

# Progress of the Ö-Project

The German Year of Science “Our Universe”  
and  
a CRC-Themed Planetarium Show

Susanne Hüttemeister, Planetarium Bochum



# Beginning of the Year: Our Calendar



# Social Media Activities in 2023

## ■ Our Channels:

- [www.sfb1491.rub.de/](http://www.sfb1491.rub.de/)
- X (ex-Twitter) - @SFB1491
- Instagram - @SFB1491
- Facebook - @SFB1491
- linkedIn - @SFB1491 **NEW!**

## **FOLLOW US!**

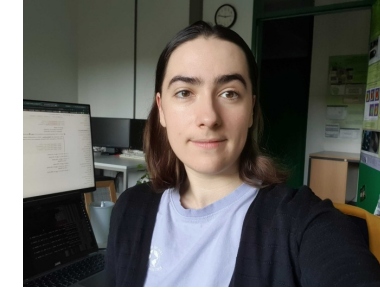
**Comment, like, re-post!**

**Send us material (pictures, short infos, etc.)**

- **Conferences**
- **Events**
- **Publications**
- **Insights into the life of a PhD student/scientist**
- **...**



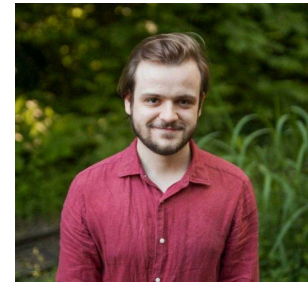
Marissa Hünnefeld  
SFB-RUB



Chloe Gaudu  
BUW



Giacomo Sommani  
AI-RUB



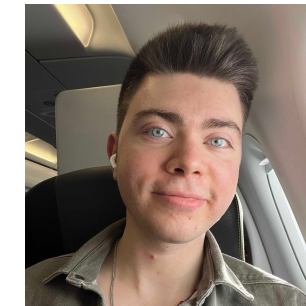
Paul-Simon  
Blumenkamp  
AI-RUB



Eva Jütte  
SFB-RUB



Dominik  
Elsässer  
TUDO



Eray Genc  
AI- RUB

Eine Initiative des Bundesministeriums  
für Bildung und Forschung

Wissenschaftsjahr

2023

unser  
**UNIVERSUM**



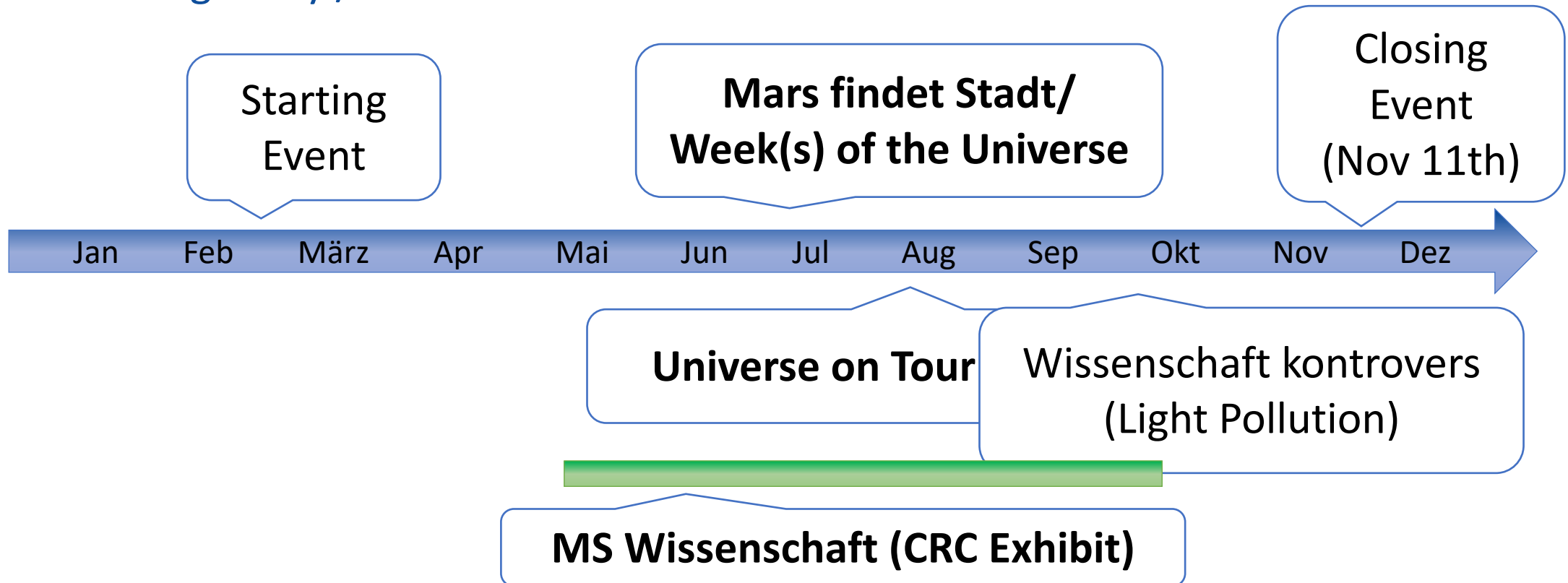
Bochum zwischen  
Himmel und Erde

Wissenschaftsjahr 2023 - Unser Universum

# Selected Activities in Bochum, Dortmund and the Ruhrgebiet

Strong CRC participation

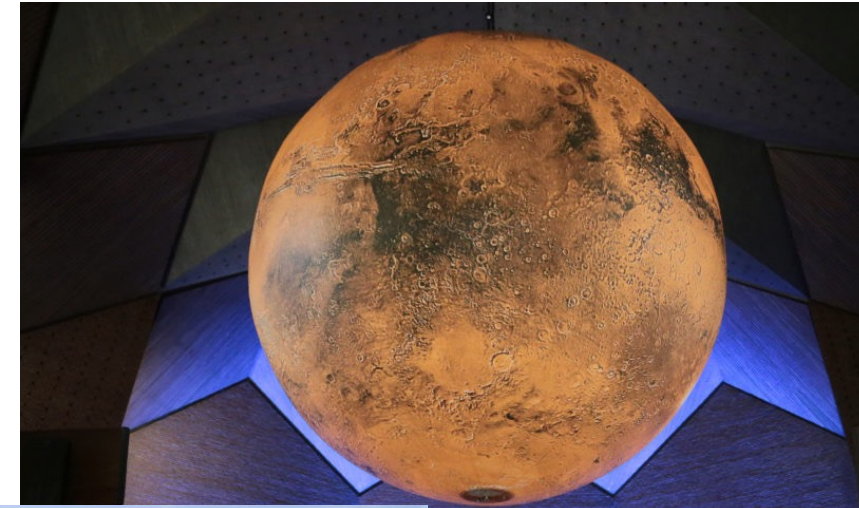
- absorbing many / most resources of Ö in 2023



# Mars findet Stadt

## Mars Finds Town / Mars Takes Place

- 9 „Cities of Science“: including Bochum
- 7-Meter installation of Mars at Christuskirche June 28. to July 13
- **Participation CRC**: Several Talks
- **Exhibit** (Kelvin-Helmholtz instability (also at Opening Event, Jugend Forscht, MS Wissenschaft...))

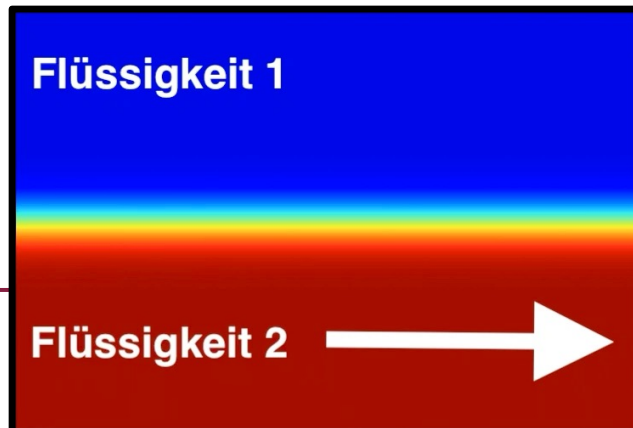


# ...and a Spontaneous Euclid Launch Event



# MS Wissenschaft

- Museum Ship on a tour through Germany (Mai – September)
- **CRC-exhibit:** Kelvin Helmholtz Instability
  - Acrylic tube with mixture of (cooking) oil / water
  - „Waves in the universe“
  - Many visitors have seen such structures (e.g. clouds)
  - bridging known phenomena and cutting-edge
  - ...and leading to some strange items in the Ö-budget...



Opening



Kelvin Helmholtz instability



MS Wissenschaft in Oberhausen

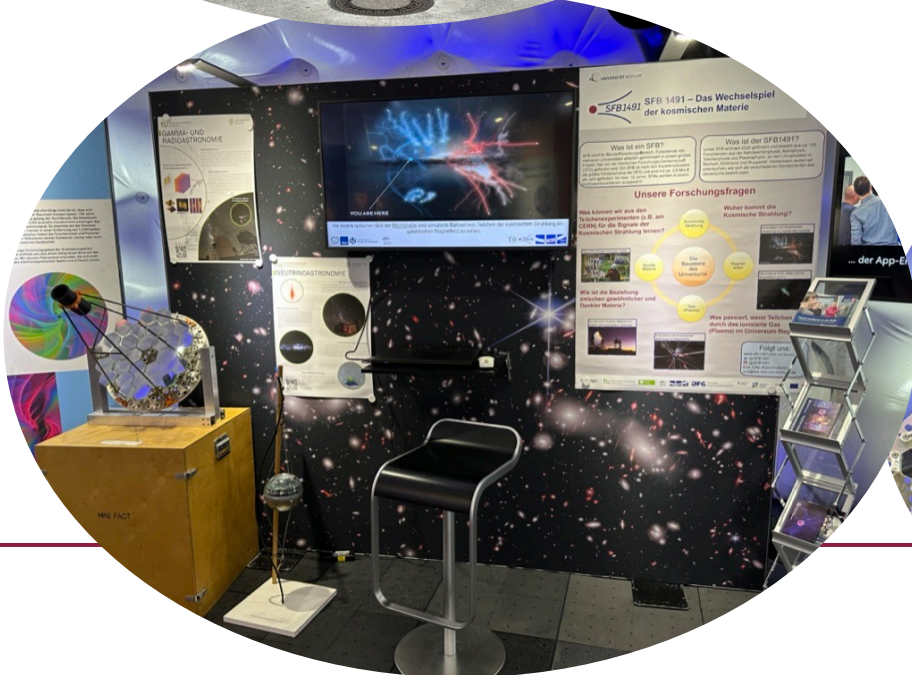


Meet the scientist (Eva!)



# Universe on Tour

- August 16 – 20 2023
- City of Dortmund – next to „U“ close to Main Station
- 3415 Visitors (Exhibition plus planetarium show)



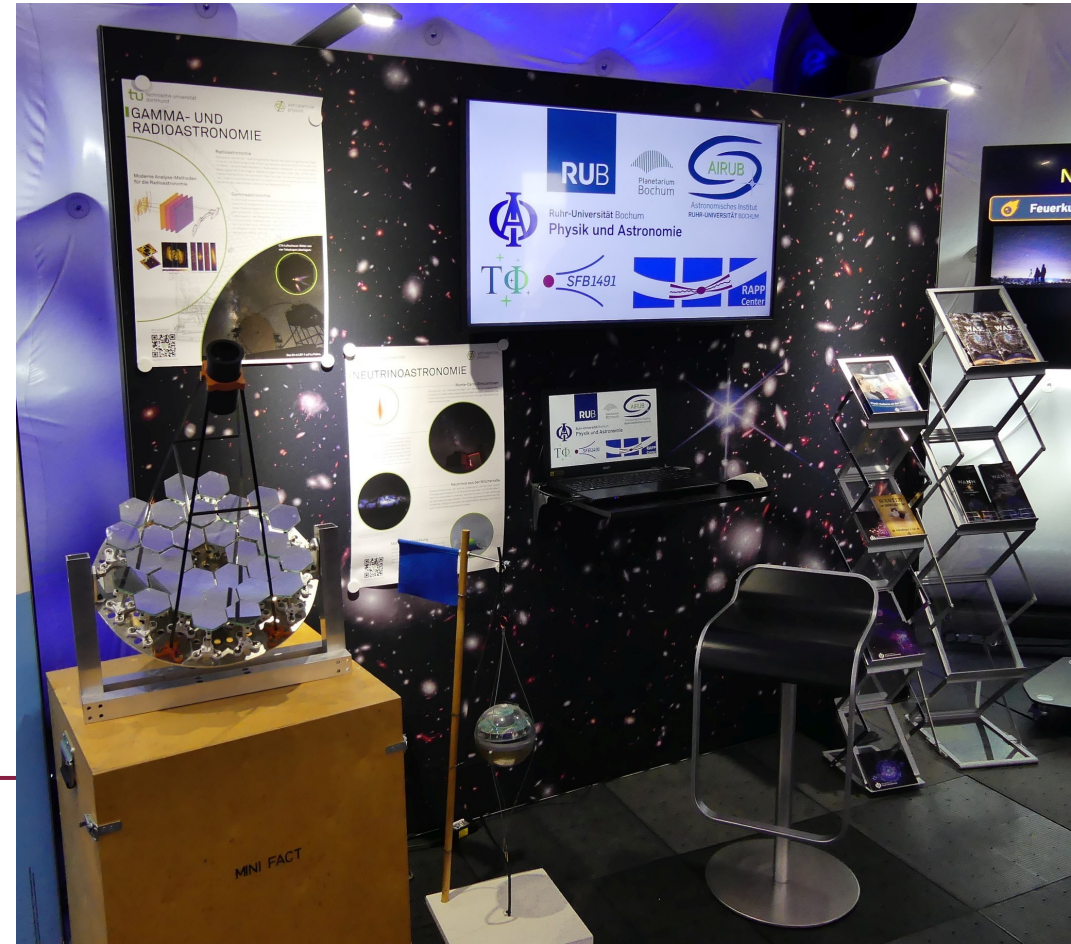
# A big effort for the CRC (and AIRUB / TP4)

Among the people who actively contributed

**Team „Universe on Tour“:** MS Wissenschaft, K-H Exhibit, Posters, Videos etc.:

Anna Berger  
Klara Bertmann  
Leon Gawlytta  
Jonas Hellrung  
Eva Jütte  
Vladimir Kiselev  
Max Linhoff  
Marcel Mielach  
Dennis Neumann  
Helmut Niemsch  
Pascal Venedey  
Jurek Völp

Sophie Aerdker  
Athy Aravinthan  
Jeremy Dargent  
Julian Dörner  
Yannick Hartych  
Jonas Hellrung  
Eva Jütte  
Vladimir Kiselev  
Marcel Schroller  
Silvia Salvatore  
Ines Seeliger  
Alex Seuthe  
Jurek Völp



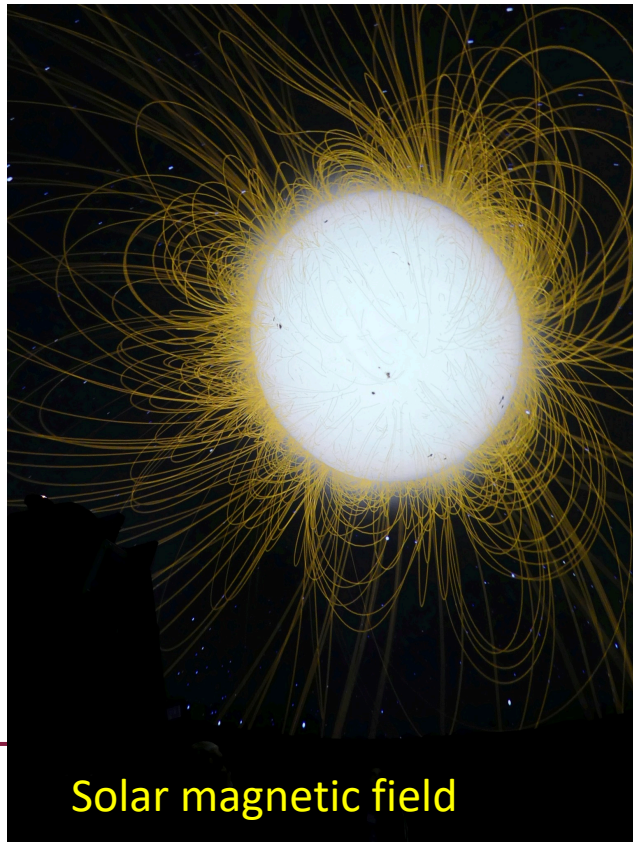
**Thank you!**

# The UoT „Local“ Planetarium Show

A very useful **trial run for the „big“ CRC show** (Premiere end of 2024)

- ~ 8 minutes

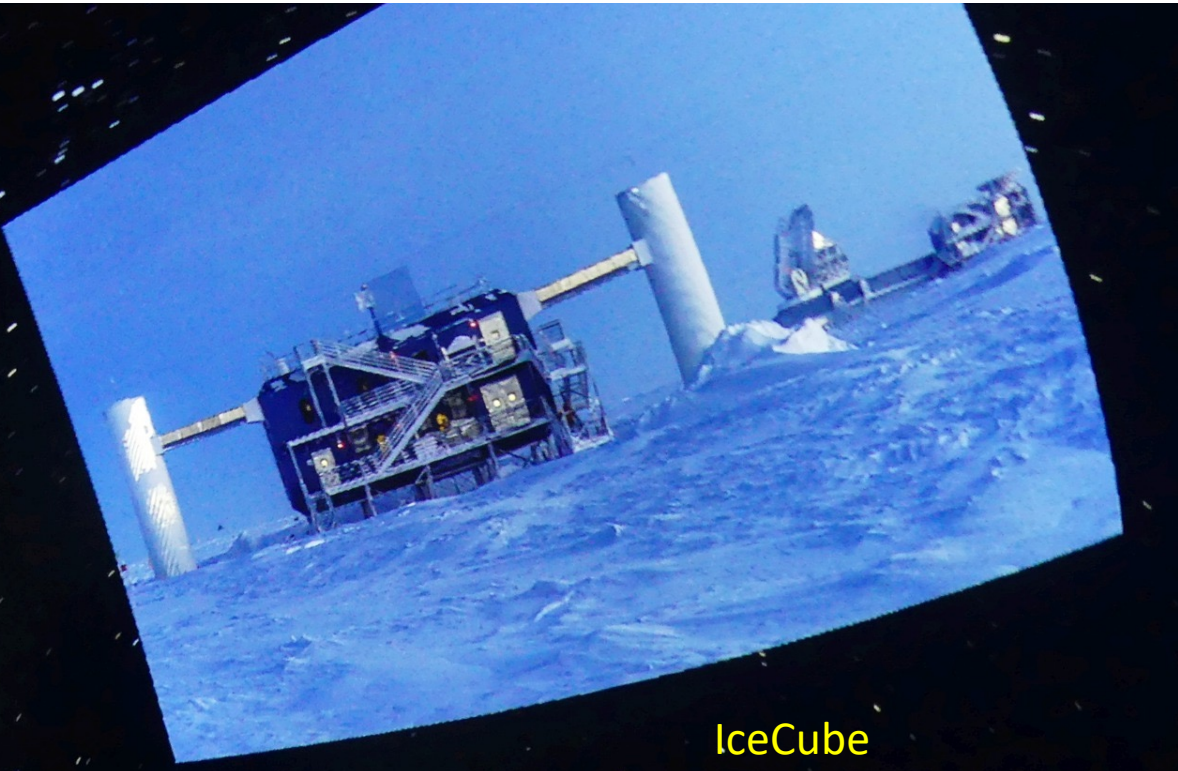
- Concept, script: SH - Production largely by Jurek Völp und Marcel Mielach (CRC WHKs)



# ... and the CRC Show

## Content / Storyline:

- Intro CRC
- Sun / Solar Wind Aurora as example for charged particle / magnetic field interaction
- Cosmic magnetic fields: SNRs, AGN, large scale Galactic: particle acceleration
- Detectors: EM (ESO/Effelsberg), Cherenkov (La Palma), particle (IceCube (and CERN))
- Extreme events: TDE



IceCube



...and the Milky Way in neutrinos

# Call for Bids Underway

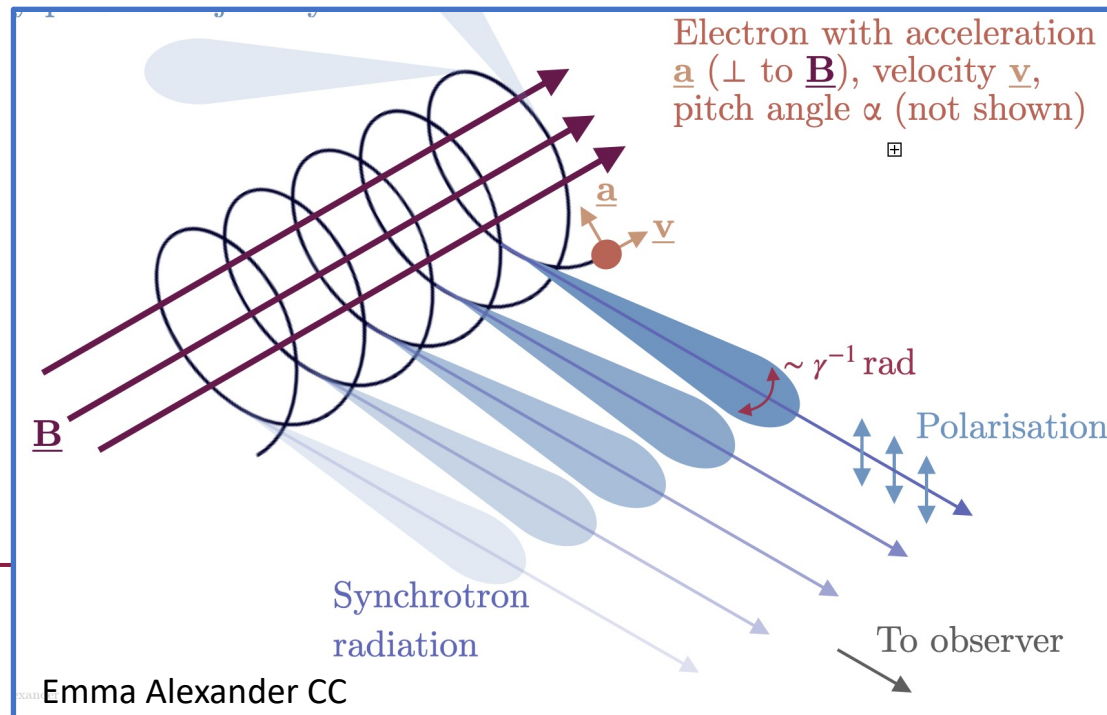
## Production of CRC show (building on UoT)

- partly „in house“ („in CRC“) – SH, Marcel Mielach, Jurek Völp...
- partly in cooperation with planetarium partners

Münster – Tobias Jogler

Mannheim – Christian Theis, Thomas Niemann, Mathias Jäger

- Call für bids for three complex 3D scenes submitted to RUB Central Procurement



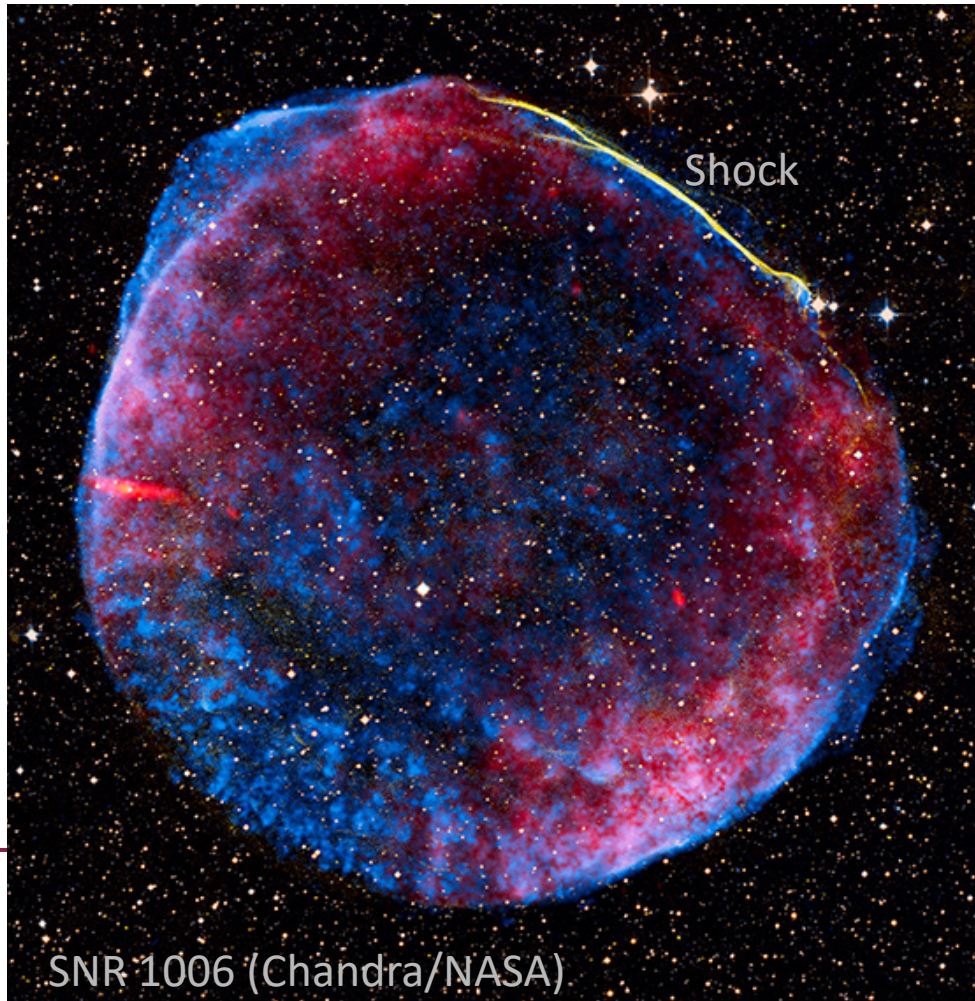
## Example 1

- Interaction of charged particle with magnetic field
- Emission of synchrotron radiation

# Sample Scenes

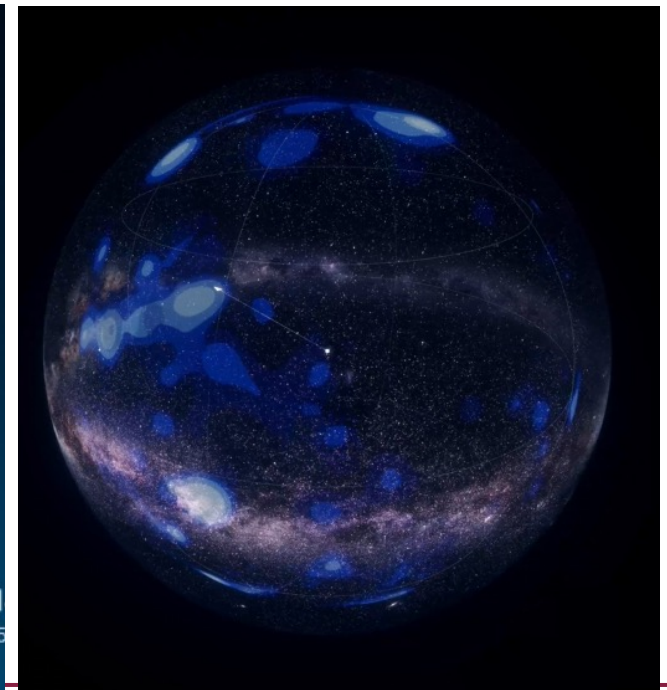
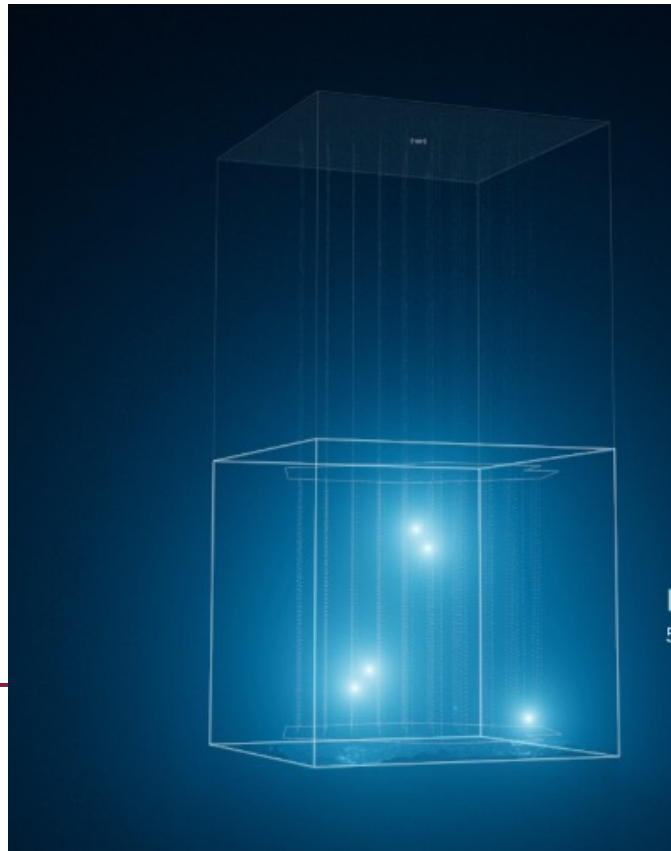
## Example 2

Fermi acceleration in SNR-shock



## Example 3

IceCube detector and (galactic) neutrino emission  
- adapted from flat, low resolution press  
conference video



# This Time Next Year...

...the invitations to the premiere should have been sent!

