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### **Deliverable 4.1**

### **Young European Astronomers Conference (YERAC)**

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## 1. Document information

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 Authors: Anita Richards (UMAN, United Kingdom)

### 1.1 Dissemination Level

Dissemination Level		
<b>PU</b>	Public	X
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	

**1.2 Content**

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## 2. Report

The Young European Astronomers' Conference – YERAC - has been held annually since 1968. 1979 was the first time it took place in Russia (Pushchino). Over 32 years later, a new generation of young radio astronomers is happy to hold it there again. The primary goal of the conference is to provide participants - both scientists and engineers - masters and doctoral students, as well as early-career postdoctoral researchers - the opportunity to present their research, typically for the first time. YERAC covers all aspects of radio astronomy: from the Sun out to white- and worm-holes, from stars and planets to the most distant galaxies, using techniques ranging from 10 meter single dish observations to space interferometry as well as modelling and theoretical work.

The XLII YERAC was organised in Pushchino Radio Astronomy Observatory (Russia) on 18-21 September 2012:

<http://prao.ru/conf/yerac2012/>

### 2. 1 Participant list

The XLII YERAC in Puhschino hosted 34 young radio astronomers from Europe, Russia and USA participated

Participants	Institute	Country	Sign
Olga BAYANDINA	Astro Space Center of LPI, Moscow State Pedagogical University	Russia	
Tatiana BOCANEGRA BAHAMON	Joint Institute for VLBI in Europe (JIVE)	The Netherlands	
Anastasiya BOIKO	Institute of Radio Astronomy of National Academy of Sciences of Ukraine (IRA NASU)	Ukraine	
Alexander BUTENKO	PRAO ASC LPI	Russia	
Maciej CEGLOWSKI	Torun Centre for Astrophysic, Nicolaus Copernicus University	Poland	
Colm COUGHLAN	University College Cork	Ireland	
Dmitry DUEV	Joint Institute for VLBI in Europe	The Netherlands	
Christian FROMM	Max Planck Institute for Radio Astronomy	Germany	
Katinka GEREB	Kapteyn Astronomical Institute	Netherlands	
Svetlana GLUBOKOVA	Pushchino Radio Astronomy Observatory	Russia	
Anatolij GLYANTSEV	PRAO ASC LPI	Russia	
Fiona HEALY	University College Cork	Ireland	
Katharina IMMER	Max-Planck-Institut fuer Radioastronomie	Germany	
Sadie JONES	University of Southampton	England, UK	
Andrey KAZANTSEV	PRAO ASC LPI	Russia	
Konstantinos KOLOKYTHAS	University of Birmingham, School of Physics and Astronomy	England	
Sergey KORNEENKO	Institute of Applied Physics	Russia	
Evgeniya KRAVCHENKO	Pushchino Radio Astronomy Observatory ASC LPI	Russia	
Dmitry LADEYSHCHIKOV	Ural Federal University	Russia	

Marcelo L. LEAL-FERREIRA	Argelander-Institut für Astronomie	Germany	<i>Handwritten signature</i>
Lucas LINDROOS	Onsala Space Observatory	Sweden	<i>Handwritten signature</i>
Ivan LITOVCHENKO	Astro Space Center of LPI	Russia	<i>Handwritten signature</i>
Guillermo MANJARREZ	European Southern Observatory	Spain	<i>Handwritten signature</i>
Evgeny A. MIKHAILOV	Research Computing Center of Moscow State University	Russia	<i>Handwritten signature</i>
Kunal MOOLEY	California Institute of Technology	USA	<i>Handwritten signature</i>
Timur MUKAKHAROV	Special Astrophysical Observatory RAS	Russia	<i>Handwritten signature</i>
Elena NIKITINA	Pushchino Radio Astronomy Observatory ASC LPI	Russia	-
Aleksandar SHULEVSKI	Kapteyn Astronomical Institute	Netherlands	<i>Handwritten signature</i>
Peter SIMS	University of Cambridge	UK	<i>Handwritten signature</i>
Dariya TEPLYKH	Pushchino Radio Astronomy Observatory ASC LPI	Russia	<i>Handwritten signature</i>
Jackie VILLADSEN	California Institute of Technology	USA	<i>Handwritten signature</i>
Samantha WALKER-SMITH	Cavendish Astrophysics Institute	UK	<i>Handwritten signature</i>
Imogen WHITTAM	University of Cambridge	UK	<i>Handwritten signature</i>
Alina YABLOKOVA	St.Petersbourg State Polytechnical University	Russia	<i>Handwritten signature</i>

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### 2.3 Meeting Photo

Participants of the XLII YERAC in Pushchino (Russia). See also <http://prao.ru/conf/yerac2012/html/photogal.html>



me (FP7)

## 2.2 Meeting programme

17.09.12 Monday	<b>Arriving day</b>	
	18:00 – 21:00	<b>Registration &amp; Welcome Party</b>
18.09.2012 Tuesday	9:00 – 9:20	<b>Opening of conference</b> (Prof. R.Dagkesamanskii, Prof. V.Malofeev) <i>Chair Valery Malofeev</i>
	9:20 – 9:40	<b>Session “ISM &amp; Masers”</b> <u>Olga Bayandina</u> <i>The similarities and differences in the formation of masers on methanol and OH according to data from radio astronomy observations</i>
	9:40 – 10:00	<u>Marcelo L. Leal-Ferreira</u> <i>Shaping Planetary Nebulae: Evidences of Magnetic Fields Around Evolved Stars</i>
	10:00 – 10:20	<u>Ivan Litovchenko</u> <i>Interferometric observations of the source W3(OH) in the main lines of OH in preparation and holding the early science program of the space mission RadioAstron.</i>
	10:20 – 10:40	<u>Guillermo Manjarrez</u> <i>CCS observations in L1448</i>
	10:30 – 11:00	Coffee-break
	11:00 – 11:20	<u>Jackie Villadsen</u> <i>Anomalous Emission - Zooming In on Spinning Dust</i>
	11:20 – 11:40	<u>Samantha Walker-Smith</u> <i>Structure and Kinematics of NGC 2068</i>
	11:40 – 12:20	<b>Invited speaker Prof. H. van der Laan</b> <i>Radio Astronomy in the 1960s and the Birth of YERAC</i>
	12:30 – 14:30	Lunch
	15:00 – 15:10	<b>Welcoming remarks by academician N. Kardashev</b> <i>Chair Nikolay Kardashev</i>
	15:10 – 15:45	<b>Session “Instrumentation &amp; Methods”</b> <b>Invited speaker Dr. Yu. Kovalev</b> <i>International Space Mission RadioAstron</i>
	15:45 – 16:20	<b>Invited speaker Prof. H. van der Laan</b> <i>ESO 50 Years and Radio Astronomy’s Future ALMA &amp; SKA</i>
	16:20 – 16:50	Coffee-break <i>Chair Harry van der Laan</i>
	16:50 – 17:10	<u>Dmitry Duev</u> <i>Ultra Near-Field VLBI Experiments</i>



- 17:10 – 17:30 Tatiana Bocanegra Bahamon  
*Space Applications of Planetary Radio Interferometry and Doppler Experiment (PRIDE)*
- 17:30 – 17:50 Sergey Korneenko  
*Research of characteristics of 100-m radio telescope at the Max Planck Institute for Radio Astronomy*
- 17:50 – 18:10 Dmitry Ladevshchikov  
*New double-channel radiometer for RT-22 radio telescope*
- 18:10 – 18:30 Lucas Lindroos  
*Stacking of Interferometric data, a look at radio emission from distant galaxies*

Chair Svetlana Glubokova

19.09.2012  
**Wednesday**

**Session "Pulsars"**

- 9:00 – 9:40 **Invited speaker Prof. I.Malov**
- 9:40 – 10:00 Andrey Kazantsev  
*Monitoring and Search for Giant Pulses with LPA radio telescope at 111 MHz frequency*
- 10:00 – 10:20 Alina Yablokova  
*A search for radio nebulae around pulsars PSR J0358+5413, PSR J1809-1917 and PSR B1800-21*
- 10:30 – 11:00 Coffee-break

Chair Igor Malov

- 11:00 – 11:20 Elena Nikitina  
*Distribution of areas of radiation generation at different frequencies in pulsar magnetospheres*
- 11:20 – 11:40 Dariya Teplykh  
*Radio Emission of Geminga*

**Session "Extragalactic & Cosmology"**

- 11:40 – 12:00 Fiona Healy  
*Multi-epoch 18-22cm VLBA Observations of Several AGNs*
- 12:00 – 12:20 Colm Coughlan  
*MEM and CLEAN imaging of 18-22 cm VLBA polarization observations of compact active galactic nuclei*
- 12:30 – 14:30 **Lunch**
- 15:00 – 18:00 **Excursion to Serpukhov city and surroundings**

Chair Evgeniya Kravchenko

20.09.2012  
**Thursday**

- 9:00 – 9:40 **Invited speaker Prof. I.Chashey**  
*Radio astronomical study of the turbulence solar wind*
- 9:40 – 10:00 Christian Fromm  
*Spectral Evolution in Blazars*
- 10:00 – 10:20 Maciej Cegłowski  
*A survey of Compact Complex Morphology Radio (CCMR) sources*
- 10:20 – 10:40 Sadie Jones  
*Radio/X-ray variability and structure investigation of NGC 4051*
- 10:40 – 11:00 Coffee-break

	11:00 – 11:20	<u>Aleksandar Shulevski</u> <i>Tracing the Life - Cycles of AGN using LOFAR</i>
	11:20 – 11:40	<u>Peter Sims</u> <i>Foregrounds to the Epoch of Reionization</i>
	11:20 – 11:40	Timur Mukakharov <i>Simultaneous spectra and radio properties of the BL Lacertae objects</i>
	12:00 – 12:20	Konstantinos Kolokythas <i>Radio properties of nearby galaxy groups</i>
	12:30 – 14:10	<b>Lunch</b>
At PRAO	14:10	<b>Trip to PRAO</b>
	15:00 – 15:20	<u>Prof. Rustam Dagkesamanskii</u> <i>Pushchino Radio Astronomy Observatory</i>
	15:20 – 16:20	Excursion to the telescopes
	16:20 – 16:50	Coffee-break
		<u>Chair Daria Teplykh</u>
		<b>Session “Stars &amp; Star Formation”</b>
	16:50 – 17:10	<u>Anastasiya Boiko</u> <i>Search of the flare star radio emission in the frequency range of 16.5 – 33 MHz</i>
	17:10 – 17:30	<u>Svetlana Glubokova</u> <i>Estimation of plasma turbulence parameters by observations of radio-source interplanetary scintillations</i>
	17:30 – 17:50	<u>Katharina Immer</u> <i>The massive star forming complex W33 - Closer than expected?</i>
	17:50 – 18:10	<u>Evgeny Mikhailov</u> <i>Star formation and models of magnetic fields in spiral galaxies</i>
	18:10 – 18:30	<b>Session “Extragalactic &amp; Cosmology”</b>
		<u>Katinka Gereb</u> <i>The global HI properties of galaxies up to z~0.1</i>
	19:00 – 22:00	<b>Conference Dinner at PRAO</b>
		<u>Chair Andrey Kazantsev</u>
21.09.2012 Friday	9:00 – 9:20	<u>Kunal Mooley</u> <i>A Sensitive Search for Variables and Transients in the Extended Chandra Deep Field South</i>
	9:20 – 09:40	<u>Imogen Whittam</u> <i>The faint source population at 15.7 GHz</i>
	9:40 – 10:00	<u>Alexander Butenko</u> <i>Search of giant radiogalaxies on the declinations from 3.5 to 12.5 degrees</i>
	10:00 – 10:20	<u>Anatoliy Glyantsev</u> <i>The refractive and diffractive scintillation of the source B0531+194</i>
	10:20 – 11:00	Coffee-break
		<b>Departure</b> (Transfer to Moscow and airports)



## 2.4 Summary of the XLII YERAC

34 young radio astronomers attended: Russia(14), UK(5), The Netherlands(4), Germany(3), Ireland(2), USA(2), Poland(1), Spain(1), Sweden(1), Ukraine(1). 16 nationalities were represented: Hungary, Russia, UK, Greece, Macedonia, Columbia, the Netherlands, Germany, Brazil, Mexico, Ireland, USA, India, Poland, Sweden and Ukraine.

Presentations and abstracts are on-line at <http://prao.ru/conf/yerac2012/html/presentats.html>. The sessions covered The ISM and masers (6 talks), Instrumentation and methods (5 talks), Pulsars (4 talks), Extragalactic astronomy and cosmology (14 talks), Stars and star formation (4 talks), plus invited speakers: Prof. R. D. Dagkesamansky, *The history of PRAO*, Prof. Harry van der Laan, *The origins of YERAC and Radio Astronomy's future*, Dr. Yu Kovalev, *International space mission RadioAstron*, Prof. I. Malov, *Pulsars* and Prof. I. Chashey, *Radio astronomical study of the turbulent solar wind*.

## 2.5 Information of the EC financial contribution

The XLII YERAC conference costs were supported by RadioNet3, Russian Foundation of Basic Research, Russian Academy of Science and Dynasty Foundation.

The EU-project RadioNet3 contribution of €5.600 was used towards the cost of accommodation and subsistence for the students and postdocs who attended.

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