

## 1.1 ECOS Catalogue Format

### 1.1.1 Parameters and formats of event records

Parameter	Description	Format
Datanr	unique identifier for the dataset	Double
cc	certainty code	Integer
Type	type of event code	Integer
Year	Year	Integer
Month	Month	Integer
Day	Day	Integer
Hour	Hour	Integer
Minute	Minute	Integer
Second	Second	Double
Lat	latitude N in degrees	Double
Lon	longitude E in degrees	Double
ceN	code for epicentral location uncertainty in NS-direction	Integer
ceE	code for epicentral location uncertainty in EW-direction	Integer
h	focal depth in km	Double
ch	code for focal depth uncertainty	Integer
M <sub>w</sub>	moment-magnitude	Double
cM <sub>w</sub>	code for moment-magnitude uncertainty	Integer
M <sub>w</sub> _ag	agency code for moment-magnitude	Integer
lo	epicentral intensity	Integer
clo	code for epicentral-intensity uncertainty	Integer
lo_sc	code for macroseismic scale of lo	Integer
lo_ag	agency code for intensity assignment of lo	Integer
lx	maximum observed intensity	Integer
clx	code for maximum-intensity uncertainty	Integer
lx_sc	code for macroseismic scale of lx	Integer
lx_ag	agency code for intensity assignment lx	Integer
lsp	number of intensity site-points in Swiss database	Integer
catalogue_id	original catalogue code	Integer
ax	area of largest effects	Text
Comment	comment to the database entry	Text

### 1.1.2 Magnitude parameters

In addition to the parameters listed above, in each event record there are up to 24 possibilities to enter different magnitude estimates for the same event from different catalogues.

Parameter	Description	Format
mag1	magnitude value 1	double
mag1_sc	type code for mag1	integer
mag1_c	code for magnitude uncertainty of mag1	integer
mag1_ag	agency_code for mag1	integer
mag2	magnitude value 2	double
mag2_sc	type code for mag2	integer
mag2_c	code for magnitude uncertainty of mag2	integer
mag2_ag	agency_code for mag2	integer
.....		
mag24	magnitude value 24	double
mag24_sc	type code for mag24	integer
mag24_c	code for magnitude uncertainty of mag24	integer
mag24_ag	agency code for mag24	integer

### 1.1.3 Tables of codes in the ECOS database

The following tables describe the codes for the parametric earthquake catalogue.

#### Certainty code (cc)

cc	certainty code
1	event certain
2	event questionable
3	event fake
4	event fake: no earthquake
5	event fake: historical tradition error
6	event fake: dating problems (calendar & night)

#### Type of event code (type)

type	description
0	unknown
1	Induced
2	Explosion
3	Earthquake
4	Earthquake main and single event
5	EQ aftershock
6	EQ foreshock
7	EQ swarm event

#### Code for uncertainty of horizontal epicenter location (ceN,ceE)

ceN, ceE	EXY [km]
0	unknown
1	5
2	≤ 10
3	≤ 20
4	≤ 50
5	≤ 100
6	> 100

#### Code for uncertainty of focal depth (ch)

ch	EZ [km]
0	unknown
1	≤ 5
2	≤ 10
3	> 10
4	according to macroseismic determination

### Code for magnitude uncertainty (cM<sub>w</sub>, mag1\_c, mag2\_c, ...)

Code	units
0	unknown
1	≤ 0.2
2	≤ 0.5
3	≤ 1.0
4	> 1.0

### Code for intensity uncertainty (cI<sub>o</sub>, cI<sub>x</sub>)

cI <sub>o</sub> , cI <sub>x</sub>	units
0	unknown
1	< 0.5
2	= 0.5
3	= 1.0
4	= 2.0

### Code for macroseismic scale (I<sub>o\_sc</sub>, I<sub>x\_sc</sub>)

I <sub>o_sc</sub> , I <sub>x_sc</sub>	macroseismic_scale_type	shortcut
0	unknown	
1	European macroseismic scale 1992	EMS92
2	European macroseismic scale 1998	EMS98
3	Medvedev scale 1953	M53
4	Mercalli-Cancani-Sieberg scale 1932	MCS
5	Modified Mercalli scale 1931	MM
6	Modified Mercalli scale 1956	MMS
7	Medvedev-Sponheuer-Kárník scale 1964	MSK64
8	Medvedev-Sponheuer-Kárník scale 1981	MSK
9	Rossi Forel scale 1883	RF
10	Mercalli-Sieberg scale	MS
11	Montandon	Mon

### Code for reference and authors (M<sub>w\_ag</sub>, I<sub>o\_ag</sub>, I<sub>x\_ag</sub>, catalogue\_id, mag1\_ag, ..., mag10\_ag)

Code	country	catalogue	Agency_id	Description of Agency
1	Switzerland	Mecos	SED	Swiss Seismological Service
2	Switzerland	Mecos02	SED	Swiss Seismological Service
3	Switzerland	Iecos	SED	Swiss Seismological Service
4	Germany	Instr_BRD_Cat	BGR	Bundesamt für Geowissenschaften und Rohstoffe
5	Germany	Macr_BRD_Cat	BGR	Bundesamt für Geowissenschaften und Rohstoffe (Leydecker Catalogue)
6	Germany	Instr_LED_Cat	LED	Landeserdbebendienst Geolog. Landesamt Baden-Württemberg
7	Germany	Instr_Karls_Cat	Karlsruhe	Universität Karlsruhe
8	Italy	NT4.1.1	CNR/GNDT	Consiglio Nazionale delle Ricerche, Milano
9	Italy	Instr_Italy_Cat	INGV	Istituto Nazionale di Geofisica e Vulcanologia
10	France	Sisfrance	BRGM	Bureau de Recherche Geophysique et Miniere

11	France	LDG_Cat	LDG	Laboratoire de Detection Geophysique
12	Austria	Austria_Cat	Austria	ZAMG Zentralanstalt für Meteorologie und Geodynamik
13	Germany	GSHAP	GFZ	GeoForschungsZentrum Potsdam
14	France	IPSN_Catalogue	IPSN	Recherche des caracteristique de séismes historique en France (Book)
15	GB	ISC_Catalogue	ISC	International Seismological Center

### Code for magnitudes (mag1\_sc,..., mag10\_sc)

Code	type of magnitudes	shortcut
1	local magnitude	M <sub>L</sub>
2	Surface wave magnitude	M <sub>S</sub>
3	body wave magnitude	m <sub>b</sub>
4	macroseismic magnitude	M <sub>m</sub>
5	duration magnitude	M <sub>d</sub>
6	moment magnitude	M <sub>w</sub>

### General magnitude overview :

Country	Agency (equals SrcAg – Source Agency)	Magnitude type (Peagasoscode)	Magnitude-No in ECOS-catalogue
CH	lecos (3)	ML (1)	1
	SED(1)	Md (5)	2
	SED(3)	Ms (2)	3
	Mecos (1)	ML (1)	4
	Mecos (1)	Mm (4)	5
	Mecos02 (2)	Mm (4)	6
D	Instr_BGR (4)	ML (1)	7
	Macroseismic_BGR (5)	ML(1)	8
	Macroseismic_BGR (5)	Mm (4)	9
	Macroseismic_BGR (5)	Ms (2)	10
	LED (6)	ML (1)	11
	Karlsruhe (7)	ML (1)	12
	Gshap (13)	Mw (6)	13
I	NT4_1_1 (8)	Ms (2)	14
	NT4_1_1 (8)	Mm (4)	15
	Instr_Italy (9)	ML (1)	16
	Instr_Italy (9)	Md (5)	17
F	sisfrance		
	instr_france(11)	ML (1)	18
	instr_france(11)	Md (5)	19
	IPSN (14)	Mm (4)	20
A	Austria (12)	ML (1)	21
UK	ISC (15)	Mb (3)	22
	ISC (15)	Ms (2)	23
CH	SED(3)	Mw (6)	24