

UNIONE EUROPEA

REGIONE ABRUZZO

PROTEZIONE CIVILE

Protezione Civile  
Dipartimento della Protezione Civile

Attuale dell'Art.11 della Legge 24 Giugno 2009, n. 77  
Attività di Prevenzione del Rischio Sismico - Microzonazione Sismica del Territorio Regionale  
Progetto Co-finanziato con Fondi Comunitari FSR-FESR Abruzzo - 2007-2013 Asse IV - Attività IV 3.1

Progetto Pilota per la Microzonazione Sismica di Livello 3 del Comune di Sulmona

# MICROZONAZIONE SISMICA di Livello 1

## Sezioni Geologico-Tecniche: Foglio 3(J-M)

SCALA 1:5.000 (esagerazione verticale Scala 1:2.500)

Sei sismopila CTR 13.000 fornito dal Servizio Cartografico della Regione Abruzzo - Sistema di Informazione Geografica MCS 1504 Fuso 33N

### REGIONE ABRUZZO

#### Comune di Sulmona (AQ)

Validazione del Tavolo Tecnico MZS

Coordinatore Scientifico del Progetto:  
Prof. Alberto Pizzi (INGEO)

Direzione Gruppi di Lavoro:  
Cartografia Geologica e Geomorfologica:  
Prof. Enrico Micciché (INGEO), Dott. Tommaso Piacentini (INGEO),  
Archiviazione Informatica e GIS: Dott. Giorgio Pippone,  
Indagini di Sismologia Storica: Dott. Fabrizio Galatini (INGV-AG),  
Indagini HVSR da Microtremore: Dott.ssa Lucia Luczi (INGV-MI)

INGEO

Dipartimento di Ingegneria e Geologia  
Università G. d'Annunzio Chieti-Pescara

INGV

Collaboratori: Dott. Antonio A. Genovese (INGV-MI), Dott. Roberto Carozzo (Archivio di Stato Sulmona), Dott.ssa Alessandra Di Domenico (INGEO), Dott. Pierluigi Di Federico (INGEO), Dott.ssa Carla Di Nanno, Dott. Marco Masini (INGV-MI), Dott. Marco Scavia (INGEO), Dott. Rosalba Puglisi (INGV-MI), Dott. Tullio Urbani (INGEO).

### Legenda

#### Unità Geologiche del Quaternario (con indicazione dell'Unità Litotecnica)

<b>all</b> - Deposito alluvionale e fluvioglaciale: sabbie ghiaiose (Unità Litotecnica E4-IVc) Dolomiti	<b>at2</b> - Deposito alluvionale terrazzato: sabbie ghiaiose poco indurite (Unità Litotecnica E4-IIIc) Pianisone Superiore-Dolomiti	<b>lac</b> - Deposito lacustre e palustre: argille limose coesive (Unità Litotecnica E4-IVc) Dolomiti
<b>col</b> - Coltre alluvio-colluviale: limi argillosi e limi sabbiosi coesivi (Unità Litotecnica F3-IV) Dolomiti	<b>at1</b> - Deposito alluvionale terrazzato: sabbie ghiaiose poco indurite (Unità Litotecnica E4-IIIc) Pianisone Medio-Superiore	<b>lac</b> - Deposito lacustre e palustre: argille limose coesive (Unità Litotecnica E4-IVc) Dolomiti
<b>at3</b> - Deposito alluvionale terrazzato: sabbie ghiaiose poco indurite (Unità Litotecnica E4-IIIc) Pianisone Superiore-Dolomiti	<b>lac</b> - Deposito lacustre e palustre: argille limose coesive (Unità Litotecnica E4-IVc) Dolomiti	<b>lac</b> - Deposito lacustre e palustre: argille limose coesive (Unità Litotecnica E4-IVc) Dolomiti

#### Unità Geologiche Marine (con indicazione dell'Unità Litotecnica)

<b>CTN</b> - Calcarei Cristallini, calcari bioclastici (Unità Litotecnica B1) Cenozoico p.p. Mesozoico	<b>CCR</b> - Calcarei Cretacei e Reticolari calcari micritici (Unità Litotecnica B1) Cenozoico p.p. Mesozoico
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#### Elementi Tettonico-Strutturali

- Faglia normale non attiva (la fregatura se la traccia è incerta)
- Limite Unità Litotecnica certo
- Limite Unità Litotecnica presunto

#### Caratteristiche Geomorfologiche: Instabilità di Versante

- Inattiva
- Frana complessa

#### Simboli

- SUS: Misure di microtremore di nuova realizzazione.

### J

Lat 4653192  
Long 410738

SW

500 m

450 m

400 m

350 m

300 m

100 m

at2-E5IIIc col-F3V ant-F3V at1-E2lb at2-E5IIIc col-F3V at1-E2lb ver-b-E4IIIc CIR-B1 at2-E5IIIc all-E5IVc at1-E2Ib lac-E4I

Bedrock ?

Bedrock ?

Bedrock ?

Colle Savente

CTN-B1

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

Amplitude

Frequency, f [Hz]

SU38

SU37

SU25

L-L'

### L

Lat 4657720  
Long 409133

SSE

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

at2-E5IIIc 101 at1-E2Ib ant-G 33-37 46 at1-E2Ib 102 col-F3V 23 24 ant-G 107 col-F3V 140 145 at1-E4Ib 16-19 118 at3-E5IIIc all-E5IVc col-F3V at3-E5IIIc 108 lac-F4I lac-F4 lac-E4I

Bedrock ?

Sulmona (Centro Storico)

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

Amplitude

Frequency, f [Hz]

SU37

SU36

NNW H-H' SE

SU22

G-G' F-F' E-E'

SU24

D-D'

SU28

C-C'

SU10

at2-F3V

Fiume Gizio

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

Amplitude

Frequency, f [Hz]

### M'

Lat 4657720  
Long 409133

SSE

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

Bedrock

Sulmona (Centro Urbano)

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

Amplitude

Frequency, f [Hz]

SU23

SU35

I-I' H-H' G-G' F-F' E-E'

SU34

D-D'

SU14

C-C'

SU7

SU5

SU9

B-B'

SU8

A-A'

NW

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

Bedrock

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Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

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Frequency, f [Hz]

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I-I' H-H' G-G' F-F' E-E'

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C-C'

SU7

SU5

SU9

B-B'

SU8

A-A'

NW

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

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A-A'

NW

550 m

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550 m

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SU5

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B-B'

SU8

A-A'

NW

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

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SU7

SU5

SU9

B-B'

SU8

A-A'

NW

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

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B-B'

SU8

A-A'

NW

550 m

500 m

450 m

400 m

350 m

300 m

250 m

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100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

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550 m

500 m

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NW

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400 m

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A-A'

NW

550 m

500 m

450 m

400 m

350 m

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250 m

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col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

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Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

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SU23

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I-I' H-H' G-G' F-F' E-E'

SU34

D-D'

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SU7

SU5

SU9

B-B'

SU8

A-A'

NW

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

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Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

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SU23

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NW

550 m

500 m

450 m

400 m

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col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

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Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

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SU8

A-A'

NW

550 m

500 m

450 m

400 m

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250 m

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col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

Bedrock

Sulmona (Centro Urbano)

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

Amplitude

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100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

Bedrock

Sulmona (Centro Urbano)

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

Amplitude

Frequency, f [Hz]

SU23

SU35

I-I' H-H' G-G' F-F' E-E'

SU34

D-D'

SU14

C-C'

SU7

SU5

SU9

B-B'

SU8

A-A'

NW

550 m

500 m

450 m

400 m

350 m

300 m

250 m

100 m

100 m

col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

Bedrock

Sulmona (Centro Urbano)

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

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col-F3V at2-E5IIIc col-F3V all-E5IVc at2-E5IIIc col-F3V at1-E2Ib 119 47 at1-E4Ib 129 113 at1-E4Ib 127 78-79 at1-E4Ib 41 62 at1-E4Ib 194 195 col-F3V ant-G fra-a 59 at1-E4Ib 97 ant-G lac-F4I lac-F4 lac-E4I

Bedrock

Sulmona (Centro Urbano)

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

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Bedrock

Sulmona (Centro Urbano)

Horizontal to Vertical Spectral Ratio <sup>(1)</sup>

Amplitude

Frequency, f [Hz]

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SU8

A-A'

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