

The prime mission of the International Seismological Centre (ISC) is to produce and distribute the ISC Bulletin, which serves as the definitive summary of global seismicity. The ISC Bulletin is the longest continuous and uniform set of bulletin data. To produce this bulletin, the ISC receives and processes parametric data for natural and non-natural seismic events from over 120 seismic networks worldwide.

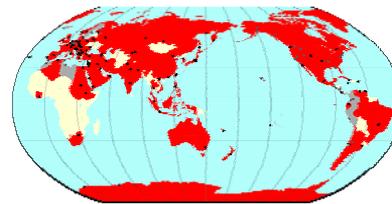
Preliminary Bulletin Data Sources

The ISC currently receives preliminary bulletin data from 21 data centres. Reported information includes hypocentres, source mechanisms, magnitudes, phase arrivals, and felt and damage information. Preliminary hypocentre solutions and arrival data (that passed an initial review by a seismologist locally) arrive at the ISC in days to weeks after seismic event occurrence. These data are grouped daily as they arrive to form the preliminary bulletin available from the ISC website. No ISC hypocentre solutions or magnitudes are computed at this point. The preliminary solutions are deleted as soon as the final reviewed data from networks become available.



Data centres contributing preliminary bulletin data to the ISC.

Bulletin Data Acquisition



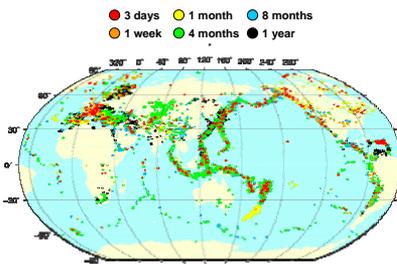
Territories and institutes contributing data directly to the ISC

Final Bulletin Data Sources

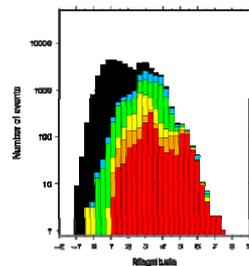
Currently the ISC receives data from over 120 seismic networks, up to 12 months after event occurrence. The data arrive in many different formats which are then parsed into the ISC database. Corresponding preliminary data is deleted at this stage.

Contributing data to the ISC via regional data centres, such as NEIC, EMSC, CASC

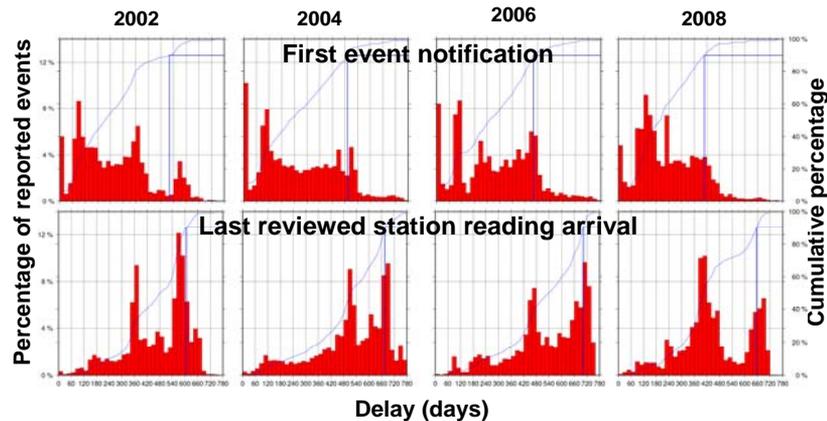
Timeliness



Timeliness of reported events to the ISC between October 2008-September 2009

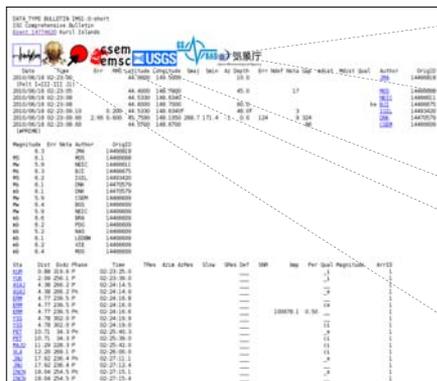


Timeliness of network bulletin data collection for years 2002-2008. The row on the top counts an event when the first (often preliminary) hypocentre arrives at the ISC. The row on the bottom counts an event when the last reviewed station arrival for this event is received by the ISC. On average, the delay in first arriving hypocentres has been decreasing since 2002, but there is more variability in the delay in last arriving station arrivals.



The procedure for data collection at the ISC is rather complex. Data for many events is available in the ISC Preliminary Bulletin as soon as any of the 21 data centres report to the ISC (many within 3 days). Data is always accepted by the ISC, but only data that arrives before the start of analysis is used during analysis of the Final Bulletin.

Preliminary Bulletin



An example of a preliminary hypocentre solution from the ISC website. Preliminary hypocentres, magnitudes and station arrivals are all available on the website as the ISC receives the data. The user can get more detailed information from the reporting data centres by clicking on the logos listed after the event number. This event occurred on June 18, 2010 and it has not yet been analyzed by an ISC seismologist. However, there are hypocentres, magnitudes and station arrivals available as they arrive at the ISC and the ISC database is updated daily.

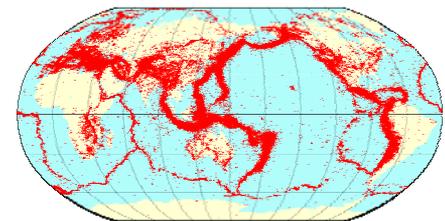
The ISC Bulletins

as available from www.isc.ac.uk



Final Bulletin

Final network bulletins arrive at the ISC approximately 12 months after event occurrence and at this time, the corresponding preliminary solutions and arrivals are discarded. The ISC editors analyze approximately 20% of events (mostly those above magnitude 3.5) once all the data has been collected. The ISC's own hypocentre solutions and magnitudes are computed and thoroughly reviewed at this point. The final ISC Bulletin is a result of this analysis, currently performed less than 24 months behind real time. We plan to reduce this delay to approximately 15-18 months despite a constant sizeable increase in the number of station reports.



ISC Bulletin epicentres for 1964-2010.

Summary

- The ISC's main mission is to produce and distribute the ISC Bulletin, which serves as the definitive summary of global seismicity
- Preliminary hypocentres and phase arrivals are available from the ISC website in days to weeks after event occurrence
- ISC hypocentres are calculated once all data has been collected, currently 24 months after event occurrence

- As data arrives more quickly after event occurrence, the ISC hypocentres can be analyzed sooner and we plan to reduce the delay from event occurrence to ISC Bulletin analysis to approximately 15-18 months
- The ISC does not provide a real-time service and does not issue earthquake notifications
- The ISC bulletin is not based on purely unreviewed automatic data