The international Atmospheric Circulation Reconstructions over the Earth (ACRE) initiative: Ongoing and Future Plans

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Who else is involved internationally?

With WMO, GEO, GCOS endorsement, wide international support & the aid of various working groups of GCOS & WCRP, ACRE provides an umbrella that links together some 35+ projects, data rescue, climate science, climate applications, education, & outreach activities around the globe.

International Projects, Sources & Repositories linked to ACRE

- IEDRO
- ICOADS
- ISPD
- WMO DARE
- RECLAIM
- GLOBE
- GLOSS
- ETCCDI
- VACS
- ICHIM
- Galaxy Zoo
- CoRRal
- EUFP7: EURO-IM
- EUFP7: ERA-CLIM
- NERC: AUSTRAL
- Reanalysis.org
Ongoing & Future ACRE & ACRE-linked Data Recovery, Imaging & Digitisation Projects

1) ACRE Chile – EC FP7 ERA-CLIM

2) ACRE Pacific – NIWA, NZ

3) ACRE India – British Library-India initiative

4) Eastern Mediterranean-Middle East – Uni of Giessen, Germany

5) ACRE Africa

6) ACRE China
ACRE OUTREACH:
CITIZEN SCIENCE MASS
DIGITISATION, WIDER SOCIAL
SCIENCES & HUMANITIES
ENGAGEMENTS, THE INTERNATIONAL
STUDENT GLOBE PROGRAM & PUBLIC
DISPLAYS
Welcome to Galaxy Zoo, where you can help astronomers explore the Universe

New, more detailed images added - see here for details

The Galaxy Zoo files contain almost a quarter of a million galaxies which have been imaged with a camera attached to a robotic telescope (the Sloan Digital Sky Survey, no less). In order to understand how these galaxies — and our own — formed, we need your help to classify them according to their shapes — a task at which your brain is better than even the fastest computer.

More than 150,000 people have taken part in Galaxy Zoo so far, producing a wealth of valuable data and sending telescopes on Earth and in space chasing after their discoveries. Zoo 2 focuses on the nearest, brightest and most beautiful galaxies, so to begin exploring the Universe, click the 'How To Take Part' link above, or read 'The Story So Far' to find out what Galaxy Zoo has achieved to date.

Thanks for your help, and happy classifying.

The Galaxy Zoo team.
Our projects live within the ‘Zooniverse’: the home of Citizen Science on the web. Each is inspired by a science team who provide the initial ideas, the reassurance that what we're doing can make a real contribution and an audience who are willing to use the end result. We are working with a wide variety of partners, from classicists to climate scientists and ecologists to planetary scientists, but the following projects are now available:

**Galaxy Zoo:** The project which inspired the CSA. Galaxy Zoo provides detailed classifications of galaxies according to their morphology. Galaxy Zoo has produced more than 15 papers in professional journals, and the team have been successful in bidding for follow-up time on some of the world’s most advanced telescopes, including the Hubble Space Telescope.

**Galaxy Zoo Mergers:** A test case for more complicated modes of interaction, visitors are invited to compare simulations of mergers between galaxies with observation. By having many thousands of people run simulations, we can explore the vast parameter space more efficiently than with automated routines.

**Galaxy Zoo Supernovae:** Help us to catch an exploding star. The task in this latest Galaxy Zoo project is to help us catch exploding stars - supernovae. Data for the site is provided by an automatic survey in California, at the world-famous Palomar Observatory.

**Solar StormWatch:** Help spot explosions on the Sun and track them across space to Earth. Your work will give astronauts an early warning if dangerous solar radiation is headed their way.

**Moon Zoo:** Coming soon..
Digitizing data for disparate communities: Naval history and climate science. **Pilot project trialling citizen science mass data digitisation on some 3,000 ship logbooks from the extended WW1 period (1914-1923).**
Old Weather: our weather’s past, the Earth’s future

What we need

Project Statistics
Old Weather transcriptions so far
Data rescue at home
(http://bjerknes.ethz.ch/tx/drah/)

Is an internet-based attempt to digitize historical weather data from all over the globe and make the digitised data available to everybody.

Two projects are currently online: German radiosonde data from the Second World War and meteorological station data from Tulagi (Solomon Islands) for the first half of the 20th century.
Now online!

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Join the community effort to digitize precious historical climate data.

Digitize an image

For more options and personalized settings please

Register

NOAA Photo Library
The historical record of climate variability and change, and the document archives on which it is based, are of interest outside the weather and climate community; and the initiative has embraced the cross/interdisciplinary interest its activities have created. Thus collaborations between ACRE and citizen science, social sciences and humanities partners, have become an essential component of the initiative. Two projects are listed below:

**Centre for e-Research, King’s College London:** e-Research Approaches to Historic Weather DATA: Sources, Collaborations, and Methodologies for Researching Environmental Change

**Centre for e-Research, King’s College London & Corbett Centre for Maritime Policy Studies, Joint Service Command and Staff College, UK:** SAILS: Shipping Archives and Integrated Logbooks of Ships: Linking WW1 Naval Records ([http://sailsproject.cerch.kcl.ac.uk/](http://sailsproject.cerch.kcl.ac.uk/))
INTERNATIONAL STUDENT GLOBE PROGRAM

http://www.globe.gov/
GLOBE Student Climate Research Campaign

Engaging Youth to Understand Climate

Coming September 2011

The GLOBE Student Climate Research Campaign (SCRC) is a two-year event that engages students from around the world in the process of investigating and researching their local climate and sharing their findings globally. SCRC is comprised of learning activities, international collaborative discussions on climate, data collection, and short-term and longer-term research investigations.

All participants will gain a fundamental understanding of climate and the climate system through inquiry-based, hands-on activities and international collaboration before exploring climate through research. Climate is the critical issue of our time and understanding climate from a scientific perspective is critical to addressing local climate impacts.

The SCRC will officially launch in 2011 and conclude in 2013. International learning symposia highlighting student climate research will occur in June 2013. GLOBE is uniquely positioned to help students understand the science of climate and help them contribute to further understanding of how climate impacts each person on Earth.

http://www.globe.gov/content/scrc
Due to open in time for the London 2012 Olympics, the Sammy Ofer Wing.
DATA
Global historical surface terrestrial & marine synoptic weather observations + data images, metadata, data sources + citizen science mass digitisation + inter/cross disciplinary interactions with social sciences and humanities

ALL REANALYSES
Including four surface input only historical reanalyses (56 realisations of 6-hourly 4D atmospheric weather variables) + downscaling (statistical or model)

WEB-BASED ENTITY: ACCESS MANIPULATE VISUALISE

ALL USERS
Climate research, Climate applications (risks, impacts & extremes), Educators & Students, General Public
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