

Up and running from our office in Thatcham

SARA joins as a Sponsor



Thanks to the efforts of **Mauro Mariotti**, at the end of 2021 *SARA Electronic Instruments* became an ISC Sponsor.

SARA is based in Perugia, *Italy* and has been operating in the electronic instrument's market since 1977. Its production has always been focused on small high-tech equipment designed and manufactured entirely at their laboratories. Since 1997, SARA has focused their interest on seismological, geophysical, and vibrational fields. SARA's background, industrial knowledge and collaboration with researchers, professors and technicians has allowed them to create a wide range of instruments with an excellent price/quality ratio, widely used in Europe, Africa, Asia, Central and South America.

Unlike other sponsors, SARA is also planning to contribute seismic event data from some of the stations that it maintains.

ISC Data Collection: 12 (and 22) months behind real time

As the readers are well aware, the ISC Bulletin is now released to users ~24 months behind real time (b.r.t.). Sadly, we can not bring the Reviewed Bulletin production any closer towards real time at present because a good number of original data reporters can barely cope with the existing last minute request for data at 22 months b.r.t. Submitting data at 22 months b.r.t. enables ISC to include your data into the Bulletin but leaves us with no time to rectify possible irregularities in submission.

Thus, we highly appreciate the effort of many tens of agencies that regularly report their revised event data by the standard ISC deadline of **12 months b.r.t.** Approximately 40% of all events are currently reported this way.

We are also grateful to ~20 agencies that report their preliminary event data (within days or hours of event occurrence) to the ISC in addition to their revised data. It allows the ISC to maintain its automatic Bulletin which includes recent unreviewed events.

On-line search: ISF 2.1 and better credit to original data reporters

On November 9, 2021, we released the ISF2.1 and made it the default format for ISC Bulletin searches. This is another step towards the introduction of the ADSL station registry notation (**A**gency, **D**eployment, **S**tation, **L**ocation) into ISC operations.

The ISF2.1 format is exactly the same as its predecessors on the left hand side of each seismic phase data line. On the right hand side we added several previously missing parameters, such as the data Author and Reporter, the channels for arrival time and amplitude readings, the polarity of the long-period first onset and, finally, the latitude, longitude, elevation, and depth of the instrument to ease user's interpretation of station codes.

In addition, we now attach a list of agencies whose original reports contributed to hypocentre locations in the Catalogue search or hypocentre/station reading parameters in the Bulletin search. At present, this information is available for data years 1999 onwards, when the ISC started using its relational database. We have plans to recover and present this information for earlier years, where possible.

CEA station positions checked

As part of its operations, the ISC runs the International Seismograph Station Registry (FDSN network code IR) for the purpose of recording positions of seismic stations which take part in the international exchange of seismic event data. It is essential that we check and update positions of these stations as time goes by because stations get closed or moved, often without notification.

It was discovered during the visit of the ISC Director to Guangzhou, *China* in November 2019 that the station GZH (one of the longest reporting backbone stations of *China*) has actually moved away from its original position close to the city centre by ~70 kilometers.



Ms **Yanru An**, the Formal Representative of *China Earthquake Administration (CEA)* to the ISC, has been asked to help check the entire set of 34

stations, parametric data from which are regularly reported to the ISC by the *CEA*. Data from 24 of these stations were reported to ISC for tens of years since the 1970s or 1980s.

Yanru An checked the location of stations with colleagues in many different provincial administrations of *CEA*. Due to the long time span of these station's reporting, our Chinese colleagues had to go through the historical records to obtain the station locations in each period of time, which took quite a bit of effort.

As a result of this work it appeared that seven *CEA* stations had moved so far from their original position that, by the existing IR rules, we had to retrospectively assign them with a different code in the International Registry

(IR). This allowed the ISC to use the updated positions in current hypocentre calculations and at the same time use the historical positions for recomputing hypocentres of historical events. The latter work is pending until necessary staff resources are found.

The new positions of the following long-term reporting *CEA* stations have been registered under different, although very similar codes:

BJI » BJI2 (Beijing)

BTO » BTO2 (Baotai)

GZH » GZH2 (Guangzhou)

KMI » KMI2 (Kunming)

KSH » KSH2 (Kashi)

QZH » QZH2 (Quanzhou)

GTA » GTA2 (Gaotai)

Here we would like to thank other Data Reporters from *Canada, India, Kazakhstan, Kyrgyzstan, Russia, and Sweden* who in the past went through the effort of checking their station positions in IR and reported the necessary corrections back to the ISC.

Corrections to the ISC Bulletin

Approximately 150 institutions regularly report their event data to the ISC. Sadly, not many of them make an effort to inform the ISC about the deficiencies in those reports, later uncovered by them during other project work. Here we would like to thank the following colleagues in *Russia* that helped to keep the ISC Bulletin cleaner: **Marina Kolomiets, Valeria Levina, Svetlana Poigina, Elena Artjomova, Irina Gabsatarova and Elena Terekhova** from the *Geophysical Survey RAS* in Obninsk; **Nyurgustana Starkova**, *Yakutia Branch of GS RAS*; and **Natalia Noskova**, *Komi Institute of Geology, RAS* in Syktyvkar.



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