-28/03:** ESA Sky continues to go from strength to strength in providing an excellent interface to the ESA archives and other multi-wavelength and multi-messenger data. This is a great boost for publicising the archives and getting scientists to maximise the return from the ESA missions. The AAUG congratulates the authors of ESA Sky for the superb work carried out to date and the exciting roadmap that has been put into place. It is clear from the large amount of users, that ESA Sky is widely used and is a very valuable resource, for scientists and the public alike. The intense usage of this resource should be translated into an increased number of acknowledgements in papers and presentations. To encourage users to acknowledge ESA Sky and the ESA Astronomy Archives, the AAUG suggests that a message could appear on the screen during an ESA Sky session, reminding users to include the acknowledgement and provide a standard sentence that could be copied and pasted into the publication.

### *Archive development*

**Recommendation 2021-10-28/04:** The AAUG congratulates the ESDC on the excellent development that has gone into the Gaia archive which will allow users to fully exploit all of the current and upcoming Gaia





data releases. The AAUG recommends that the return from this new development is maximised by propagating the new tools to the other ESA astronomy archives, where possible.

### ***Visitors programme proposal evaluation procedure***

**Recommendation 2021-10-28/05:** Regarding the evaluation of the proposals submitted to the Archival Research Visitor programme, the AAUG recommends that it continues to involve all of the AAUG members to evaluate the proposals on the scale agreed between the three areas evaluating proposals (Astronomy, Heliophysics and Planetary Science). Following the first round, it became clear that it was important to have an expert in a maximum of scientific areas. This allows all the proposals to be evaluated in a fair manner. Involving all of the AAUG members will ensure that there is an expert available in the majority of the scientific areas addressed in the proposals, ensuring that the best scientific cases are indeed selected and the larger number of assessors will limit the number of proposals with no one to evaluate them due to conflicts. The average grades for the evaluated proposals will then be put forward for the meeting with the representatives who have evaluated the proposals emanating from Heliophysics and Planetary Science.