

MEMORANDUM OF UNDERSTANDING (MoU)

BETWEEN

**The University of Sydney, through its ARC Centre of
Excellence for All-sky Astrophysics
(CAASTRO) of, Sydney, NSW 2006, AUSTRALIA**

AND

**Max-Planck-Institut für extraterrestrische Physik ("MPE")
representing the German eROSITA Consortium
("eROSITA_DE") of GERMANY**

1. Participating Parties

The parties ("Parties") to this Memorandum of Understanding ("MoU") are

- The University of Sydney ("Sydney"), Australia, representing the Australian Research Council Centre of Excellence for All-sky Astrophysics ("CAASTRO")
- Max-Planck-Institut für extraterrestrische Physik ("MPE"), Germany, representing the German eROSITA Consortium ("eROSITA_DE").

2. Purpose

- 2.1 This MoU identifies the Parties collaborating on multi-wavelength southern sky astronomy, requiring joint use of data, models, algorithms, software and simulations associated with the eROSITA instrument and with the wide-field optical and radio facilities that form part of CAASTRO's research program (including but not limited to ASKAP, MWA, SKAMP, the Parkes radio telescope, ATCA, SkyMapper, AAT and AAO UK Schmidt).
- 2.2 This MoU describes the method by which staff and students from CAASTRO and eROSITA_DE will collaborate, share data and publish papers on scientific topics of common interest.
- 2.3 No direct exchange of funding is provided or implied by any of the terms in this MoU.
- 2.4 This MoU does not create any legally binding relationship between the Parties. Nothing in this MoU will be interpreted to create or imply a relationship between the Parties and in particular the Parties expressly agree that this MoU is not intended to, nor shall, create

a partnership, joint venture or agency relationship between the Parties. This MoU does not give rise to any contractual relationship between the parties or create any legal obligations on either Party, including an obligation to enter into formal and separate agreement at any time.

3. Term

- 3.1 This MoU is effective for a period of five years from the date at which authorised representatives from all Parties have signed this agreement.
- 3.2 This MoU may be amended or extended at any time by unanimous agreement of the Parties. Amendments may include admittance of a new Party. A provision of this MoU may not be varied or modified except by a separate written instrument that is signed by a duly authorised signatory of each Party.
- 3.3 Any Party may withdraw from this MoU by providing notification of the intention to withdraw in writing to the authorised representatives with 90 days notice. The Parties undertake that in the event of withdrawal of any Party, every effort will be made to minimise the impact on associated staff, students and research projects and, in any event, the Parties agree that withdrawal by a Party and/or termination of this MoU will not affect any other agreements entered into by the Parties in accordance with clause 8.1
- 3.4 This MoU may be terminated by either Party with 90 days written notice to the other Party in writing.

4. Intellectual Property

- 4.1 Each Party shall continue to own the intellectual property that it had developed prior to the signing of this Memorandum of Understanding, the Prior Intellectual Property.
- 4.2 Each Party shall own the intellectual property it develops during the term of this MoU. To the extent that any intellectual property rights are created jointly by the Parties, they will be shared equally as tenants in common. No Party may use such jointly owned intellectual property for any commercial purpose without the consent of the other party.
- 4.3 This MoU does not transfer any interest in intellectual property.

5. Confidentiality

- 5.1 The Parties shall at all times keep confidential and use their best endeavours to procure their respective employees, members and students to keep confidential any information disclosed in confidence by one Party to another, and shall not use or disclose any such information except:
 - (a) with the written consent of the other Party and in accordance with such conditions as may be mutually agreed upon; or

(b) in accordance with an order of a court of competent jurisdiction; provided always that the provisions of this clause shall cease to apply to any of this information coming into the public domain otherwise than by breach of either Party's obligations hereunder or information which is independently developed by either Party or lawfully acquired by either Party from any third party ("Excluded Information").

5.2 The receiving Party may disclose the disclosing Party's information if required by law but, if possible, it must inform the disclosing Party first and, where the information is not Excluded Information, use reasonable endeavours and cooperate with the disclosing Party to limit the terms of that disclosure as reasonably requested.

6. Management Committee

6.1 All collaborative activities between CAASTRO and eROSITA_DE will be overseen by a Management Committee, consisting of:

- the Director of CAASTRO, or their designee
- the Chief Operating Officer of CAASTRO, or their designee
- the Director of the High-Energy Astrophysics Group at MPE, or their designee
- the Principal Investigator (PI) of eROSITA_DE, or their designee

6.2 The Management Committee will be responsible for:

(a) approving, adding, maintaining, reviewing and removing research activities from the list of active CAASTRO/eROSITA_DE Science Projects, as described in Clause 9.

(b) resolving internal disputes within CAASTRO/eROSITA_DE Science Projects, as described in Clause 9.

(c) overseeing requirements on data access, students, publications and other joint activities as described elsewhere throughout this MoU .

(d) initiating and overseeing arrangements for data access as per Clause 14.2 and in accordance with the terms of any separate agreements.

6.3 The Management Committee will meet at least once every six months, via phone, video or in person. Matters requiring a more immediate response or action may be addressed by email as needed.

7. Dispute Resolution Mechanism

7.1 The Management Committee will have responsibility for resolving all internal disputes in the first instance.

7.2 In the event of a dispute that the Parties cannot resolve by negotiation, the Parties shall attempt to resolve the dispute with the assistance of a mediator acceptable to both Parties at their own costs.

8. Separate and Existing agreements

8.1 The Parties intend that any agreement for cooperation in relation to specific activities including data sharing will be documented in separate and formal agreement executed by the Parties.

8.2 No part of this MoU takes precedence over existing or separate agreements that govern the conduct of the Parties, their access to data, observing time or computing time, or their policies on membership, funding, publications or students.

9. CAASTRO/eROSITA_DE Science Projects

9.1 New science projects can be proposed at any time by members of CAASTRO or eROSITA_DE, and will be assessed by the Management Committee at the next meeting following the receipt of the proposal. Parties wishing to propose a new science project must complete and submit a Project Addition form. Each science project must either require the use of both eROSITA and CAASTRO data, or must involve development, simulation and design associated with the anticipated use of both eROSITA and CAASTRO data. Each project must not conflict with existing eROSITA/CAASTRO projects, and must involve at least one member from each of the eROSITA_DE and CAASTRO teams. The Management Committee will assess each project proposal to determine whether the project complies with these requirements and in addition whether the project is technically feasible and of sufficient scientific impact. The decision of the Management Committee on whether or not to support the proposed project will be communicated to the PI of each proposal. In the case where additional information is required in order to make a decision, the Management Committee may communicate any questions or potential issues to the PI first in order to seek clarification. The decision of the Management Committee is final. The Management Committee (or their designates) will be responsible for maintaining a list of all approved projects.

9.2 CAASTRO/eROSITA_DE science projects will be subject to an annual review to be performed by a Review Committee comprised of members of the CAASTRO and eROSITA_DE consortia, to be designated by the Management Committee. The PI of each science project will be required to complete a review template form and submit it for review. The Review Committee will meet (either in person or via videoconference or telephone) to discuss each report and assess whether there are any issues regarding the progress of the project, specifically with regards to outputs to date, meeting of previous Key Performance Indicators (KPIs), new KPIs, and the timescale of the project. The Review Committee will provide feedback to the PI including stating any recommendations or concerns raised. The Review Committee will report to the Management Committee on the progress of each science project and provide recommendations regarding whether or not the project should continue.

9.3 Removal of existing projects can occur at the conclusion of the project as designated in the project timeline, at the request of the project PI, or at the decision of the Management Committee. The Management Committee may decide to remove a project if: the project has reached the end of the projected timeline and it is their considered view that additional activities will not produce sufficient additional outputs; the project is significantly underperforming with respect to outputs and stated KPIs; or a conflict has arisen between the project and pre-existing CAASTRO or eROSITA_DE science projects. Prior to removing a project the Management Committee will inform the PI in writing outlining the concerns that are the basis for the proposal being removed. Unless

otherwise agreed, the project partners will be given a timescale of 3 months to address the concerns raised. At the end of this period, the partners will submit a report to the Management Committee on the progress made and outlining how the management committee's concerns have been addressed. If the Management Committee is satisfied that the project is back on track, they may choose to cancel the removal of the project. If the Management Committee is not satisfied with the progress made, the project may be terminated. Any dispute regarding such a decision may be considered by the Parties in accordance with clause 7. Unless otherwise agreed, any equipment purchased using CAASTRO or eROSITA_DE funds specifically for the removed project will be returned to the relevant organisation and any access to proprietary data that was provided to the project partners through the project agreement will be revoked.

9.4 At the end of the projected timescale of each science project, the project PI will submit a final report to the Management Committee detailing all outputs from the project. The PI may request an extension of the project should they feel that there are additional outputs to be gained. This request should be made in writing to the Management Committee, outlining the justification for extension. The Management Committee will review all requests for extension and communicate their decision to the project PI.

9.5 The following items are included in the Collaboration Document Register.

(a) List of proposed/approved science projects to include the following fields:

- Title
- Partners (from CAASTRO and eROSITA_DE)
- External partners
- Summary
- Data access requirements
- Resource requirements
- Student involvement
- Project details/science case
- use of both eROSITA and CAASTRO data
- KPIs/projected outputs
- Timeline
- Sign-off sheet

(b) Template for review of existing projects are to include the following fields:

- Title
- Partners (from CAASTRO and eROSITA_DE)
- Changes in membership
- Summary of Science Progress
- use of both eROSITA and CAASTRO data
- Changes since last review
- Outputs (papers, talks, grants, media etc.)
- List of previous KPIs and details of whether they were met or not
- Revised KPIs and projected timescale for meeting them
- Timeline progress
- Sign-off sheet

10. CAASTRO Membership

10.1 At or prior to the commencement of this MoU, the Management Committee should identify two members of eROSITA_DE to be invited to apply for membership of CAASTRO as either CAASTRO Partner Investigators, CAASTRO Associate Investigators or CAASTRO

Affiliates, as per the CAASTRO Membership Policy. Addition of a CAASTRO Partner Investigator requires that person's host institution to become a CAASTRO Partner Organisation, as per the CAASTRO Multi-Institutional Agreement.

- 10.2 For each active science project as defined in clause 9, the Management Committee should identify at least one member of eROSITA_DE to be invited to apply for membership CAASTRO as either a CAASTRO Partner Investigator, CAASTRO Associate Investigators or CAASTRO Affiliates, as per the CAASTRO Membership Policy. Addition of a CAASTRO Partner Investigator requires that person's host institution to become a CAASTRO Partner Organisation, as per the CAASTRO Multi-Institutional Agreement.
- 10.3 Organisational or individual membership of CAASTRO commits members to reporting their planned and ongoing contribution to CAASTRO, in terms of key performance indicators and in-kind contribution, as per the CAASTRO Membership Policy and CAASTRO Multi-Institutional Agreement.

11. eROSITA_DE Membership

- 11.1 For each active science project as defined in clause 9, the Management Committee must identify at least one member of CAASTRO to be invited to apply for Individual External Collaborator status within eROSITA_DE in order to obtain proprietary data access for the science project, as per the German eROSITA Consortium Policy and in accordance with Clause 14.1. Under certain situations, the Management Committee may invite a larger group of CAASTRO members to apply for Group External Collaborator status within eROSITA_DE, as per the German eROSITA Consortium Policy.

12. Collaboration Membership

- 12.1 For organisational, communication and promotion purposes, an individual will be considered a member of the CAASTRO/eROSITA_DE collaboration if:
- (a) he or she is a current individual member of at least one of CAASTRO or eROSITA_DE, and if he or she is a listed participant in one of the active science projects governed by this MoU; or
- (b) he or she is a member of the Management Committee.

13. Students

- 13.1 The Parties encourage participation in joint CAASTRO/eROSITA_DE activities by undergraduate and postgraduate students.
- 13.2 An undergraduate or postgraduate student whose degree requirements depend on joint CAASTRO/eROSITA_DE MWA data, algorithms or software should meet the criteria for Collaboration Membership as described in Clause 12, and must further obtain formal recognition of their research project as a CAASTRO/eROSITA_DE Student Project.

- 13.3 A CAASTRO/eROSITA_DE Student Project is a well-defined research project that depends on the combination of CAASTRO and eROSITA_DE data, algorithms or software, and that will be conducted primarily by an undergraduate or postgraduate student in pursuit of his/her degree.
- 13.4 Formal recognition of a CAASTRO/eROSITA_DE student project can be obtained by application to the Management Committee, made by the student's supervisor (who should also be, or be applying to become, a Collaboration Member as described in Clause 12). Applications must include a brief description of the project, the names of the project supervisor(s), the name of the student, the degree that the student is undertaking, the institute(s) with which the student is affiliated, and the likely start and finish dates for the student's participation in joint CAASTRO/eROSITA_DE activities.
- 13.5 Designation as a CAASTRO/eROSITA_DE Student Project is valid for 3 years from approval by the Management Committee or until the associated research project as described in Clause 9 ends, whichever comes first. After this date, all rights and privileges cease unless an application is made to renew the project as per Clause 13.4.
- 13.6 If a CAASTRO/eROSITA_DE Student Project is deemed by the Management Committee to be inactive or unsatisfactory, the Management Committee will report its findings to the student, the student's supervisor and the original nominator. In order to continue the project as a CAASTRO/eROSITA_DE student project, the student and/or nominator must demonstrate that the project is active within two weeks of receiving the notice. At the end of two weeks, the Management Committee will make a final determination on the status of the project as a CAASTRO/eROSITA_DE student project. Nothing in this MoU will be interpreted to restrict a student from completing the requirements of their degree in accordance with the policies and procedures of the Party to which the student is enrolled.
- 13.7 CAASTRO/eROSITA_DE Student Projects will be reserved by the Management Committee for the student to pursue.
- 13.8 The progress of the student remains the responsibility of the student's supervisor(s).

14. Data Access

- 14.1 A CAASTRO member will have access to proprietary eROSITA data only for the purposes of active science projects as described in Clause 9, and only through the policies and procedures for data access described in the German eROSITA Consortium Policy.
- 14.2 An eROSITA_DE member will have access to proprietary data from the wide-field optical and radio facilities that form part of CAASTRO's research program only for the purposes of active science projects as described in Clause 9, and only through separate agreements to be negotiated by CAASTRO on behalf of the participants in the relevant science

project. Such agreements should be consistent with the terms of this MoU.

15. Funding and Observing Proposals

- 15.1 Proposals for funding, observing time or computing time that present as-yet-unpublished data associated with projects as described in Clause 9 above should be provided to the Management Committee for assessment. An endorsement from the Management Committee must be obtained prior to the proposal's submission.

16. Publication and Dissemination Policy

- 16.1 A CAASTRO/eROSITA_DE publication ("Publication") is defined as any journal/proceedings paper, popular article, or other publicly available document that has been derived from activities associated with a science project as described in Clause 9 (whether active or lapsed), and for which these results have not been previously published elsewhere.
- 16.2 If the tasks required to produce a publication commence while any of the relevant data or information are still proprietary, then that publication will be considered a CAASTRO/eROSITA_DE publication, even if the publication is not completed until after these data or information have been released into the public domain.
- 16.3 If the tasks required to produce a publication commence after all the relevant data and/or information have been released into the public domain, then that publication will not be considered a CAASTRO/eROSITA_DE publication.
- 16.4 CAASTRO/eROSITA_DE Publications are subject to the separate publication policies of CAASTRO, of eROSITA_DE, and of any relevant employing organisations.
- 16.5 CAASTRO/eROSITA_DE Publications must include the acknowledgements and affiliations required of CAASTRO Publications and of eROSITA_DE Publications.
- 16.6 Each Party may publish material in relation to a science project provided that before submission for publication, a copy of a CAASTRO/eROSITA_DE Publication must be emailed to the Management Committee for review and comment, who will provide any feedback within 14 days. The publishing party will take any comments into consideration in good faith.
- 16.7 News releases and public announcements in relation to the projects described in clause 9 shall only be made with the prior written consent of the Management Committee (who may be required to obtain the consents of their respective member organisations represented by the respective Parties, if required by those members). These announcements shall be publicised jointly by CAASTRO and MPE or their designees.

Dated:..... 2013

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Dated: 14th October 2013

Signed for and on behalf
of MPE

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(Print name:)

KIRPAL NANDRA

(Print title:)

DIRECTOR

Signed for and on behalf
of University of Sydney



(Print name:)

JILL TRENHELLA

(Print title:)

DEPUTY VICE-CHANCELLOR
(RESEARCH)