

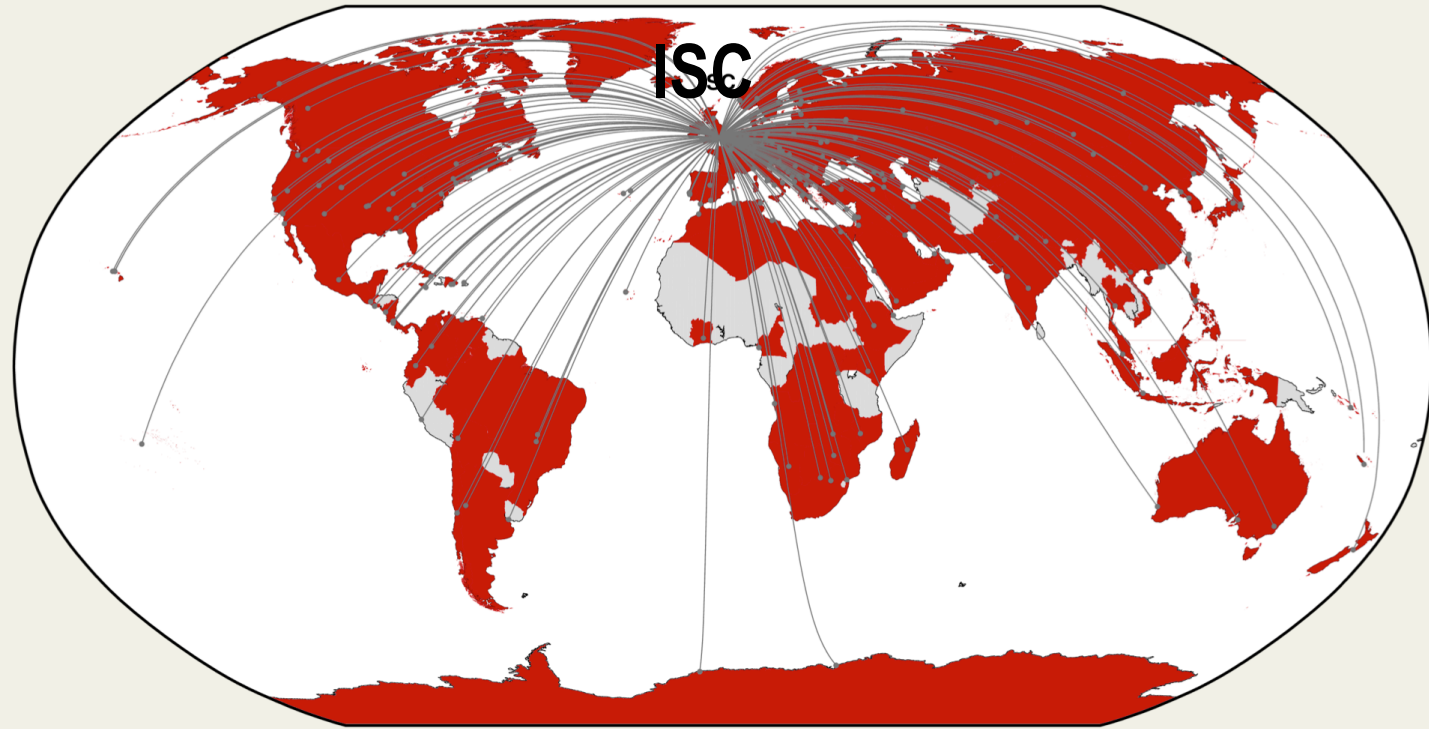


Seismic Network Related Articles in the Summary of the ISC Bulletin

Dmitry A. Storchak, Kathrin Lieser, Lynn Elms, Alfie Barber and James Harris

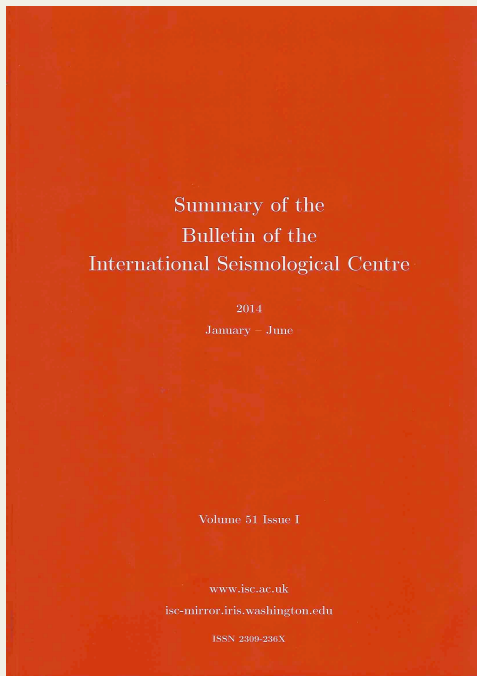
Intro: Collecting Parametric Data for the ISC Bulletin

To fulfil its mission, the ISC routinely collects earthquake bulletins from ~150 seismic networks in ~100 countries, comprising in total ~8,000 permanent seismic stations worldwide.



Agencies that reported to the ISC over a long period of time (1964-present) were expected to follow international standards valid at each point in time. Nevertheless, organizational missions, configurations of networks, equipment and processing procedures varied over the time. With exception to occasional journal articles, no good record of network status in different periods of time is openly available. With constant rotation of staff and change of institutions responsible for earthquake monitoring, this information became largely inaccessible.

Summary of the ISC Bulletin: on-line and printed



So far, 13 issues have been published that cover earthquake data during data years 2010-2016

Back in 2012, we started production of the Summary of the ISC Bulletin in place of the old printed bulletin that listed hypocentres and station readings in b/w.

The Summary explains the procedures and standards used by the ISC and gives analysis of the ISC data during each 6-months period.

In order to obtain information on the way the incoming data from 150 agencies are produced, we initiated inclusion of invited articles on:

- seismic networks and
- notable earthquakes contributed by external authors.

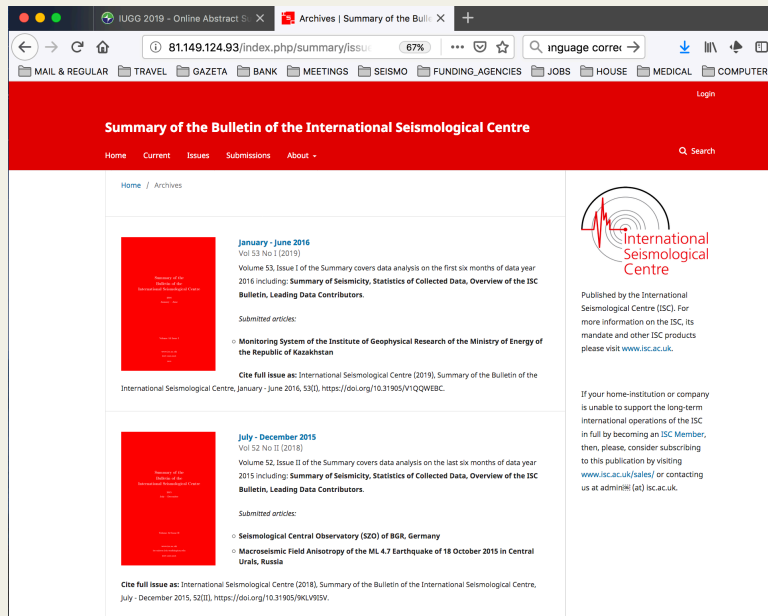
Summary: Dedicated Web Pages

publications.isc.ac.uk

Dedicated webpages for the Summary were built using achievements and software of the **OJS** (Open Journal Systems) and **PKP** (Public Knowledge Project).

PKP is a multi-university initiative developing (free) open source software and conducting research to improve the quality and reach of scholarly publishing.

Membership in **Crossref** was established in order to be able to issue and maintain **DOI**.



The **Scope** of the Network Articles

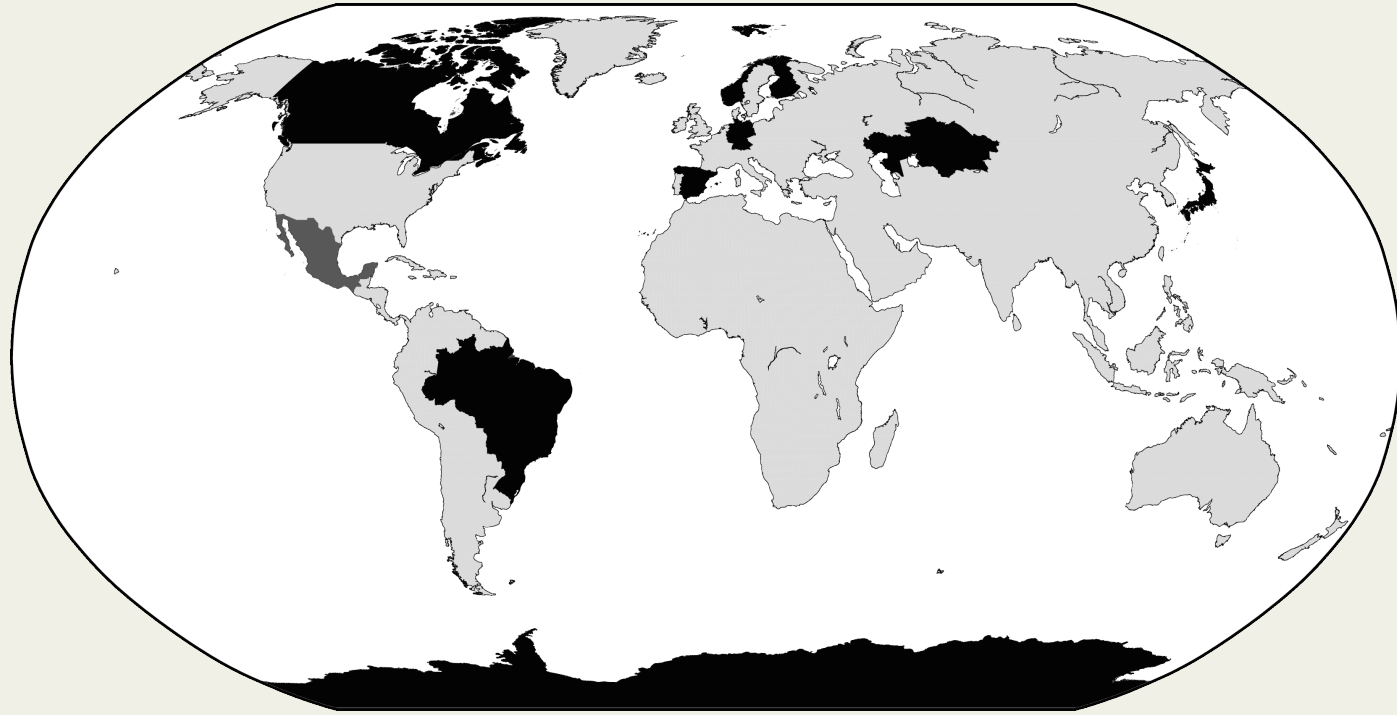
- Brief summary of regional seismicity;
- History of the network and instruments in operation;
- Current status of the network;
- Procedures currently used in:
 - analysis of phase and amplitude picking for local/regional/teleaseismic events,
 - event location,
 - magnitude determination,
 - source mechanisms, etc.
- Data availability.

Benefits to Authors:

- a DOI through CrossRef;
- a landing page;
- long-term availability;
- free access;
- easily identifiable by Google and Google Scholar;
- reviewed by the Chief-Editor of the Summary, *Dr. Kathrin Lieser*;
- where necessary, technical correction provided by a native English speaker, *Mrs Lynn Elms (known as the ISC Admin Officer)*;
- link to the ISC Agency registry;
- soon: link with the FDSN.

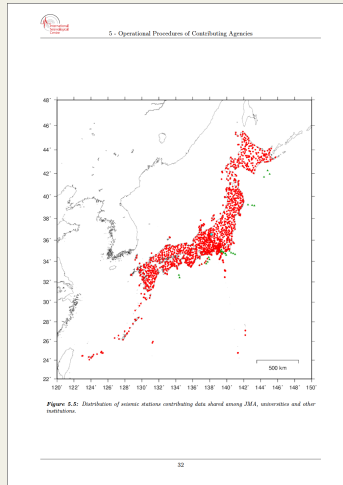
Already Published Network Articles

- JMA, *Japan*
- GS, *Canada*
- USP, *Brazil*
- Collm, *Germany*
- BRG, *Germany*
- AWI, *Germany*
- UoB, *Norway*
- UoH, *Finland*
- ICGC, *Catalonia, Spain*
- BGR, *Germany*
- KNDC, *Kazakhstan*

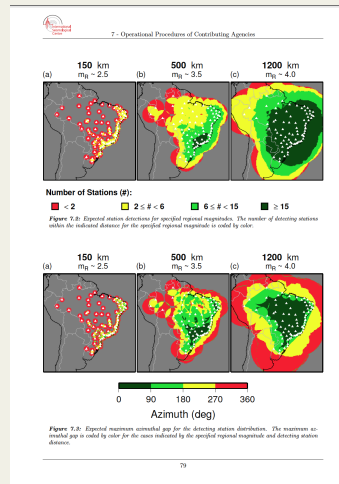


An article from the National Seismological Service in *Mexico* is currently in print

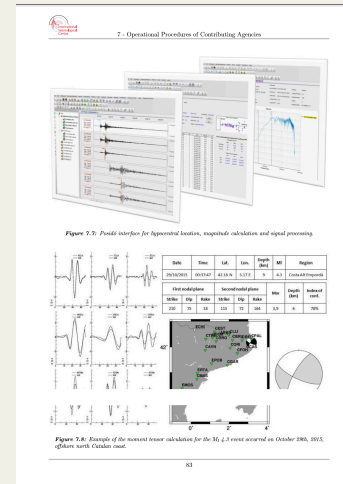
Examples from Published Articles: 1



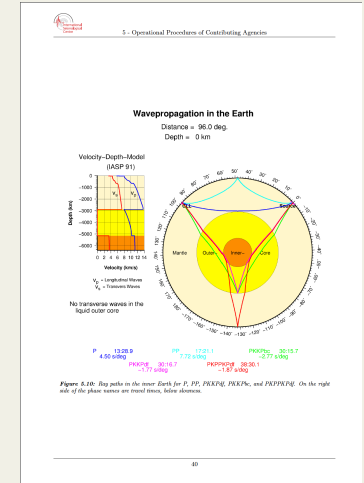
Shared stations in **Japan**, JMA



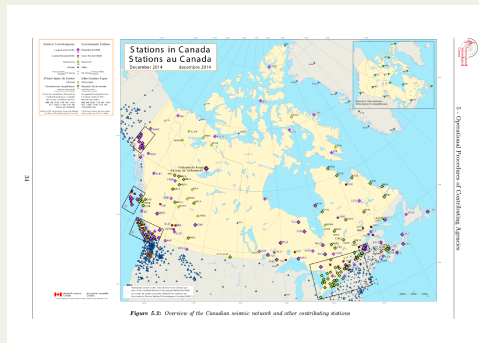
Expected station detections **USP, Brazil**



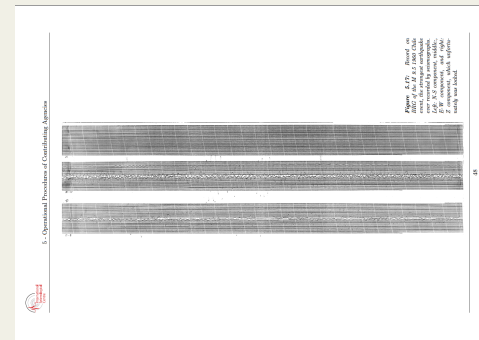
Monitoring procedures at ICGC, **Catalonia**



Ray paths of seismic phases reported by CLL, **Germany**

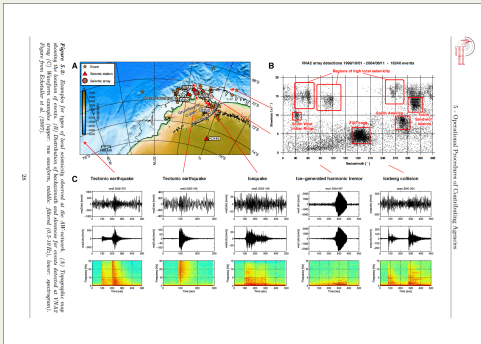


Stations in **Canada**, NRCAN

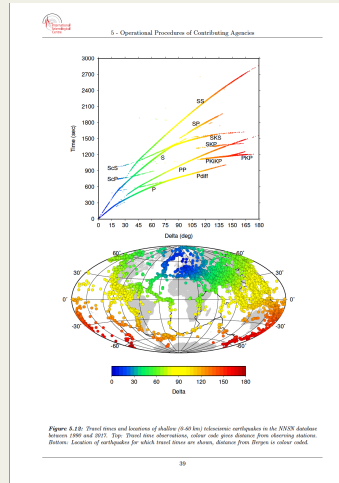


1960 Chile earthquake by BRG Observatory, **Germany**

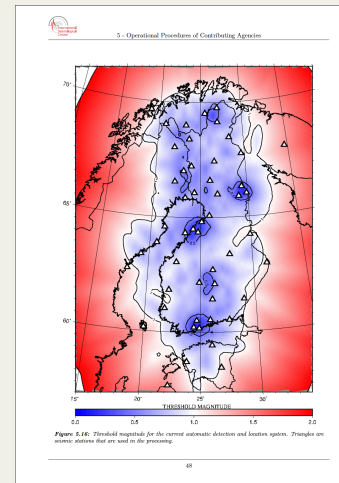
Examples from Published Articles: 2



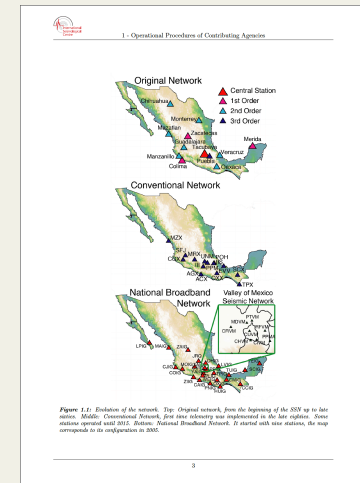
Types of local events in Antarctica recorded by AWI, Germany



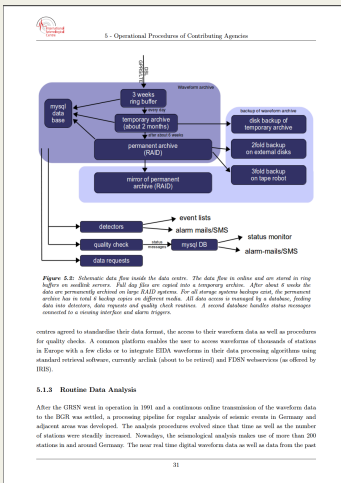
Diversity of seismic phases and earthquakes reported by UoB, Norway



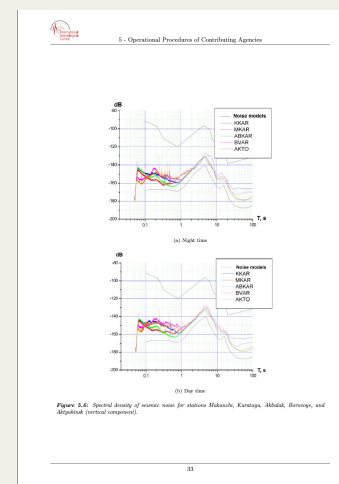
Threshold magnitude of detection and location systems at UoH, Finland



Evolution of the seismic network in Mexico



Data flow at the data centre of the German Regional Seismic Network, BGR



Spectral density of seismic noise recorded by stations of Kazakhstan National Data Centre

Summary

- The network articles in the **ISC Bulletin Summary** provide a history and current snapshot of operations, securing information on procedures for data users, now and in the future.
- These articles are linked with ISC Agency Registry and easily accessible to users of the ISC Bulletin.
- These articles are identified by own **DOI** and have a **landing page**.
- All articles are easily identifiable by **Google**.
- All articles are **reviewed**.
- We plan to link these articles with FDSN registries.
- We invite other seismic networks to join the effort.

