



## Harvard-Smithsonian Center for Astrophysics

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Memorandum of Understanding MWL External members and EHT Collaboration  
Re: Data sharing, collaboration and publication policy

Dear Multi-wavelength Working Group (MWL WG) Partners,

I am writing to you as Director of the Event Horizon Telescope Collaboration (EHTC) to invite you to sign this Memorandum of Understanding with us, regarding the work plan in the lead up to publications that involve your MWL contributions.

This document covers the protocol leading up to the three categories of EHT publications:

- 1) **Collaboration Paper:** These are papers that are widely recognized throughout the EHTC to constitute the legacy of the EHT. These are expected to be of extraordinary scientific importance, address directly the key motivating science goals of the EHTC, and directly utilize the EHT VLBI data or ancillary data that most properly belongs to the EHTC rather than operators of an individual station. For these the author list will consist of "The EHT Collaboration" followed by all members of the EHTC in alphabetical order, unless they specifically request in writing to be removed from the authorship list.
- 2) **Official Paper:** These are papers that are widely recognized throughout the EHTC to be the product of the collaboration, though where a subset of EHTC members made the dominant contributions. These need not be based on EHT VLBI data or ancillary data that most properly belongs to the EHTC rather than operators of an individual station. All EHTC members not already on the primary author list (PAL) are automatically assumed to be coauthors in the secondary author list (SAL) unless they specifically request in writing to be removed from the authorship list.
- 3) **Related Paper:** These are papers on topics of substantial relevance to core EHTC science objectives. Examples include: papers documenting the development, testing and deployment of EHT instrumentation, or those that make use of EHTC-derived analysis tools, simulations, or ancillary data. Typically Related papers do not meet the requirements of a Collaboration or Official Paper. Most of the work of members of the EHTC on EHTC science is expected to fall into this category. All EHTC members are eligible to join the SAL pending written request to the PB, though short, primary-only author lists can be expected for many cases.

As we aim to publish our first results from the 2017 campaign, and afterwards move into more regular project publications, we suggest the following points of agreement:

- Each instrument group involved in a MWL campaign is free to give talks or publish their own data independently, without coordinating with the EHTC, as long as there is no mention of anyone else's data/results, including those of the EHT.
- The EHTC will share general information in good faith about the results with our non-EHTC MWL WG partners, with the understanding that none of the information can be discussed outside working groups or the EHTC until published. General information for 2017 for example refers to those needed for planning purposes, such as the list of planned publications, the timeline of M87 and AGN first result release, and the plans to finalize Sgr A\* results at a later date.

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Specific information such as figures and images with the results will not be shared generically (i.e. via MWL WG telecons) with external collaborators.

- If/when external MWL WG collaborators are contributing to an EHTC publication, via supplying data or other needed materials, the EHT will have full transparency with such coauthors within the relevant writing group for each particular paper, on a need-to-know-basis, again with understanding that all EHTC results fall under data embargo until their publication.
- The EHTC will provide access to relevant external MWL WG members to collaboration spaces on Teamwork where discussions about individual papers, on a case-by-case basis, following the above understandings re embargo period.
- The author list policy will be: 1) Collaboration papers: any MWL WG member contributing data used for the publication will be included alphabetically and/or grouped by facility (as preferred by each collaborator/group), after the EHT Collaboration Members; 2) Official papers: any MWL WG member contributing data will be included alphabetically, and/or grouped by facility, in the SAL unless their data play a primary role, in which case they will be included in the PAL; 3) Related papers: MWL WG members will be included in order of their contribution, similar to a regular publication, and can in principle even lead a publication that uses EHT data as long as the EHT data are not the primary focus of the publication.
- Within these categories some papers will be coordinated by the MWL WG and some by the AGN WG, depending on the content of the paper. In general this will be handled on a case-by-case basis via the writing groups for a given paper, but as a guideline we envision the following cases:
  - case1: target=M87/SgrA, data=only EHT/radio + opt/X/gamma → handled by MWL WG
  - case2: target=AGN, data=EHT + other VLBI → handled by AGN WG
  - case 3: target=AGN, data=EHT + other VLBI + opt/X/gamma → handled by both AGN + MWL WGs, with lead established during writing process
- By signing this document you, the undersigned MWL WG member, acknowledge the sensitive nature of the EHTC (and other MWL collaborators') data and their results, and agree to not disseminate them in any way outside of the collaboration until their publication, or you are otherwise informed that information can be shared. When in doubt, ask!
- For MWL WG members who represent collaborations (e.g., HESS, Fermi, etc.), you will sign as a representative of your collaboration, and list the relevant members as an addendum that you are effectively signing for.
- For individual MWL WG members, the EHTC asks that you notify your chair/head/institute director, in writing, of this MoU you are signing by *sending back this document via replying to this email, as a signed and scanned PDF*, to the people listed as signatories at the bottom of this letter and included in CC on this email, with your chair/head/institute director in CC.
- For MWL WG members representing instrument collaborations, replace 'chair/head/institute director' by the facility director or official spokesperson.
- If you violate this MoU, which forms a code of conduct and the terms of data privacy/embargo in any way, you understand that you will be removed from the MWL WG group and from any subsequent EHTC publication, and will lose your status as an external collaborator.

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- We (the EHT director as well as the names listed below) represent the entire EHTC in signing this MoU, which we will disseminate to the collaboration. The EHTC will be informed of the same code of conduct regarding your shared MWL data, at the November 2019 collaboration meeting as well as via an official mailing. Your MWL data will be treated as proprietary and cannot be used in any way, or publicly discussed, until published or we are otherwise informed.

We hope that this MoU will serve as a constructive guideline to avoid any potential misunderstandings or information leaks during particularly the key embargo period prior to publication, and assure all participants of confidentiality and good ethics in the preparation and publication phase. Post-publication we will share via the Outreach WG appropriate EHT materials and results to MWL WG partners to use in their talks, and likely formulate some guidelines, but this will be covered in a future discussion.

Sincerely,



Shep Doleman  
Director, Event Horizon Telescope



Event  
Horizon  
Telescope

On behalf of the EHT Management Team, Science Council and MWL and AGN WG conveners, represented here and in CC via: Geoffrey Bower, Heino Falcke, Kazuhiro Hada, Svetlana Jorstad, Thomas Krichbaum, Sera Markoff, Neil Nagar and Dimitrios Psaltis



Director of the H.E.S.S. Collaboration

06/11/2018

