

Hai Sentito Il Terremoto (HSIT) - Macroseismic questionnaire database 2007-2018, version 1,
doi:[10.13127/HSIT/Q.1](https://doi.org/10.13127/HSIT/Q.1)

File description

Database of the questionnaires, about earthquake macroseismic effects observed in Italy, collected for earthquakes occurred from 15-06-2007 to 31-12-2018 by “*Hai Sentito Il Terremoto*” system (HSIT, <https://doi.org/10.13127/HSIT>) in Italy. Data were voluntarily given by people and they were not revised by scientists, thus in this database, there may be errors due to a wrong attribution of responses, in particular for the events immediately following or just preceding a strong earthquake.

Macroscopic observations were collected through the web-based questionnaire described in “Tosi P., Sbarra P., De Rubeis V., and Ferrari C. (2015), Macroscopic intensity assessment method for web-questionnaires, *Seismological Research Letters*, 86, 985-990, doi: 10.1785/0220140229”.

The municipality data (columns from 34 to 37) were obtained from the National Institute of Statistics (ISTAT 2011). Earthquake parameters (columns from 38 to 44) were obtained from ISIDe Working Group (2007), Italian Seismological Instrumental and Parametric Database (ISIDe) <https://doi.org/10.13127/ISIDE>. Column descriptions are listed in Tables 1 and 2. In Table 2 are listed also all answer codes of the HSIT questionnaire.

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Table 1. Column number and field explanation of the file.

| Column number | Field Name | Field Explanation |
|---------------|-----------------------------|--|
| 1 | IdQuestionnaire | questionnaire identifier |
| 2 | QuestionnaireVersion | the answer codes have been updated four times since 2007 |
| 3 to 31 | questionnaire questions | 29 columns listed in the Table 2 |
| 32 | QuestionnaireReliabilityMCS | questionnaire used (1) or not used (0) for MCS intensity estimation |
| 33 | QuestionnaireReliabilityEMS | questionnaire used (1) or not used (0) for EMS intensity estimation |
| 34 | MunicipalityNameByDb | municipality in which the observer was located during the quake (ISTAT 2011) |
| 35 | MunicipalityIstatCode | municipality ISTAT identifier (ISTAT 2011) |
| 36 | MunicipalityLat | latitude N WGS84 of the municipality centroid (ISTAT 2011) |
| 37 | MunicipalityLon | longitude E WGS84 of the municipality centroid (ISTAT 2011) |
| 38 | EventID | Italian Seismological Instrumental and Parametric Database ISIDe earthquake identifier |

| | | |
|----|-------------------|--|
| 39 | EventDate | earthquake occurrence date and time UTC in ISO 8601 “YYYY-MM-DD hh:mm:ss” (ISIDE) |
| 40 | EventLat | latitude N WGS84 of the earthquake epicentre (ISIDE) |
| 41 | EventLon | longitude E WGS84 of the earthquake epicentre (ISIDE) |
| 42 | EventMagPrefType | best quality earthquake magnitude type (ISIDE) |
| 43 | EventMagPrefValue | best quality earthquake magnitude value (ISIDE) |
| 44 | EventDepth | earthquake hypocentral depth in km (ISIDE) |

Table 2. Column number and answer codes of the HSIT questionnaire.

| Column number | Question Field | Answer | Indoors | Outdoors | Code |
|---------------|--------------------------------------|------------------------|---------|----------|------|
| 3 | Observer location (versions 1, 2) | inside a building | x | x | 4 |
| | | outdoors | x | x | 1 |
| | Observer location (versions 3, 4) | inside a building | x | x | 4 |
| | | outdoors | x | x | 2 |
| | | inside a vehicle | x | x | 3 |
| 4 | Floor (version 1) | unable to say | x | | 400 |
| | | basement/ground (-1/0) | x | | 401 |
| | | 1/2 | x | | 402 |
| | | 3/4 | x | | 403 |
| | | 5/6 | x | | 404 |
| | | >6 | x | | 405 |
| | Floor (versions 2, 3, 4) | unable to say | x | | 400 |
| | | basement (-1) | x | | 500 |
| | | ground (0) | x | | 501 |
| | | 1 | x | | 502 |
| | | 2 | x | | 503 |
| | | 3 | x | | 504 |
| | | 4 | x | | 505 |
| | | 5 | x | | 506 |
| | | 6 | x | | 507 |
| | | 7 | x | | 508 |
| | | 8 | x | | 509 |
| | | 9 | x | | 530 |
| | | 10 | x | | 531 |
| | | >10 | x | | 532 |
| 5 | Building height (version 1) | unable to say | x | | 410 |
| | | 1/2 | x | | 411 |
| | | 3-5 | x | | 412 |
| | | 6-10 | x | | 413 |

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| | Building height (versions 2, 3, 4) | >10 | x | | 414 |
| | | unable to say | x | | 410 |
| | | 1 | x | | 510 |
| | | 2 | x | | 511 |
| | | 3 | x | | 512 |
| | | 4 | x | | 513 |
| | | 5 | x | | 514 |
| | | 6 | x | | 515 |
| | | 7 | x | | 516 |
| | | 8 | x | | 517 |
| | | 9 | x | | 518 |
| | | 10 | x | | 519 |
| | | >10 | x | | 520 |
| 6 | Observer situation (version 1) | unable to say | x | x | 20 |
| | | sleeping | x | x | 21 |
| | | at rest | x | x | 22 |
| | | in motion | x | x | 23 |
| | Observer situation (versions 2, 3, 4) | unable to say | x | x | 20 |
| | | sleeping but awakened by the shaking | x | x | 21 |
| | | at rest | x | x | 22 |
| | | in motion | x | x | 23 |
| | | sleeping | x | x | 25 |
| 7 | Earthquake felt | yes | x | x | 31 |
| | | no | x | x | 32 |
| 8 | Shaking strength | unable to say | x | x | 41 |
| | | not felt | x | x | 42 |
| | | weak | x | x | 43 |
| | | moderate | x | x | 44 |
| | | strong | x | x | 45 |
| 9 | Fear (version 1) | unable to say | x | x | 51 |
| | | no | x | x | 52 |
| | | yes | x | x | 53 |
| | Fear (versions 2, 3, 4) | unable to say | x | x | 51 |
| | | not at all, very little | x | x | 52 |
| | | moderately | x | x | 53 |
| | | a lot, very much | x | x | 54 |
| 10 | Balance | unable to say | x | x | 71 |
| | | no problem | x | x | 72 |
| | | difficulty to keep balance | x | x | 73 |
| | | fall | x | x | 74 |
| | | dizziness only | x | x | 75 |
| 11 | Frightened animals | unable to say | x | x | 91 |
| | | no problem | x | x | 92 |
| | | animals indoors | x | | 93 |

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|----|----------------------------------|----------------------|---|---|-----|
| | | animals outdoors | | x | 94 |
| 12 | Free-hanging objects | unable to say | x | | 101 |
| | | still | x | | 102 |
| | | slight swinging | x | | 103 |
| | | violent swinging | x | | 104 |
| 13 | China and glasses | unable to say | x | | 111 |
| | | still | x | | 112 |
| | | rattling | x | | 113 |
| | | clattering together | x | | 114 |
| | | have broken | x | | 115 |
| 14 | Small objects (version 1) | unable to say | x | | 121 |
| | | still | x | | 122 |
| | | moved or fell | x | | 123 |
| | Small objects (versions 2, 3, 4) | unable to say | x | | 121 |
| | | still | x | | 122 |
| | | moved | x | | 123 |
| | | fell | x | | 124 |
| 15 | Doors and windows | unable to say | x | | 131 |
| | | still | x | | 132 |
| | | rattling | x | | 133 |
| | | opening or closing | x | | 134 |
| | | slamming | x | | 135 |
| 16 | Liquids | unable to say | x | x | 141 |
| | | still | x | x | 142 |
| | | oscillating slightly | x | | 143 |
| | | oscillating strongly | x | | 144 |
| | | spilling out | x | | 145 |
| | | splashes from pools | | x | 146 |
| 17 | Pictures, vases, books | unable to say | x | | 151 |
| | | still | x | | 152 |
| | | shifted | x | | 153 |
| | | few fell | x | | 154 |
| | | many fell | x | | 155 |
| 18 | Furniture | unable to say | x | | 161 |
| | | still | x | | 162 |
| | | swinging | x | | 163 |
| | | moved | x | | 164 |
| | | fell or overturned | x | | 165 |
| 19 | Plants, trees | unable to say | | x | 191 |
| | | still | | x | 192 |
| | | visibly moving | | x | 193 |
| | | shaking branches | | x | 194 |
| | | branches have broken | | x | 195 |
| 20 | Acoustic effect | unable to say | x | x | 201 |
| | | not heard | x | x | 202 |

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| | | heard | x | x | 203 |
| 21 | Start of acoustic effect | unable to say | x | x | 211 |
| | | before the shaking | x | x | 212 |
| | | during the shaking | x | x | 213 |
| | | after the shaking | x | x | 214 |
| 22 | Provenance of acoustic effect | unable to say | x | x | 221 |
| | | from the depth | x | x | 222 |
| | | from the building | x | x | 223 |
| | | from outdoors | x | x | 224 |
| 23 | Building type of structure | unable to say | x | | 231 |
| | | masonry | x | | 232 |
| | | reinforced concrete | x | | 233 |
| | | wood | x | | 234 |
| | | steel | x | | 235 |
| | | mixed masonry and reinforced concrete (versions 3, 4) | x | | 236 |
| 24 | Walls | unable to say | x | | 241 |
| | | no damage | x | | 242 |
| | | cracks in plaster only | x | | 243 |
| | | small cracks in walls and/or big pieces of plaster fall | x | | 244 |
| | | large cracks in walls | x | | 245 |
| | | collapse | x | | 246 |
| 25 | Roof tiles | unable to say | x | | 251 |
| | | no damage | x | | 252 |
| | | few sliding | x | | 253 |
| | | many sliding | x | | 254 |
| 26 | Chimneys | unable to say | x | | 261 |
| | | no damage | x | | 262 |
| | | cracks | x | | 264 |
| | | fell | x | | 265 |
| 27 | Building damages | unable to say | x | | 271 |
| | | no damage | x | | 272 |
| | | slight damage | x | | 273 |
| | | moderate damage | x | | 274 |
| | | partial collapse | x | | 275 |
| | | total collapse | x | | 276 |
| 28 | End of acoustic effect (versions 3, 4) | unable to say | x | x | 291 |
| | | before the shaking | x | x | 292 |
| | | during the shaking | x | x | 293 |
| | | after the shaking | x | x | 294 |
| 29 | Intensity of acoustic effect (versions 3, 4) | unable to say | x | x | 301 |
| | | soft | x | x | 302 |
| | | medium | x | x | 303 |
| | | loud | x | x | 304 |

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| 30 | Earthquake lights (versions 3, 4) | unable to say | x | x | 331 |
| | | not observed | x | x | 332 |
| | | observed | x | x | 333 |
| 31 | Acoustic effect similitude (versions 3, 4) | unable to say | x | x | 1001 |
| | | rumble | x | x | 1002 |
| | | shot | x | x | 1003 |
| | | explosion | x | x | 1004 |
| | | thunder | x | x | 1005 |
| | | whistle | x | x | 1006 |
| | | passing truck | x | x | 1007 |
| | | rocks fall | x | x | 1008 |
| | | thoud | x | x | 1009 |
| | | other | x | x | 1010 |