



MEETING

Meeting Date 17 April 2020

Ref MoMAAUG#4
ESDC-GEN-MOM-0011

Meeting Place WebEx

Chairperson Beate Stelzer

Minute's Date 1 July 2020

Participants

AAUG Members : Beate Stelzer (AAUG Chair), Christopher Conselice, Ioannis Georgantopoulos, Søren Larsen, Sandra Savaglio, Eva Villaver

In attendance : Deborah Baines (ESDC Astronomy Archives Science Lead), 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), Bruno Altieri (Euclid Archive Scientist), Guillaume Belanger (INTEGRAL Archive Scientist), Hector Canovas (Gaia Archive Scientist), Jos de Bruijne (Gaia deputy Project Scientist & Athena performance scientist), Pierre Ferruit (JWST ESA Project Scientist), Nora Loiseau (XMM-Newton Archive Scientist), Marcos Lopez (JWST Archive Scientist), Alcione Mora (Gaia Archive Scientist), Timo Prusti (Gaia Project Scientist), Eva Verdugo (PLATO Archive Scientist).

Absent: Hervé Bouy (AAUG member) sent his apologies.

Subject Minutes of the Astronomy Archives User Group (AAUG) meeting #4.

Copy

Description	Action	Status
The UG is interested in seeing the number of users that access the archives via ESASky. D. Baines to report to the ESASky team.	2018-06-12/02	OPEN Moved to a future meeting.
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
ESDC to contact the relevant EU project PIs.	2019-02-13/14	OPEN
G. de Marchi/ D. Baines to define a timescale for implementation of the visitor programme and the necessary interaction steps with AAUG.	2019-10-14/01	ON HOLD
The AAUG to produce a report for the Astronomy Working Group (AWG) on the second year of AAUG activities.	2019-10-14/02	OPEN. Due 13/05/20



Description	Action	Status
D. Baines/G. de Marchi to email the AAUG to set a deadline for renewal/resigning from the Users Group.	2019-10-14/03	DONE
B. Stelzer to distribute the 8 remaining EU projects among AAUG members for evaluation.	2019-10-14/04	DONE
D. Baines to distribute the user survey preliminary results document and spreadsheet to the ESA missions whose archives are in the survey, including ESASky.	2019-10-14/05	DONE
D. Baines to provide a summary of the user survey results online at https://archives.esac.esa.int .	2019-10-14/06	DONE
D. Baines to create an in-depth report on the user survey results and send to all stakeholders	2019-10-14/07	IN PROGRESS 1 st draft sent internally at ESDC
D. Baines to compile a ratio for each mission relating the number of people responding per archive to the survey with the number of archive users.	2019-10-14/08	DONE
D. Baines/G. de Marchi to email the AAUG after action 2019-10-14/03 is closed: send a doodle for the date of the next AAUG; undertake eventual replacements (if any).	2019-10-14/09	IN PROGRESS: replacements.
D. Baines and G. de Marchi to provide a flow chart to the AAUG showing the steps in the process to be followed for each EU project evaluation.	2020-04-17/01	Due date 1 month before AAUG meeting #5
D. Baines to send out a doodle in about a month to AAUG members to find next meeting date.	2020-04-17/02	Due 17/08/20
AAUG members to provide names for a new AAUG chair and new AAUG members.	2020-04-17/03	Due 08/05/20



WELCOME:

B. Stelzer and D. Baines opened the meeting on Friday 17th April 2020 by welcoming everyone and summarising the main topics to be discussed during the afternoon. The meeting was a shorter format and held via telecon due to the COVID-19 crisis in Europe. A roundtable of introductions was performed as many ESA Project Scientists and Archive Scientists participated in the meeting.

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. 7 actions remain open with the following status: **Action 2018-06-12/02:** *The UG is interested in seeing the number of users that access the archives via ESASky. A session was planned in meeting #3 to present the ESASky statistics but it was moved to a future meeting due to a heavy meeting #3 schedule. The presentation with the ESASky statistics was distributed to AAUG members after meeting #3.* **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 was discussed later in the meeting (see discussion session 3). **Action 2019-02-13/14:** *ESDC to contact the relevant EU project PIs* Action to be completed based on feedback from Action 2019-02-13/13 and on a project by project case. D. Baines reported that the relevant ESA missions will be contacted first before making any final decision to contact the EU project PIs. **Action 2019-10-14/01:** *G. de Marchi/ D. Baines to define a timescale for implementation of the visitor programme and the necessary interaction steps with AAUG.* Defining the timescale for the visitor programme is currently on hold due to the COVID-19 pandemic. This action was discussed later in the meeting (see discussion session 1). **Action 2019-10-14/02:** *The AAUG to produce a report for the Astronomy Working Group (AWG) on the second year of AAUG activities.* This action is postponed to the AWG meeting in May 2020 due to a busy AWG meeting schedule in January 2020. **Action 2019-10-14/07:** *D. Baines to create an in-depth report on the user survey results and send to all stakeholders.* This action is currently in progress, a first draft has been distributed internally in the ESDC, the second draft will be distributed to AAUG members in the coming weeks. **Action 2019-10-14/09:** *D. Baines/G. de Marchi to email the AAUG after action 2019-10-14/03 is closed: send a doodle for the date of the next AAUG; undertake eventual replacements (if any).* The first two points of this action are closed, finding eventual replacements for AAUG members (including the chair) is in progress.



PRESENTATIONS:

The following presentations and discussion sessions were held on 17th April 2020:

1. Visitor Programme (G. de Marchi)
2. ESA Astronomy Archives session at EAS (EWASS) 2020 (G. de Marchi, D. Baines, B. Stelzer)
3. EU H2020 and FP7 project assessments (All)
4. Date and time of next meeting (All)
5. AOB
6. 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/meeting4>

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. Visitor Programme

The Archival Research Visitor 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. G. de Marchi started the discussion session on the Archival Research Visitor Programme by summarizing the latest status of the programme. The programme was ready to be advertised in March 2020 but due to the COVID-19 pandemic it has been postponed, currently to Autumn 2020 with visits to start in January 2021. The dates are open to adjustment depending on how the world-wide pandemic develops. The AAUG was asked if they thought the visitor programme could become virtual if the situation does not improve in the next six months. AAUG members asked how the per diem funding would work if the programme was virtual. G. de Marchi replied that this is obviously one drawback. There would be no per diem, therefore any researcher wanting to use the opportunity to stay at ESA for three months, for example because they were in-between positions, would not have this option if the programme was virtual. The AAUG suggested that going virtual will lose the purpose of the programme as interaction is a key part of its design. Also achieving a result on each project may be more difficult. A virtual programme would be almost the same as what ESA offers already, i.e. scientists can ask questions to the relevant missions and experts and solve their questions via email, helpdesk, or if needed via telecons. However, it was noted that things may not go back to normal for some time, and some major meetings are becoming virtual, therefore the programme should be flexible and also have a degree of flexibility on dates when people can visit. The AAUG suggested that since the visitor programme is going to be delayed for some months, the option of having a virtual visitor programme can be discussed again at the next AAUG meeting.



The discussion moved on to how best to use the time from now until the programme can start. G. de Marchi suggested the AAS job register as a possible advertising channel. Other large scientific institutes and observatories do this for their visitor programmes and ESA research fellowships are also advertised on the AAS job register. B. Stelzer noted she found it somewhat perplexing that ESA uses non-European channels for advertising a programme restricted to employees of ESA members states. Overall, the opinion in the AAUG was that it would be good to advertise the programme there so long as it is also advertised in the equivalent EAS channel and other European channels, as well as ESA mission newsletters.

A discussion followed on AAUG members being part of the visitor programme selection panel. All current AAUG members have agreed their availability to contribute to the selection process, and the AAUG suggested that future AAUG members are asked to carry on with this commitment and that this task be included either in the AAUG terms of reference or in individual invitation letters (see **Recommendation 2020-04-17/01**).

2. ESA Astronomy Archives session at EAS (EWASS) 2020

G. de Marchi reported that there is an ESA Astronomy Archives lunch session scheduled for the first day of the EAS (EWASS) 2020 conference in Leiden, on Monday 29th June. The session is planned to have a similar format as the previous session at EWASS 2019, with the goals of updating the community with the latest ESA Astronomy Archives activities and news, to present the AAUG activities, to provide a demo on how to use ESASky and to then have an open floor discussion session. In the beginning of April, a message was circulated to all session chairs, and later to all registrants, that this year's EAS conference will be virtual. ESA has signed up to have a virtual ESA Astronomy Archives lunch session. G. de Marchi asked if ESA should also tell the community in the lunch session about the plans for an Archival Research Visitor Programme. The AAUG suggested it would be fine to mention the programme so that the community starts to be aware of it. The EAS 2020 ESA Astronomy Archives lunch session page can be found here: <https://eas.unige.ch/EAS2020/session.jsp?id=LS3>

3. EU Horizon 2020 and FP7 project assessments

During the second AAUG meeting there was a dedicated discussion on EU Horizon 2020 and FP7 projects that use ESA archival data and produce high level or user provided products and if these products should be added to the relevant ESA science archives. 12 relevant large EU projects were identified before and during the previous AAUG meeting, 4 of which are already being followed by the relevant ESA missions (XMM-Newton and Planck). Two actions are open from this meeting (*Action 2019-02-13/13 and Action 2019-02-13/14*). D. Baines started the discussion session on the EU H2020 and FP7 project assessments by summarizing the goals and presenting the list of projects that are being assessed.

D. Baines reported that she has recently been told about two other FP7 projects, both using Herschel data (HELP and Vialactea). D. Baines proposed that if the AAUG suggest that the majority of the products from these 8 projects are interesting and useful, then the ESDC should conduct a very thorough search on the hundreds of Fp7 projects that could be relevant (expecting to find only a handful of relevant projects). The AAUG asked to elaborate again the other possibilities of ESA preserving data in the long-term outside of the archives. D. Baines described two possibilities, the first being the Guest Storage Facility, which is currently



being used by the Planetary area of the ESDC to preserve data products. This facility allows the long-term storage of high-level science products created by the community, with the aim that the data will not be lost because project funding finishes, people move institutes, etc. The second possibility is the ESA datalabs project. It is foreseen that data could be stored there, like in the Guest Storage Facility, and it may even be possible to host archives created by the community in Virtual Machine environments in order to preserve not only the data, but other products and software.

The AAUG reported that most of the assessments have been collected. Overall, they are positive, concluding that there is useful data and also useful models, however, the projects produce rather inhomogeneous outputs. A main reason to store the data is so that it is not lost and because there has been a lot of effort in the community to work on these projects. A discussion followed on assessing the projects. B. Stelzer noted that projects working only on ESA mission data are clearer to assess and to recommend if their data should be preserved. Assessing projects with vast inhomogeneous databases that include data from ESA missions as well as many different non-ESA missions and telescopes can be rather complicated. B. Stelzer noted that some projects are only dealing with a few tens of objects, these may not be worth pursuing to justify the effort that will be needed to preserve the data. G. de Marchi emphasized the questions that need to be asked, namely, is the data something that ESA and the community can afford to lose? Is the risk very high that in ten years or so from now the data might not be available? The AAUG should advise ESA per EU project, if the AAUG deems the data products are useful, then this is discussed with the relevant ESA project scientists, who in the end are responsible for the science of the mission and can make the decision if the data is considered important enough to be added to the relevant archive or preserved in the long-term by ESA. J. Tauber noted that products not official but associated with the missions, and that give added value for the users, should be stored in the archive, but clearly distinguished as being different products. D. Baines noted for projects with data from many missions and non-ESA missions that this can become quite complicated. An example is the DustPedia data in the Herschel Science Archive (HSA), i.e. there are User Provided Data Products (UPDPs) already in the HSA that have been provided by one PI of a Herschel proposal and these products are also part of DustPedia. The Herschel archive scientist has therefore advised that the DustPedia data should not be included as a whole in the HSA because some data are already ingested as UPDPs. Probably each EU project is going to have to be treated on a case-by-case basis and maybe needs a different solution. E. Verdugo emphasized that the projects cannot be generalized. Given her experience with these kinds of products for ISO and for Herschel, they do need to be analyzed case-by-case and it takes a lot of effort to evaluate if the data products should be hosted or not. She also stressed that it is very important to have the products well documented, based on for example papers or technical notes, which clearly state how the products were produced, the software used, the date, etc. J. Tauber stated that these large EU projects have already gone through a competitive selection, so they start from a good point. Then, in the case of the Planck mission, the Planck SOC make an evaluation of the results by bringing together experts in the field that say if the project has achieved their objectives; if the data products are of a good quality; and if the products are interesting to the community. Only after this evaluation are the products ingested into the archive. He also repeated that the documentation for the products has to be adequate. G. de Marchi repeated that this is a several steps process, and therefore ESA is asking the AAUG to provide an initial assessment on the projects and let ESA know which should be pursued and which can be left. And then ESA can convene through the Project Scientists and other experts to go through the projects and assess them. The AAUG commented that the next steps should be universal and applied to all the projects under evaluation. The AAUG suggested, since this is rather complex, that it would help the AAUG if ESDC can produce a flow chart or plan to show the steps in the process to be followed for each project and to show what will happen in the case of a positive evaluation



(i.e. recommending ESA to preserve the project data in the long-term) or a negative evaluation (**Action 2020-04-17/01**).

AAUG members raised the question about coordination with the EU programs at an earlier stage. This has already been given as a recommendation by the AAUG (see Recommendation 2019-02-13/05). AAUG members said it is important and should be pursued. Finally, a discussion followed on ESA hosting non-ESA data products that are produced by these EU projects. AAUG members pointed out that to use some of the ESA mission data, for particular science cases, you do need the other non-ESA data. Therefore, to make a particular archive useful, it may be good to have the other data within the archive. A. Mora explained the case with the Gaia archive and that it does host some relevant non-ESA mission data, for the many Gaia user science cases that need these products, and that Euclid will also be similar. J. Tauber also noted that if non-ESA data products are used in ESA mission pipelines, then in those cases these products are hosted as secondary products. The AAUG commented that of course it is very different to host a full official non-ESA survey or full non-ESA mission data rather than hosting data products limited to a science topic, as is the case for most EU Horizon 2020 and FP7 projects. It was agreed that more time is needed to finish assessing all the EU projects (Action 2019-02-13/13) and in the meantime ESDC will provide a flow chart to show the steps in the process to be followed for each project (**Action 2020-04-17/01**).

4. Date and time of next meeting

It was agreed that a doodle will be sent to the AAUG and ESDC members to fix the dates for the next meeting for some time in October/November 2020 (**Action 2020-04-17/02**). The doodle will be sent to the AAUG in about one month's time, when possibly there will be a clearer picture of what may be happening in the autumn regarding the pandemic. Otherwise, the meeting will again be held as a virtual meeting.

5. AOB

A brief discussion followed on AAUG membership renewal and substitution, in particular, finding a new AAUG chair by the end of 2020. The AWG have been asked to propose names for a new AAUG chair and G. de Marchi reported that the AWG are happy to receive any suggestions from the AAUG. The AAUG is also currently missing one member, therefore ESA are requesting for the AAUG members to suggest names for a new AAUG chair and new AAUG members (**Action 2020-04-17/03**). ESA will also be happy if any current AAUG members register their interest in becoming the new AAUG chair. Ideally all suggestions should be sent before the next AWG meeting in mid May.



RECOMMENDATIONS

The following recommendation was formulated by the AAUG:

Archival Research Visitor Programme

Recommendation 2020-04-17/01: The AAUG is pleased to see that the Archival Research Visitor Programme has been established and is ready to start, adopting a scheme previously discussed with this group. The delay of the expected schedule (see *Recommendation 2019-02-13/02*) is due to the current world-wide COVID-19 pandemic. The AAUG fully supports ESA in opening the first call for this new opportunity as soon as feasible, and the AAUG suggests to advertise the call through appropriate channels. The AAUG members renew their availability to contribute to the selection process as long as they serve on this panel and advises ESDC to make sure that eventual future AAUG members will adhere to this task.