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Technical Analysis Case Study: 2019 National Data Centre Preparedness Exercise Trigger Event

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The trigger for the 2019 National Data Centre Preparedness Exercise (NPE) scenario (a fictitious nuclear explosion) was based on a real ML 3.7 shallow tectonic seismic event within an earthquake swarm in southern Germany, near the city of Constance. The event occurred at 23:17 UTC on the 29 July 2019 (e.g. see International Seismological Centre bulletin) and is not found in the International Data Centre (IDC) standard products (Reviewed Event Bulletin and Standard Event List 3) or the Late Event Bulletin, even though eight International Monitoring System (IMS) seismic stations are within 1500 km of the event and the IDC threshold monitoring detection capability for this period suggests it should be detected. However, this event was clearly observed at IMS stations in Switzerland (DAVOX), Germany (GERES), Czech Republic (VRAC) and the UK (EKA), as well as at numerous non-IMS stations across Europe. An event was formed by the NET-VISA algorithm and listed in the IDC NET-VISA database ("vSEL3"). We re-analyse the NPE 2019 trigger event (and selected others in this swarm of earthquakes) using both IMS and non-IMS stations and demonstrate the potential important role of auxiliary IMS seismic stations and local seismic networks as part of the expert technical analysis.

Promotional text

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Oral preference format

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