

# XRISM Guest Scientist Program and Code of Conduct

EXTRACT COPY OF XRISM SCIENCE IMPLEMENTATION PLAN

# **XRISM Guest Scientist (XGS) Program**

## **1. Background**

The XRISM Guest Scientist (XGS) program (formerly known as the Performance Verification Phase Collaborating Scientists, PVCS) allows members of the astronomy community to participate in the XRISM Performance Verification (PV) phase. The XGS program will strengthen the PV phase scientific output by augmenting Target Teams from the XRISM Science Team with additional scientific expertise. This program is designed so that the limited data rights allowed XGS participants (discussed below), do not intrude unnecessarily on the Science Team PV phase data privileges.

## **2. Prerequisites – the PV phase target list and target teams**

Approximately 18 months prior to launch, the XRISM Science Management Office (SMO) Steering Group will select PV phase targets based on Science Team proposals. Prior to the initiation of the XGS program, the XRISM Science Team shall publish this list of PV phase targets. It is expected that the list will include about 50 targets. The list will include both “A” priority targets (must observe) and “C” priority targets (observe if they fit into the schedule). There are no “B” priority targets. Members of the Science Team will sign up to participate in the Target Team for some number of targets, and the SMO will select a lead and a co-lead for each Target Team. The details of the PV phase observations (a summary of the science objectives, pointing locations, and exposure times) shall also be published at the call for the XRISM Guest Scientists (XGSs), while the Target Team membership and team leads shall also be disclosed after the selection of XGSs to avoid possible conflict of interests. The guidelines for Target Team and team leader selection will be covered in a separate chapter of the Science Implementation Plan.

## **3. The XGS program**

Through the XGS program, scientists worldwide who are not XRISM Science Team members will be invited to apply to participate in the observation planning and data analysis of individual PV phase targets. Interested scientists will apply to the XGS program by responding to solicitations from NASA (scientists at US and Canadian institutions), ESA (scientists at European institutions), and JAXA (scientists at Japanese institutions). The specifics of each solicitation may vary from agency to agency.

Prior to the solicitation, each XRISM Target Team will create a list of expertise contained within the team and that desired from prospective XGS participants. These lists for each target will be included as part of the solicitation for XGS scientists.

Each proposal for the XGS program will consist of a request to join a particular Target Team, specifying the science investigation that would be performed for that target, and what the proposer would bring to the Target Team. The proposed science should enhance and/or complement the existing expertise on the Target Team. This expertise may include, but is not limited to: substantial theoretical insight, models for X-ray emission from the

relevant astrophysical phenomena, unique or specialized data analysis techniques, or complementary data on the source from other X-ray observatories or other wavebands.

Each proposer is allowed to propose for up to three Target Team, but may only be selected for at most one team. Some Target Teams may have more than one XGS participant added to the team, while some may have none. Only individuals are allowed to submit a proposal; no proposals by teams are allowed. Proposals for “Priority C” targets are allowed but come with the inherent risk that the target may never be observed. Other details of the proposal submission process will be detailed in the XGS solicitations from the respective agencies.

The criteria by which XGS participants are selected will include scientific merit of the proposed analysis ideas and the potential of the proposed science to complement and/or enhance the existing abilities of the PV Target Team.

Each list contains the number of XGSs assigned for each agency. The lists from the three agencies will be combined by the SMO Steering Group into a single list without making any selection. Before communicating the list of XGS to the respective Agency for their concurrence, the SMO Steering will seek for concurrence on the list by the Target Team Leads. This consultation process shall be run in a fully anonymized way (*i.e.*, target Team Leads shall not have access to the names of the prospective XGSs prior to their selection).

The following guidelines govern the XGS program:

1. An XGS participant is granted access only to the data from the target for which she/he has been selected. XGS members do not become Science Team members.
2. XGS members must sign a code of conduct and agree to adhere to the same rules and guidelines as the Science Team regarding data analysis and publication. These guidelines will be spelled out in a subsequent chapter of the SIP. This code of conduct will be made available at the time of the solicitation, and signed versions must be included by proposers in their proposal.
3. PV targets will be selected by the Science Team exclusively. XGS members are added to existing target teams.
4. While the target selection and duration of the observation will be fixed, XGS participants may suggest a modification of the observing strategy and/or a re-organization of the individual pointings to optimize the scientific return. Such discussions would be internal to the target team, including the XGS participant. Any such changes would be subject to approval by the SMO Steering Group.
5. Approximately one XGS scientist will be selected per target. It is allowable that some teams have more than one XGS member, while others have none.
6. The number of XGS scientists from JAXA, NASA, and ESA will be consistent with the respective Guest Observer phase data share. (Note that the GO phase data share proportions are not applied within the science team during the PV phase.)
7. Each XGS participant will be assigned to a single target team. (This limitation does not apply to Science Team members.)

8. During the proprietary period for the PV Phase data, XGS participants are restricted to accessing and analyzing the data exclusively from target to which they have been assigned. Science Team members from another Target Team may not share PV Phase data with XGS participants outside of that Target Team. Under exceptional circumstances, Target Teams may recommend to the SMO that an XGS participant from another team be added to their team for a specific and unique scientific necessity. The SMO will make the final decision on such recommendations.
9. With the approval of the Target Team leader, XGS participants may be lead authors of publications, consistent with the Science Team rules and guidelines. The policy on authorship of PV Phase publications will be detailed in a later chapter of the SIP.
10. Each XGS participant may share the PV phase data with a graduate student or a postdoc working directly under their supervision. In the case of significant graduate student (or postdoc) participation in the analysis or interpretation of the data, the graduate student (or postdoc) may be included as a co-author (or, under exceptional circumstances, a lead author) of any resulting publication. Graduate students and postdocs affiliated with XGS participants do not become XRISM Guest Scientists.
11. Any analysis performed by an XGS participant prior to the end of the PV phase proprietary period is viewed as part of the Target Team effort; i.e., the XGS are bound by the same Code of Conduct as Science Team members and the participant may not perform an independent analysis and submit it for publication separate from Team activity, unless the analysis commences after the data have entered the public archive.
12. There are no restrictions on XGS participants submitting Guest Observer proposals that do not duplicate their work as an XGS.

### **Proposed timeline**

The timeline of events leading to the selection and the integration of the XGS program is dictated by the XRISM launch date. The notional timeline of events associated with the XGS program is provided below.

Launch – 18 months: Selection by the Science Team of PV phase targets complete.

Launch – 15 months: Selection of PV phase target teams and chairs complete.

Launch – 12 months: Science Team provides PV phase target list, and target team needs to JAXA.

Launch – 12 months: Solicitations released by JAXA, NASA, and ESA.

Launch – 9 months: Proposals due.

Launch – 6 months: Selection of XGS participants.

Launch – 4 months: XGS participant workshop / Science Team meeting.

Launch + 4 months: PV phase commences.

Launch + 10 months: PV phase ends; AO1 observations commence (15% of time for residual PV phase observations).

Launch + 22 months: AO1 observations are complete; no further PV phase observations.

# **XRISM Science Team Code of Conduct**

## **1. Preamble**

This document is part of a larger document known as the XRISM Science Implementation Plan (SIP). Many of the sections below are summaries of longer policy documents contained in other chapters of the SIP. Where relevant, those chapters should be consulted for a more complete view.

The XRISM Science Team (XST) is a multi-national collaboration of over 100 scientists from Japanese, North American, and European institutions. The purpose of the XST is to plan and execute the science program for the Performance Verification (PV) phase to optimize the scientific utilization of XRISM. The Terms of Reference (ToR) chapter of the SIP spells out in detail the Roles and Responsibilities of the XST, including standard policies for adding or removing an XST member, the data rights of the XST, and the term of duration of the XST.

All members of the XST must strive for an inclusive and respectful environment for all collaboration members. The purpose of this Code of Conduct is to establish a baseline set of principles that all XST members are expected to abide by.

## **2. Respectful Treatment**

XST members should always remain collegial. More broadly, XST members must treat each other equally and with respect, regardless of gender, gender identity, sexual orientation, race, ethnicity, national origin, physical disability, religion, age, or any other attribute.

The nature of advancing science requires active collaboration, discussion, and debate. It is inevitable that disagreements will arise, and when conducted in a constructive and healthy fashion, these can be an important part of the scientific process. All members of the XST should feel free to respectfully express their scientific and technical ideas and interpretations. Likewise, objections and feedback must also be expressed respectfully.

Personal attacks, including verbal, non-verbal, or written harassment, threatening, bullying, intimidation, disparagement, and exclusion will not be tolerated. It is the responsibility of all XST members to ensure that a respectful environment is maintained and that any inappropriate actions are reported.

Sexual harassment of any kind will not be tolerated. This includes, but is not limited to, inappropriate verbal, written, or physical contact, unwelcome advances, and requests for sexual favors.

XST members should also maintain respectful interactions with members of the astronomical community outside the XST when presenting or discussing XRISM results.

The XST contains participants from many different cultures and backgrounds. In some cases, what is considered appropriate behavior in one culture may differ from that of another culture. XST members should make a good faith effort to understand and respect cultural differences in these regards. However, if questionable behavior arises between members, XST members should also feel free to educate each other on appropriate cultural customs and behaviors, as well as report continued violations.

### **3. PV Phase Data Rights and Sharing**

All XST members have access to all PV phase data. Sharing PV phase data with members of the astronomical community who are not part of the XST is strictly forbidden. In rare cases, target teams may agree that it is scientifically necessary to obtain external help to analyze or interpret data when the sufficient expertise is not already present on the XST. Target teams must request and be granted permission to share PV data outside the XST by the SMO Steering Group.

XST members may share PV phase data from the target teams they are working on with graduate students and postdocs that work under their direct supervision. The names of graduate students or postdocs shall be provided to the SMO Steering Group.

### **4. Publication and Presentation Policies**

Detailed rules regarding publication policies for XRISM PV phase data are contained in the SIP chapter titled “XRISM Publication Policy,” and all team members must abide by these rules.

For as long as the PV-phase data remains proprietary to the XST, no XST member may write, submit, or publish any work that contains PV data, except for those publications that arise from collaborative work within the XST and the relevant target teams.

Members of the XST may give talks on the XRISM mission, including technical descriptions and science objectives and capabilities. In such cases, they should inform the SMO Steering Group of the talk. Without explicit permission from the SMO Steering Group, XST members may not share anything in presentations outside the science team that is proprietary to the XST. This includes but is not limited to: XRISM data that is not yet in the public archive, results that are not yet published, data or results that are embargoed, status of the observatory that has not yet been made public, and findings that have only been discussed within the XST.

### **5. Social Media Guidelines**

Personal social media accounts are a great way to disseminate scientific results to the broader astronomical and public community. XST members with social media accounts are encouraged to share results from the XRISM PV phase, once the results are made public in a journal, press release, or other appropriate venue. However, in general, XST members may not share anything on their social media accounts that is not yet in the

public domain. The following are items that may not be shared on social media, even if the account is “private” or “protected.”

- Non-public documents pertaining to flight hardware, the instruments, the spacecraft, operations, integration and testing, telemetry, or scheduling.
- Internal XRISM documents that are proprietary to the XST, the broader XRISM team, or any of the agencies or contracting organizations involved in the mission.
- Slides or any non-public information that is discussed or shared at a XRISM Team meeting. Obtain express permission from the author of the slide and the SMO Steering Group before sharing.
- Photos of flight hardware without the express permission of the SMO Steering Group.
- Emails, confluence posts, or any other communication that is internal to the XST.
- Paper results that are under embargo by a journal until an official release date.

## **6. Scientific Misconduct**

XST members are expected to conduct scientific research in a fundamentally ethical manner. Falsification, fabrication, selective reporting of data, plagiarism, and any other form of scientific misconduct will not be tolerated.

While it is rarely possible to cite every paper that pertains to a given topic, a good faith effort should be made to include references to prior work that are particularly relevant to any publication produced by the XST. Deliberate omission of authors or references is not acceptable.

## **7. Implementation**

All XST members are required to agree to and abide by this Code of Conduct. New XST members, students and postdocs of XST members, and XRISM Guest Scientist participants, will abide by the same standards set forth here.

Any XST member who has a concern about a violation of this Code of Conduct should voice their concerns to the SMO Steering Group. Complaints or concerns will be held in confidence by the SMO Steering Group, and anonymous complaints by those wishing to remain unnamed will be accepted. Retaliation against an XST member for voicing a concern or complaint is unacceptable and is a violation of this Code of Conduct.

In dealing with concerns over a violation of this Code of Conduct, the SMO Steering Group will first attempt to restore an inclusive and respectful environment and rectify any wrongs that may have occurred. If the restoration of such an environment cannot be achieved, the SMO Steering Group, along with representatives from the respective national agencies, have the right and the responsibility to act. Consequences can range from being removed or reassigned to another target team, to removal from the XST, to (in the cases of scientific misconduct or bullying/harassing) reporting the activities of the offending XST member to their institution.

