

2013

2013

160 million events of KASCADE

WOLF359

2014

Added new quantities

VULCAN

2015

Added more quantities and redesign of data shop and format

MERIDIAN

2017

433 million events available and additional GRANDE detector component

NABOO

2019

Added LOPES radio detector component

OCEANUS

2020

Combined data sets of KASCADE and GRANDE

PENTARUS

2021

MAKET-ANI data shop and upgraded all software

SKARAGAN

Now

<https://kcdc.iap.kit.edu/>

A web-based platform to provide scientific data for the general public

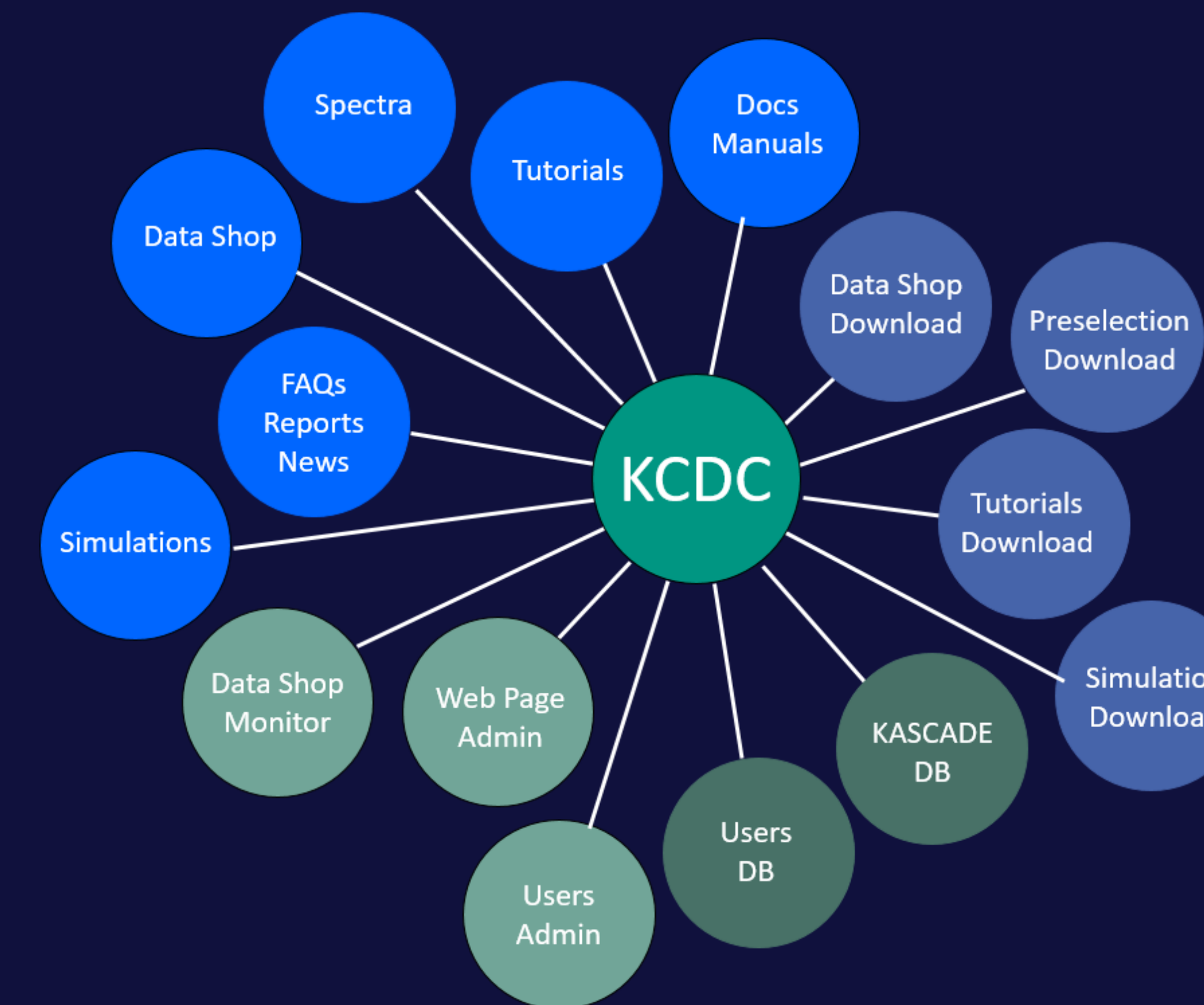


To archive original research data such as from KASCADE

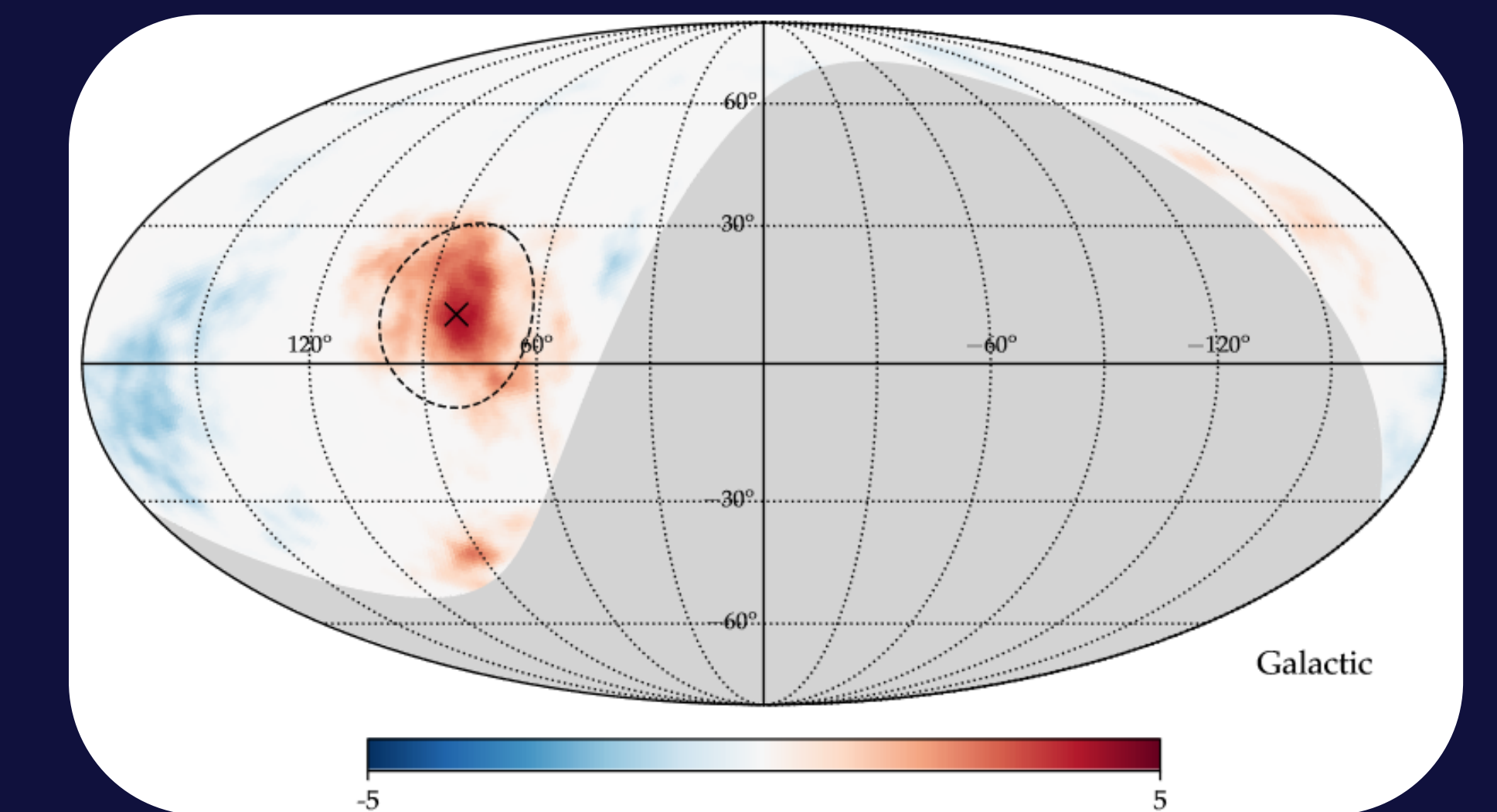
To offer long-term scientific data for community and students



Web Portal



Physics with KCDC



Example: Re-analysis of the Anisotropies in the arrival directions of cosmic rays observed with KASCADE-Grande; The Astrophysical Journal 886 (2019)

KASCADE-Grande in Karlsruhe



MAKET-ANI in Armenia



- First release in 2013
- 433 million events from KASCADE and KASCADE-Grande including data on detector level
- Independent data shops for multi-experimental analysis
- Easily extendable and modifiable modular software design

Education & Outreach



- An important goal of the public data release
- Examples of simple data analyses for school students
- Online KCDC data analysis in Jupyter Notebook: <https://jupyter.iap.kit.edu>
- KCDC masterclass for students

KCDC is...

- Already accepted by Astroparticle Physics community
- Forerunner in public data access in Astroparticle Physics
- First step towards a Global Analysis & Data Centre
- Foreseen to be integrated in the PUNCH4NFDI Science Data Platform

