



The Buncefield fire: A case study for analyzing the location capability of an infrasound network

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A large explosion occurred at the Buncefield oil refinery in Hemel Hempstead, 40 km north of London, on December 11, 2005 at 06:03 UTC. At this event, approximately 15 million gallons of fuel blew up. The effects were felt by many people up to a distance of 60 km. Strong infrasound signals were recorded all over central Europe by infrasound stations (France, Sweden, Germany), and by seismic stations in the United Kingdom. The event is of great interest due to the high number of stations detecting signals, the large number of recorded arrivals, and exceptional wind conditions in the stratosphere. Therefore, this event is a benchmark for analyzing the capability of automatic signal processing, phase labeling, propagation modeling using different wind and temperature profiles, and acoustic event location.