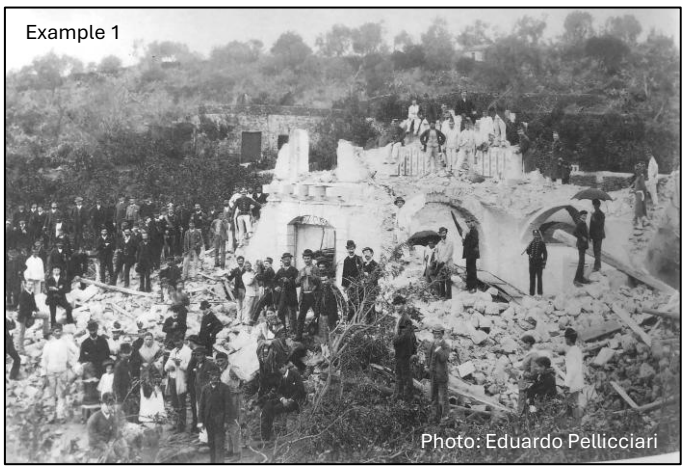
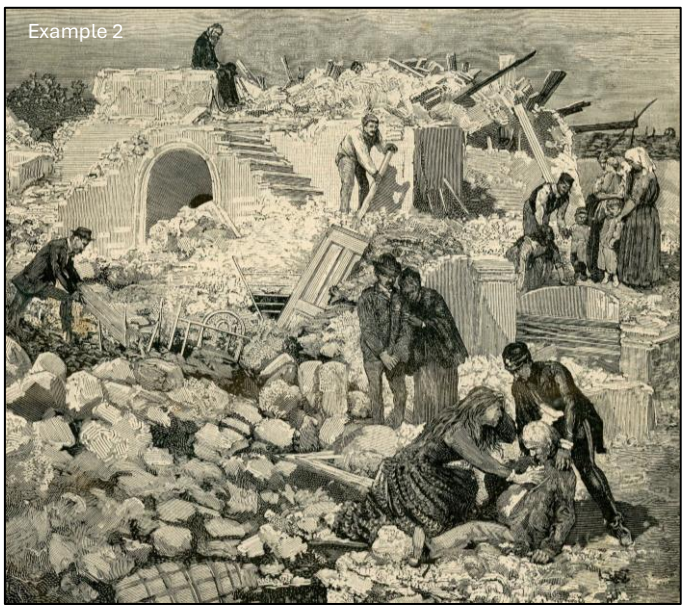
ESSL IF-Scale Tornado Summary

Tornado in Catania, Italy - 1884

Strongest damage: Catania
Event date and time: 7 October 1884, 10:30 UTC (+/- 15 min)
Maximum intensity: IF5

Several houses were (almost) completely destroyed, 28 persons killed and several hundreds injured. Homes with a wall thickness of about 1 meter were reported to have been destroyed.





Example 1:
A brick structure with outer walls of more than 40 cm thickness was destroyed to more than two thirds (DoD 2). Choosing sturdiness class E for damage indicator building structure (assuming weak connections) leads to IF5.

IF-Scale damage indicator (DI): BS (building, structural elements)
IF-Scale sturdiness class: E
IF-Scale Degree of Damage (DoD): 2 (more than 2/3 destroyed)
IF-Scale result: IF5

A written report of homes with 1 meter thick walls that have been destroyed backs up the IF5 rating.

Example 2:
Another building was destroyed to more than two thirds (DoD2). Thickness of walls is less clear in this case, but since it has been a residential building, too, assuming at least sturdiness D for building structure seems reasonable which leads to at least IF4.

DI: BSD
DoD: 2 (more than 2/3 destroyed)
IF-Scale result: ≥ IF4

Number of analyzed historical damage photos: 5; Additional information analyzed: written damage account;

Literature: Sul Tornado di Catania del giorno 7 Ottobre 1884. Relazione del prof. Damiano Macaluso, 1885.
Aldo Musumarra, 2018 , Una vita per l'Etna, Orazio Silvestri vulcanologo fiorentino (1835-1890).

We would like to thank Federico Pavan (MeteoNetwork Pretemp) for his valuable contributions to this rating.

The International Fujita Scale (IF-Scale) documentation is available here:
https://www.essl.org/cms/research-projects/international-fujita-scale/