



REPORT ON THE RADIONET3 NETWORKING ACTIVITY

| TITLE: MID FREQUENCY APERTURE | ARRAYS AND D | DISHES – MAAD 2015 |
|-------------------------------|--------------|--------------------|
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DATE: 19-22ND APRIL **TIME:** (WHOLE DAY)

LOCATION: AVEIRO - PORTUGAL

MEETING WEBPAGE http://www.engageska-portugal.pt/events/maad/

HOST INSTITUTE: INSTITUTO DE TELECOMUNICAÇÕES

PARTICIPANTS NO: 59

MAIN LEADER: MPG





REPORT:

1. Programme of the meeting

See attachment.

2. Scientific Summary

MAAD 2015 is a synergy workshop between MIDPREP project and the SKA Mid Frequency Aperture Array (AAMID) Consortium All-hands meetings and SKA Dish Consortium (SKADC) taking place in the same venue. In these meetings, relevant science and technology developments for the establishment of long-term radio astronomy plans towards SKA were discussed. MIDPREP is an EU funded FP7 programme enabling knowledge and staff exchange between two leading European institutes in research and three South African partners. The partners collaborate in developing and building radio astronomy instrumentation e.g. through the Square Kilometre Array precursor MeerKAT in the Karoo as framework for (inter)national human-capital, research and infrastructure. In Europe, novel approaches to radio astronomy (i.e. Aperture Array technology) as used in the Low Frequency Array ("LOFAR") and Wideband Single Pixel Feed Receivers give insight in gaps to be filled and requirements for future radio telescopes. For the SKA as the world largest radio telescope operating in the next decade, with a large part to be realized in the Karoo, a common long-term focus is developing requiring intensified knowledge exchange.

Specifically, MIDPREP organizes for strengthening relevant research networks through exchange of experienced and early-stage radio scientists and engineers between South African institutes to and from Sweden and the Netherlands. Through that, MIDPREP aims at a common design view on site related aspects for radio telescopes, to advance radio-optics, calibration, ICT, processing and technology views and (possibly "green") designs on MID-SKA centered in the Karoo. Knowledge from the project will be disseminated to a larger community by annual workshops, out of which this workshop is the second.



Attendance list (incl. participant names, affiliation and country) signed by the participants and confirmed by the organizerSee attachment.

Contract no.: 283393 2 / 3





4. Financial Report / RadioNet3 contribution

Radionet3 support of 4305,01€ was used for local organisation.

5. Conference Proceedings and Web page

Information on the workshop, parallel meetings, participants and venue can be found at the meeting web page: http://www.engageska-portugal.pt/events/maad/

Presentations made at the meeting will be posted on the *RadioNet3* wiki of the Networking Activity when possible: http://www.radionet-eu.org/radionet3wiki/

MAAD 2015 19th - 22nd APRIL AAMID AND DISH CONSORTIA MEETINGS

ORGANISERS













SPONSORS

















MIDPREP WORKSHOP

AGENDA AAMID all-hands meeting – April 21-22, 2015 – IT, Aveiro (PT)

| 21-April | IT | |
|----------|---------------------------------|--|
| 9.00 | MFAA System Design | Andre Gunst |
| 9.30 | MFAA (alternative) architecture | Steve Torchinsky |
| 10.00 | Requirements analyses | Mark Ruiter |
| 10.30 | Coffee break | |
| 11.00 | Front-end Design pt1 | David Zhang (Beltran, Gilmore, KLAASA, Witvers, RvdBrink, Sangitiana Rakotozafy) |
| 12.30 | Lunch | |
| 13.30 | Front-end Design pt2 | David Zhang |
| 14.00 | Receiver: Analogue Integration | Stéphane Bosse |
| 14.30 | Receiver: ADC/serializer | Stéphane Gauffre |
| 15.00 | Tea break | |
| 15.30 | Array Proto Types | Pieter Benthem (+vd Brink) |
| | Wrap-up, discussion | |
| 18.00 | Close day2 | |
| 19.30 | Dinner | |

MAAD 2015 19th - 22nd APRIL

AAMID AND DISH CONSORTIA MEETINGS MIDPREP WORKSHOP

ORGANISERS













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AGENDA AAMID all-hands meeting – April 21-22, 2015 – IT, Aveiro (PT)

| 22-April | IT | | |
|----------|---------------------------|--------------------------------|--|
| 9.00 | MFAA Verification Systems | Andrew Faulkner+all | |
| 10.30 | Coffee break | | |
| 11.00 | SRR documentation | Gunst, Gerbers | |
| 12.30 | Discussion | | |
| 12.30 | Lunch | | |
| 14.00 | AAMID Progress meeting | By invitation, MT members+SKAO | |
| 15.30 | Adjourn | | |

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| Name | Organisation | Value | Invoice Number |
|-----------------------------|--|-------|---|
| Maria Grazia Labate | SKA | θ | C |
| Anthony Brown | University of Manchester | 0 | C |
| Carla V. Leite | Instituto de Telecomunicações | 0 | 0 |
| Domingos Barbosa | Instituto de Telecomunicações | 0 | 0 |
| João Paulo Barraca | Instituto de Telecomunicações | 0 | 0 |
| Miguel Bergano | Instituto de Telecomunicações | 0 | 0 |
| Truus van den Brink-Havinga | ASTRON | 0 | 0 |
| Kristian Zarb-Adami | University of Oxford | 60 | FR-2015-0001 |
| Michael Jones | University of Oxford | 60 | FR-2015-0002 |
| Jamie Leech | University of Oxford | 60 | FR-2015-0003 |
| Angela Taylor | University of Oxford | 60 | FR-2015-0004 |
| Andre Gunst | ASTRON | 60 | FR-2015-0005 |
| Raymond van den Brink | ASTRON | 20 | FR-2015-0006 |
| Mark Ruiter | ASTRON | 60 | FR-2015-0007 |
| Roel Witvers | ASTRON | 60 | FR-2015-0008 |
| Gert Kruithof | ASTRON | 60 | FR-2015-0009 |
| | | 60 | FR-2015-0009 |
| Pieter Benthem | ASTRON | 60 | FR-2015-0010 |
| Marchel Gerbers | ASTRON | | No in control of the |
| Jan Geralt Bij de Vaate | ASTRON | 60 | FR-2015-0012 |
| Arnold van Ardenne | ASTRON | 20 | FR-2015-0013 |
| Girish Kumar Beeharry | University of Mauritius | 60 | FR-2015-0014 |
| Michiel Van Haarlem | ASTRON | 60 | FR-2015-0015 |
| Ed Elson | University of Cape Town | 60 | FR-2015-0016 |
| Wim van Cappellen | ASTRON | 60 | FR-2015-0017 |
| Stefan J. Wijnholds | ASTRON | 60 | FR-2015-0018 |
| Tobia Carozzi | Onsala Space Observatory | 60 | FR-2015-0019 |
| Miroslav Pantaleev | Onsala Space Observatort/Chalmers University | 60 | FR-2015-0020 |
| Bhushan Billade | Onsala Space Observatory | 60 | FR-2015-0021 |
| Andrew Faulkner | University of Cambridge | 60 | FR-2015-0022 |
| Alberto Barcia | Instituto Geográfico Nacional | 60 | FR-2015-0023 |
| Juan Daniel Gallego | Instituto Geográfico Nacional | 60 | FR-2015-0024 |
| Mikko Kotiranta | Fraunhofer IAF | 60 | FR-2015-0025 |
| Giuseppe Moschetti | Fraunhofer IAF | 60 | FR-2015-0026 |
| Eduardo Artal | University of Cantabria | 60 | FR-2015-0027 |
| Beatriz Aja | University of Cantabria | 60 | FR-2015-0028 |
| Alessandro Bau' | Università degli Studi di Milano-Bicocca | 60 | FR-2015-0029 |
| Mario Zannoni | Università degli Studi di Milano-Bicocca | 60 | FR-2015-0030 |
| Jeff Wagg | SKA Organisation | 20 | FR-2015-0031 |
| Andrea Cremonini | SKA | 60 | FR-2015-0032 |
| Mark Harman | SKA | 60 | FR-2015-0033 |
| Eloy de Lera Acedo | University of Cambridge | 60 | FR-2015-0034 |
| David Zhang | University of Manchester | 60 | FR-2015-0035 |
| Ming Yang | University of Manchester | 60 | FR-2015-0036 |
| Rik Jongerius | IBM | 60 | FR-2015-0037 |
| -201/ 928 777 | | 20 | FR-2015-0037 |
| Oleg Smirnov | Rhodes University SKA | 60 | |
| Steve Torchinsky | Observatoire de Paris, Nançay | | FR-2015-0039 |
| Stéphane Bosse | Observatoire de Paris, Nançay | 60 | FR-2015-0040 |
| Bruno Da Silva | Observatoire de Paris, Nançay | 60 | FR-2015-0041 |
| Rakotozafy Harison | Observatoire de Paris, Nançay | 60 | FR-2015-0042 |
| Du Biao | CETC54 | 60 | FR-2015-0043 |
| Wu Yang | CETC54 | 60 | FR-2015-0044 |
| Stephane Gauffre | University of Bordeaux - LAB | 60 | FR-2015-0045 |
| Antsa Randriamanantena | University of Bordeaux - LAB | 60 | FR-2015-0046 |
| Joel Schleeh | Low Noise Factory | 60 | FR-20150047 |
| Reinhard Keller | MPIfR | 60 | FR-2015-0048 |

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|--------------------------------|-------------------------|------|---------------------|
| Robert Lehmensiek | EMSS Antennas | 60 | FR-2015-0054 |
| Jean Kotze | EMSS Antennas | 60 | FR-2015-0054 |
| Isak Theron | EMSS Antennas | 60 | FR-2015-0053 |
| Edgar Colin Beltran (and wife) | University of Cambridge | 110 | FR-2015-0051 e 0052 |
| David Prinsloo | Stellenbosch University | 60 | FR-2015-0050 |
| David Davidson | Stellenbosch University | 60 | FR-2015-0049 |