ITACA 2.2
USER INFO

INTRODUCTION

Processed time-series and response spectra and unprocessed time-series are available from the download pages, where the parameters of interest can be set and specific events, stations, waveforms and their metadata can be retrieved.

The waveform files contain a 64 rows header and a data vector. Response spectra files contain a 64 rows header and pairs of period - response spectra ordinates at 105 periods (from 0.01s to 10s)

File names

Following the standard of the Seed manual v 2.4 (www.iris.edu), the file names have the following structure:

net_code.station_code.location_code.channel_code.D.date.time.processing_type.waveform_type.format

where:

'net_code' is the FDSN network code (http://www.fdsn.org/networks/)

'station_code' is the station code (3 to 5 characters)

'location_code' is the channel location code (e.g. free field, different depths or heights).

'channel_code' indicates the waveform type and the component and has 3 digits:

    1) 1 digit for the band code (in our case H = High Broad Band)

    2) 1 digit to indicate the instrument code: N, L, G = accelerometer (the codes are the ones used by different networks)

    3) 1 digit to indicate the orientation code: e.g. Z N E (traditional Vertical, North-South, East-West) or 2 3 Z orthogonal components but non-traditional orientations

'date' is the event date as YYYYMMDD

'time' is the event origin time as hhmmss

'processing_type' is either X (unprocessed) or C (processed)

'waveform_type' is either ACC (acceleration) VEL (velocity) DIS (displacement) SA (acceleration spectrum) PSV (pseudo-velocity spectrum) SD (displacement spectrum)

'format' is the file format (.ASC for ASCII format)

Example: the acceleration recorded by the Department of Civil Protection network (IT) at S. Giuliano di Puglia (SGIUB), NS component, occurred on 2002/11/12 at 09:27:00 GMT (event origin time), unprocessed, ASCII format, will have the following name:

IT.SGIUB..HNN.D.20021112.092700.X.ACC.ASC

ASCII HEADER

The ASCII-with-header records (acceleration, velocity, displacement or response spectra) have a header of 64 rows, containing information in order to make the record self-consistent.

1	EVENT_NAME	Name of the seismic event
2	EVENT_ID	Event ID in the database
3	EVENT_DATE_YYYYMMDD	GMT event date (YYYYMMDD)
4	EVENT_TIME_HHMMSS	GMT event origin time (hhmmss)
5	EVENT_LATITUDE_DEGREE	Event Latitude (decimal degrees)
6	EVENT_LONGITUDE_DEGREE	Event Longitude (decimal degrees)
7	EVENT_DEPTH_KM	Event depth (km)
8	HYPOCENTER_REFERENCE	Hypocentre reference
9	MAGNITUDE_W	Moment magnitude (Mw)
10	MAGNITUDE_W_REFERENCE	Moment magnitude reference
11	MAGNITUDE_L	Local magnitude (Ml)
12	MAGNITUDE_L_REFERENCE	Local magnitude reference
13	FOCAL_MECHANISM	Focal mechanism (NF, SS, TF, U, etc.)
14	NETWORK	Network code
15	STATION_CODE	Station code
16	STATION_NAME	Station name
17	STATION_LATITUDE_DEGREE	Station Latitude (decimal degrees)
18	STATION_LONGITUDE_DEGREE	Station Longitude (decimal degrees)
19	STATION_ELEVATION_M	Station elevation (m.a.s.l.)
20	LOCATION	Flag indicating the location
21	SENSOR_DEPTH_M	Sensor depth below ground level (m)
22	VS30_M/S	$V_{s,30}$ (m/s)
23	SITE_CLASSIFICATION_EC8	Geotechnical classification (EC8): A, A*, B, B*, etc.; where the * indicates that site classification is not based on a direct Vs,30 measurement
24	MORPHOLOGIC_CLASSIFICATION	Morphologic classification

25	EPICENTRAL_DISTANCE_KM	Epicentral distance (km)
26	EARTHQUAKE_BACKAZIMUTH_DEGREE	Earthquake backazimuth (degrees)
27	DATE_TIME_FIRST_SAMPLE_YYYYMMDD_HHMMSS	Time (GMT) of the first sample (YYYYMMDD_hhmmss.dec)
28	DATE_TIME_FIRST_SAMPLE_PRECISION	seconds / milliseconds
29	SAMPLING_INTERVAL_S	Sampling interval (s)
30	NDATA	Number of observations
31	DURATION_S	Duration (s)
32	STREAM	Channel code (3 digits, e.g. HNE)
33	UNITS	Units (cm/s^2, cm/s or cm)
34	INSTRUMENT	Instrument (sensor and digitizer)
35	INSTRUMENT_ANALOG/DIGITAL	Flag to indicate whether the instrument is digital or analog
36	INSTRUMENTAL_FREQUENCY_HZ	Instrument Frequency (Hz)
37	INSTRUMENTAL_DAMPING	Instrument Damping
38	FULL_SCALE_G	Fullscale (g)
39	N_BIT_DIGITAL_CONVERTER	Number of bits of the Analog to Digital Converter
40	PGX_UNITS	PGA, PGV or PGD (cm/s^2, cm/s or cm)
41	TIME_PGX_S	Time corresponding to the PGA, PGV, PGD
42	BASELINE_CORRECTION	Flag indicating the baseline corrction
43	FILTER_TYPE	Filter type (Butterworth, etc.)
44	FILTER_ORDER	Filter order
45	LOW_CUT_FREQUENCY_HZ	LP1 (low-cut frequency)
46	HIGH_CUT_FREQUENCY_HZ	LP2 (roll-on frequency)
47	LATE/NORMAL_TRIGGERED	LT/NT
48	DATABASE_VERSION	Database version
49	HEADER_FORMAT	Header format version
50	DATA_TYPE	Data type ("ACCELERATION", "ACCELERATION RESPONSE SPECTRUM", "VELOCITY", "PSEUDO-VELOCITY RESPONSE SPECTRUM", "DISPLACEMENT" or "DISPLACEMENT RESPONSE SPECTRUM")
51	PROCESSING	Processing reference ("none" indicates unprocessed acceleration)
52	DATA_TIMESTAMP_YYYYMMDD_HHMMSS	Date of file compilation
53	DATA_LICENSE:	License for data use
54	DATA_CITATION:	Network or data service citation
55 ... 59	UNUSED1 ... UNUSED5	Reserved fields
60 ... 64	USER1 ... USER5	User defined fields