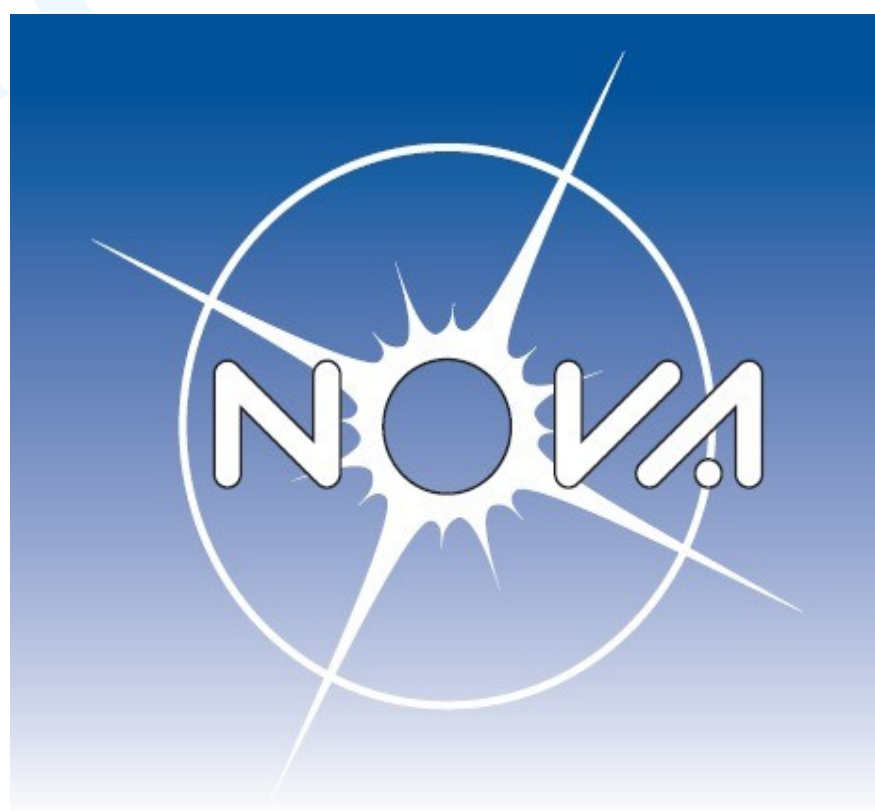
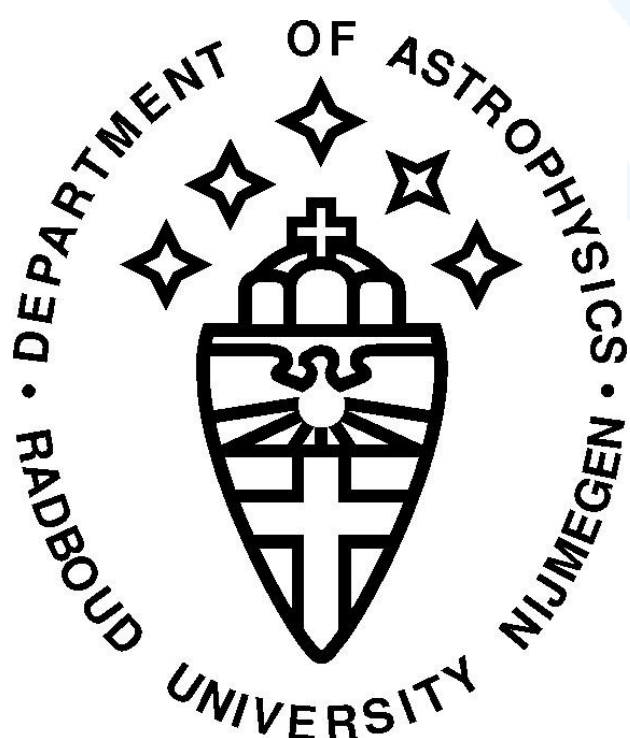


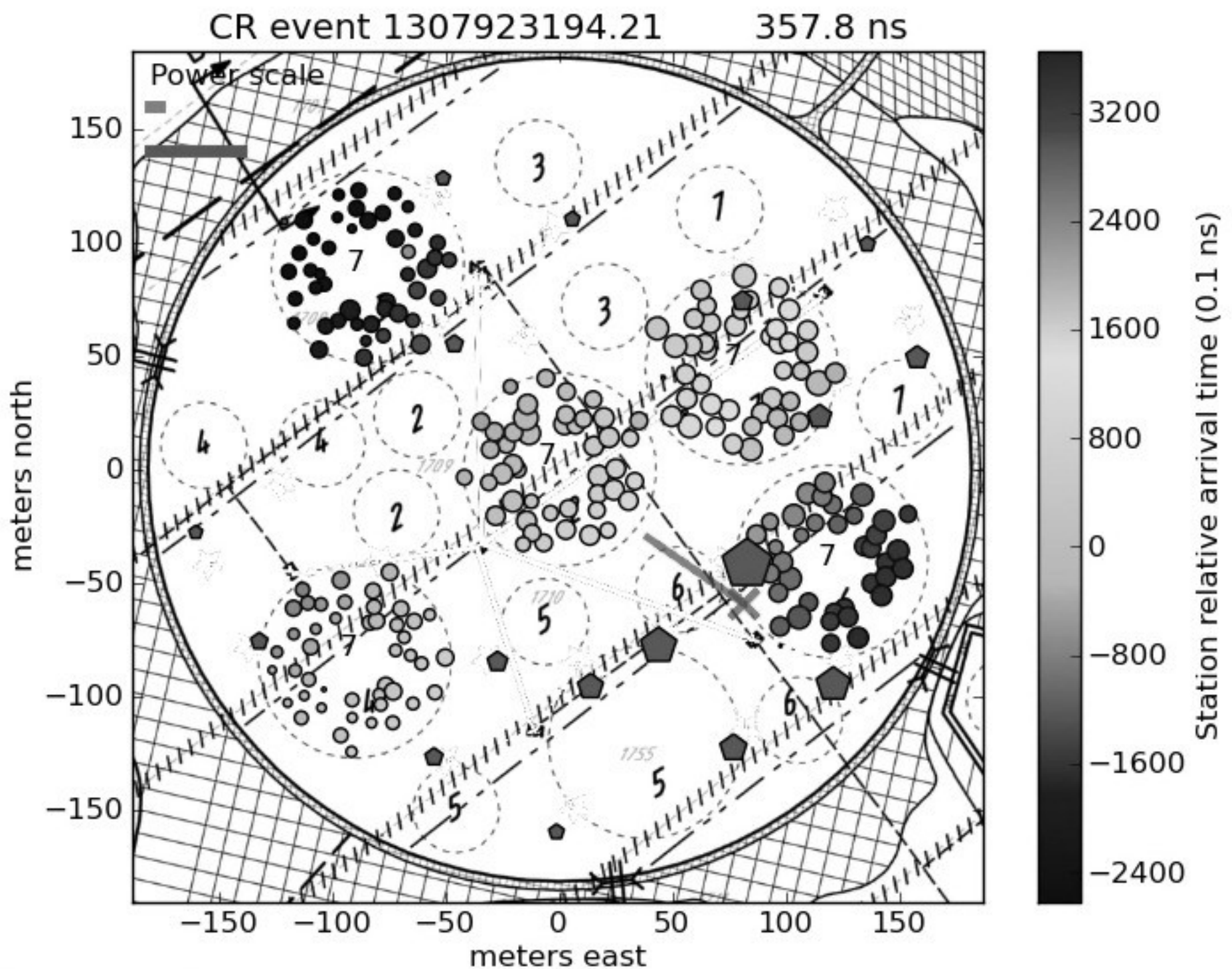
This symposium has been made possible through financial contributions by the following organisations:



LKBF

NWO

Jan65: Magnetic fields and the Cosmos



A symposium to honour Jan Kuijpers' 65th birthday and the 10th anniversary of the Department of Astrophysics at the Radboud University Nijmegen

Faculty of Sciences
Radboud University Nijmegen
24 – 26 August, 2011

Dear Participant,

It is my pleasure to welcome you to the Department of Astrophysics of the Radboud University Nijmegen for the symposium '*Jan65: Magnetic Fields and the Cosmos*'. In only two weeks from now Jan Kuijpers will be reaching the legal retirement age in the Netherlands, and of course we did not want to let him go without a special symposium. We are very happy that you are here to celebrate this event with us.

As an organizing committee one is always faced with the question of 'What will it be on?'. In the case of Jan this is actually quite a difficult question. Jan's interest lie in the physics of our Universe, and in particular in the 'hard' part of it: 'general-relativistic plasma magnetohydrodynamics'. At the occasion of Jan's knighthood a few years ago we had the mayor of Nijmegen pronounce these words and it was clear that he had no idea what they meant. It *is* a very broad subject that encompasses, amongst others, the physics and radiation field around neutron stars, around black holes, in cosmic rays, in gravitational waves and in magnetosonic waves in the Sun and accretion disks. Magnetic fields may be considered to be a 'nuisance' by many astronomers, but they are everywhere and quite often dominate the physical appearance and behaviour of astronomical objects. As Jan has never felt to be bound by one particular topic, we felt that we shouldn't be either. This is the reason why this symposium offers you a range of topics, from the Earth's atmosphere to the nature of our Universe!

We not only honour the scientific work of Jan, but we also celebrate the fact that Jan founded the Department of Astrophysics at the Radboud University Nijmegen exactly 10 years ago. In 2001 the flux of students starting their physics studies at our university had dropped to a mere 15 per year, and something needed to be done to stop this dramatic decline. Among the measures taken was the restart of the Department of Astrophysics. And a spectacular success it is! Right from the start the Department has blossomed and was evaluated in 2011 to be among the top 10% of institutes in the world. Moreover, the number of students starting their physics and astronomy studies at the Radboud University Nijmegen has grown to more than 55 per year. All this has been made possible through the relentless energy, enthousiam and magnetism of Jan, and I am sure we will see a lot of that during this symposium as well.

I hope that you will enjoy your time here in Nijmegen!
On behalf of the SOC/LOC,

Paul Groot

Front cover: A snapshot of the radio emission of the first, confirmed ultra-high energy cosmic ray detection in the summer of 2011 with the giant LOFAR radio telescope. The event came from the upper left and the greyscale coding shows the arrival time at each of the LOFAR field stations. The event was triggered by the Lofar-Radboud Array (LORA) of scintillators interspersed between the radio antennae. After the LORA trigger, the LOFAR transient buffer boards were used to look back in time and retrieve the radio signal.

Program

Wednesday August 24

11:00 - 12:00 Registration and welcome
12:00 - 13:30 Lunch (Huygens building)

Session I: Pulsars & Neutron Stars

13:30 - 13:35	Welcome	
13:35 - 14:20	Ben Stappers	<i>Pulsars with LOFAR</i>
14:20 - 15:05	Janusz Gil	<i>Magnetic fields in Radio Pulsars</i>
15:05 - 15:30	Coffee/Tea	
15:30 - 16:15	Anna Watts	<i>The strongest magnetic fields: Magnetars</i>
16:15 - 17:00	Giorgi Melikidze	<i>Magnetic fields in neutron stars</i>

Thursday August 25

Session II: Astroparticle Physics and Gravitational Waves

09:00 - 09:45	Mattias Marklund	<i>Gravitational wave distortions of space-time</i>
09:45 - 10:30	Walter van Suijlekom	<i>The noncommutative structure of space-time</i>
10:30 - 10:55	Coffee/Tea	
10:55 - 11:40	Gijs Nelemans	<i>Gravitational wave astronomy</i>
11:40 - 12:25	Ad van den Berg	<i>Ultrahigh Energy Cosmic Rays with the Pierre Auger Observatory</i>

12:30 - 13:45 Lunch (Huygens building)

Session III: Astroparticle Physics and Magnetic Fields in the Galaxy and Sun

13:45 - 14:30	Heino Falcke	<i>Ultrahigh-Energy Cosmic rays in radio</i>
14:30 - 15:15	Marijke Haverkorn	<i>The Magnetic Field in the Milky Way Galaxy</i>
15:15 - 15:40	Coffee/Tea	
15:40 - 16:25	Frans Snik	<i>Magnetic fields in the Sun</i>
16:25 - 17:10	Kees de Jager	<i>Solar dynamo instabilities</i>

18:15 Conference Dinner at 'De Kazerne' (all welcome)

Friday August 26

Session IV: Magnetic Fields in the Sun and Stars

09:00 – 09:45	Huib Jan van Langevelde	<i>Magnetic fields measurements around young and old stars using masers</i>
09:45 - 10:30	Huib Henrichs	<i>Magnetic fields in massive stars</i>
10:30 - 10:55	Coffee/Tea	
10:55 - 11:40	Henk Spruit	<i>Understanding the Solar Magnetic Field</i>
11:40 - 12:25	Don Melrose	<i>What do plasma astrophysicists ignore by using only half of Maxwell's equations?</i>

12:30 - 14:00 Lunch (Huygens building)
14:00 - 14:30 Walk to Main Auditorium
15:00 - 17:30 *Afscheidscollege/Retirement Lecture Jan Kuijpers*