

**First Amendment to  
MEMORANDUM OF AGREEMENT**

between

**MAX- PLANCK- GESELLSCHAFT ZUR FÖRDERUNG DER  
WISSENSCHAFTEN E.V.**

(hereinafter referred to as "**MPG**")

and

**NATIONAL RESEARCH FOUNDATION ("NRF"),**  
a statutory entity established in terms of the National Research Foundation Act 23 of  
1998, acting herein through its National Facility the

**SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY**  
(hereinafter referred to as "**SARAO**")

and

**ISTITUTO NAZIONALE DI ASTROFISICA**  
(hereinafter referred to as "**INAF**")

(MPG, SARAO and INAF hereinafter individually also referred to as  
"**Partner**" and collectively as "**Partners**")

## **PREAMBLE**

The Partners intend to extend the existing Memorandum of Agreement between MPG and SARA0 dated 31 July 2019 by this amendment. The existing agreement sets out the details of the collaboration between the existing partners to extend MeerKAT to "MeerKAT+". MeerKAT+ will provide an up to 50% increase in sensitivity by adding 20 SKA-type dishes and the required additional infrastructure and processing capabilities. The agreement also sets out the goals for a joint scientific exploitation of MeerKAT+ between SARA0 and MPG.

With this amendment, INAF becomes involved as a Partner along the lines set out here. In addition to the existing partners, INAF is only to be involved as a Partner for this amendment.

The Partners therefore agree to the following:

### **Section 1 SUBJECT MATTER OF AGREEMENT**

- 1.1 INAF would like to support MeerKAT+ with a financial contribution in order to take part in the scientific exploitation of the MeerKAT+ instrument by becoming a partner in the joint "legacy" project(s) that are being planned and will be conducted jointly by the South African and German communities represented by SARA0 and MPG. INAF will have the opportunity to help define and take part in the legacy project(s) undertaken with the reserved share of observing time on MeerKAT+ in a manner to be agreed amongst the Partners, taking cognisance of relative investments made towards MeerKAT+.
- 1.2 This Agreement does neither establish an employment relationship between staff members of one Partner with staff members of the other Partner nor a partnership or joint venture between the Partners.
- 1.3 The research project does not have individual legal personality and does not act externally in legal intercourse. Neither Partner is entitled to legally represent the other Partner.

- 1.4 The following contact persons are designated:  
For MPG: Dr Gundolf Wieching  
For SARA0: Mr Willem Esterhuyse  
For INAF:

## **Section 2 PRINCIPLES OF COOPERATION**

- 2.1 The Partners shall endeavour to achieve their joint scientific goal by making their best efforts to provide the agreed contributions, particularly with respect but not limited to research performance.
- 2.2 INAF will get a chair as Scientific Member of the MeerKAT+ Board and will contribute to define and later carry out science legacy projects.

## **Section 3 INAFs FINANCIAL CONTRIBUTION**

- 3.1 INAF shall provide an overall financial contribution to MeerKAT+ of € 6.000.000,00 (sixmillion/00 euro). A proportion of this contribution, totaling € 5.000.000,00 (fivemilion/00 euro), shall be paid to MPG. The MPG will allocate the funds in accordance with the stipulations of the MK+ Board. The proportion of the total contribution to be paid shall be paid upfront in a single instalment.

Remaining funds not paid to MPG, but which are counted as part of the overall financial contribution to MeerKAT+, shall be utilised by INAF towards activities that contribute directly to the development and construction of MeerKAT+, as recognised by the MK+ Board.

The allocation of INAF financial contribution shall open up a demonstrated opportunity for the participation of the Italian industry in the procurement of MeerKAT+. This is an essential provision as regards section 9.3 of this agreement.

- 3.2 The amount to be paid to MPG according to Section 3.1 (or the pertinent instalment payment respectively) is to be paid upon receipt of the invoice pursuant to Section 4.2 to the following account of MPG:

Accountholder:

Bank:

IBAN:

BIC:

## **Section 4**

### **INAF OBLIGATIONS AND RIGHTS AS A PARTNER**

- 4.1 INAF shall deliver the cash contribution and the agreed in-kind contribution to MeerKAT+, not exceeding the amount specified in section 3.1, according to the present agreement and any following decision of the MeerKAT+ Board.
- 4.2 INAF will receive as return over investment a proportional participation to the science exploitation of MeerKAT+ as specified in section 1.1 of this agreement.
- 4.3 In the case MeerKAT+ will eventually be transferred to SKAO and an In-kind contribution construction credit will be awarded to the MeerKAT+ builders, such a construction credit will be recognized to Italy in proportion to INAF investment.

## **Section 5**

### **CONFIDENTIALITY**

- 5.1 With regard to confidentiality, Article 14 of the Memorandum of Agreement with the corresponding definitions also applies to all partners in connection with this amendment.

**Section 6**  
**INTELLECTUAL PROPERTY**

6.1 The provisions of Article 12 of the Memorandum of Agreement do not apply here. INAF shall be granted access to Intellectual Property in the context of this Agreement to the extent necessary for astronomical scientific observations.

**Section 7**  
**TERM and TERMINATION**

7.1 With regard to termination Article 9.1 of the Memorandum of Agreement shall apply.

7.2 The Partners may terminate the Agreement prior to the end of term only for an important reason in writing.

**Section 8**  
**LIABILITY**

8.1 To the extent legally possible, the Partners shall be liable to each other only with regard to wilful intent and gross negligence.

8.2 To the extent legally possible, any liability for consequential damages is excluded.

**Section 9**  
**FINAL PROVISIONS**

9.1 Amendments and supplements to this Agreement together with its appendices must be made in writing. This requirement also applies to the written form requirement itself.

9.2 This Agreement is governed by German law, excluding the UN Convention on Contracts for the International Sale of Goods.

9.3 Should one or more provisions of the Agreement be or become invalid, the Partners are obliged to replace such invalid provision with another valid provision that come so close to the invalid provisions that it can reasonably be assumed that the Partners would have entered into the Agreement even with this clause. If such arrangement cannot be achieved, the invalidity of one or more provisions of the Agreement shall not affect the validity of the Agreement as a whole, unless the invalid provisions are so important for the Agreement that it can reasonably be assumed that the Partners would not have entered into the Agreement without the invalid provisions.

[Signatures on the following page]

DRAFT

[Signature page]

SARAO

Max-Planck-Gesellschaft  
zur Förderung der Wissenschaften e.V.

Date:

Date:

INAF

Date:

DRAFT