



19.30 - 22.0+A10

## **Widefield Astronomy and Technologies for the SKA**

**4 - 6 November 2009 at Limelette, Brussels, Belgium**

**SKADS Conference and Marie Curie SKADS Workshop**

### **4th DRAFT AGENDA**

**Purpose:** Discuss the status and astronomical capabilities of Widefield Techniques  
Discuss Dense and Sparse Arrays for Innovative Science  
Discuss and disseminate SKADS Achievements  
Assess technological readiness of of phased array sub-systems  
An optimized system design-scenario for SKA  
Implement AA development in the Aperture Array Verification Programme, AAVP

**Abstract deadline: October 1, 2009**

**Full paper deadline: November 30, 2009**

**Registration fee: € 150,00, including lunches and dinners**

**Publication: A Conference book will be available for all participants by March, 2010**

#### **Registration desk open:**

Tuesday, November 3, 2009                      18:00-19:00

Wednesday, November 4, 2009                12:00-13:30

#### **SOC**

Paul Alexander	Michael Kramer
Arnold van Ardenne	Stelio Montebugnoli
Rafael Bachiller	Tom Oosterloo
Wim van Driel	Steve Rawlings
André van Es	Mario Santos
Andy Faulkner	Steve Torchinsky
Thijs van der Hulst	Jan Geralt bij de Vaate
Dion Kant	Peter Wilkinson
	Anton Zensus

#### **LOC**

Arnold van Ardenne  
André van Es  
Truus van den Brink  
Steve Torchinsky

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[www.skads-eu.org/limelette2/limelette2.php](http://www.skads-eu.org/limelette2/limelette2.php)



**DAY 1**

**Wednesday, November 4, 2009**

12.00 - 13.30 Lunch				
<b>Opening Session</b>				
	<b>Chair</b>		<b>Peter Wilkinson</b>	<b>Uman</b>
13.30	<b>Opening and Welcome</b>	10 min	<b>SKADS Chairman of the Board</b>	
13.40	Views on Large Scale projects from the EC	20 min	Robert-Jan Smits	DG Research EC
14.00	SKA Developments	20 min	Richard Schilizzi	SPDO
14.20	Overview SKADS	20 min	Arnold van Ardenne	ASTRON
14.40	SKADS white paper; technologies	20 min	Andrew Faulkner	U.Cambridge
15.00	SKADS white paper; science	20 min	Steve Torchinsky	O.Paris
15.20 - 15.45 BREAK				
<b>Science and Simulations</b>				
	<b>Chair:</b>		<b>Thijs van der Hulst</b>	<b>RuG/Kapteyn</b>
15.50	Review of SKADS Sky Simulations	20 min	Steve Rawlings	U.Oxford
16.10	Pulsars	20 min	Michael Kramer	MPIfR
16.30	AGN Feedback: Where Does the Jet Energy Go	20 min	Matt Lehnart	O.Paris
16.50 - 17.05 BREAK				
17.10	The Transient Sky	20 min	Joe Lazio	NRL
17.30	Epoch of Reionisation	20 min	Saleem Zaroubi	RuG/Kapteyn
17.50	Wide field polarimetry and Cosmic Magnetism	20 min	Rainer Beck	MPIfR
18.10	Large scale structures of the ISM in H1	20 min	José Cernicharo	DAMIR - IEM - CSIC
19.00 - 19.30 DRINKS				
19.30 - 21.30 DINNER				



**DAY 2**

**Thursday, November 5, 2009**

<b>Widefield Science and Simulations</b>				
<b>Chair:</b>		<b>Steve Rawlings</b>		
08.15	Opening	5 min	Steve Rawlings	U.Oxford
08.20	Science and early results with LOFAR	20 min	Ger de Bruyn	ASTRON
08.40	Widefield astronomy with ASKAP	20 min	Carole Jackson	CSIRO
09.00	The WSRT focal plane array system APERTIF	20 min	Tom Oosterloo	ASTRON
09.20	Overview on the HI SKA End2end Simulations	15 min	Hans Rainer Klöckner	U.Oxford
09.35	Fast Large Volume Simulation of the Epoch of Reionization	15 min	Mario Santos	CENTRA-IST
09.50	Science Simulations for Radio interferometers	15 min	Ian Heywood	U.Oxford
10.05	Atmospheric turbulences in widefield observations	15 min	Ivan Marti-Vidal	MPIfR
10.20 - 10.45 BREAK				
<b>SKADS; The Aperture Array System</b>				
<b>Chair:</b>		<b>Arnold van Ardenne</b>		
10.45	Active Antennas; Design and Characterization	15 min	Jan Geralt bij de Vaate e.a.	ASTRON
11.00	Phase Transfer for Timing and LO distribution	15 min	Roshene McCool	U.Man. /SPDO
11.15	Data flow and processing- a key SKA design driver	15 min	Paul Alexander	U.Cambridge
11.30	System design choices: Cost and performance trade-offs	15 min	Rosie Bolton et. al.	U.Cambridge
11.45	The Building of Embrace	15 min	Dion Kant et. al.	ASTRON
12.00	2-PAD: An overview	15 min	Georgina Harris	U.Man.
12.15	Mixed Signal Transportation for the EMBRACE antenna tiles	15 min	Thomas Berenz	MPIfR
12.30	Introduction to poster session	15 min	Marco de Vos	ASTRON
12.45 - 15.15 <b>Lunch and Poster Session</b>				
<b>Chair:</b>		<b>Steve Torchinsky</b>		
<b>Widefield Technologies</b>				
<b>Chair:</b>		<b>Peter Hall</b>		
15.45	Best: Basic Element for SKA Training	15 min	Stelio Montebugnoli	INAF/IRA
16.00	Fully-digital beam forming results from 2PAD	15 min	Kristian Zarb Adami	U. Oxford
16.15	Low noise Broadband Amplifiers in InGaAs/InAlAs	15 min	Sanae Boulay et. al.	U.Man.
16.30	Design of High Performance Aperture Array Antennas	15 min	Yongwei Zhang	U.Man.
16.45	FIDA: A novel Active Aarray for the Mid-SKA	15 min	Oscar-Garcia-Perez	OAN
17.00	EMBRACE receiver design	15 min	Jader Monari	INAF/IRA
17.15	Reliability performance on radioreceiver chains for BEST	15 min	Valeria Scarano et. al.	U. Florence
18.30 - 19.00 DRINKS				
19.00 - 21.30 DINNER				



**DAY 3 SKADS Conference**

*Friday, November 6, 2009*

<b>Widefield Technologies</b>				
<b>Chair:</b>		<b>Stelio Montebugnoli</b>		
08.30	Aperture Array Frontend Design for Production	15 min	Marco Drost et. al.	ASTRON
08.45	Progress on analog Frontend for 2-Pad	15 min	Tim Ikin	U.Man.
09.00	SKA LNA technologies and topologies	15 min	Saswata Bhaumik	U.Man.
09.15	EMBRACE Station Processing	15 min	Philippe Picard	Obs. de Paris
09.30	The 2-PAD Digital System Architecture	15 min	Chris Shenton	U.Man.
09.45	The OSKAR beamforming simulator	15 min	Fred Dulwich et. al.	U.Oxford
10.00	A Real-time SW. Broadband Beamformer on IBM Cyclops	15 min	Aziz Ahmed Said	U.Man.
10.15 - 10.45		Conference Photo Shoot and BREAK		<b>Steve Torchinsky</b>
<b>Widefield Science &amp; Systems</b>				
<b>Chair:</b>		<b>Wim van Driel</b>		
10.45	EMBRACE: Experiments with 10.000 elements	15 min	Stefan Wijnholds et. al.	EMBRACE Team
11.00	Array Configuration Simulations in SKADS	15 min	Andrei Lobanov	MPIfR
11.15	Quantifying and Improving Polarimetric Widefield Obs.	15 min	Tobias Carozzi et. al.	Glasgow U.
11.30	Redundant Baseline Calibration on Dense Arrays	15 min	Parisa Noorishad et. al.	RUG/ASTRON
11.45	Cost effective infrastructure in a multi-telescope layout	15 min	Gabriel Grigorescu	U. Cambridge
12.00	SKA Pathfinders and Solar System science and exploration	15 min	Leonid Gurvits	JIVE
12.15	Euclid:an optical view of the whole extragalactic sky	15 min	Roberto Scaramella	Euclid Consortium
12.30 - 13.30		LUNCH		
<b>From SKADS to SKA</b>				
<b>Chair:</b>		<b>Richard Schilizzi</b>		
13.30	Simulations beyond SKADS	15 min	Jan Noordam	ASTRON
13.45	From SKADS to AAVP	15 min	Arnold van Ardenne	ASTRON
14.00	ICRAR/Contributions to AAVP	15 min	Peter Hall	ICRAR/Curtin U.
14.15	The SKA AA-lo array; e.m. simulation and design	15 min	Eloy de Lera Acedo	U. Cambridge
<b>Discussion Theme: Key issues</b>		Panel members:		Steve Rawlings
<b>Discussion Panel, Chair:</b>		SKADS MT		Paul Alexander
14.30	Discussion	<b>Mike Garrett</b>		Ron Ekers
				Ken Kellermann
				Justin Jonas (by tel.)
15.00	Conclusions	15 min	Elena Righi-Steele	EC Project Officer
DRINKS				