

**CPC****COOPERATIVE PATENT CLASSIFICATION****G01V****GEOPHYSICS; GRAVITATIONAL MEASUREMENTS; DETECTING MASSES OR OBJECTS**

(detecting or locating foreign bodies for diagnostic, surgical or person-identification purposes [A61B](#); means for indicating the location of accidentally buried, e.g. snow-buried persons [A63B 29/02](#); investigating or analysing earth materials by determining their chemical or physical properties [G01N](#); measuring electric or magnetic variables in general, other than direction or magnitude of the earth's field [G01R](#); electronic or nuclear magnetic resonance arrangements [G01R 33/20](#); radar, sonar or analogous methods in general, detecting masses or objects involving these methods [G01S](#))

**NOTES**

1. In this subclass, the geophysical methods apply both to the earth and to other celestial objects, e.g. planets.
2. Attention is drawn to the Notes following the title of class [G01](#).

**WARNING**

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[G01V 3/11](#) covered by [G01V 3/101](#),  
[G01V 3/104](#)

**G01V 1/00****Seismology; Seismic or acoustic prospecting or detecting****NOTE**

Groups [G01V 1/44](#) to [G01V 1/52](#) take precedence over groups [G01V 1/001](#) to [G01V 1/393](#) [G01V 1/42](#)

- [G01V 1/001](#) . {Acoustic presence detection (measurement of sonic vibrations [G01H](#); alarm systems [G08B](#))}
- [G01V 1/003](#) . {Seismic data acquisition in general, e.g. survey design ([G01V 1/3808](#), [G01V 1/42](#) takes precedence)}
- [G01V 1/005](#) . . {with exploration systems emitting special signals, e.g. frequency swept signals, pulse sequences or slip sweep arrangements}
- [G01V 1/006](#) . . {generating single signals by using more than one generator, e.g. beam steering or focussing arrays ([G01V 1/13](#), [G01V 1/3861](#) takes precedence)}
- [G01V 1/008](#) . {Earthquake measurement or prediction (event detection for microseismic events [G01V 1/288](#))}
- [G01V 1/02](#) . Generating seismic energy ({[G01V 1/003](#) takes precedence }; blasting in general [F42](#); nuclear explosives [G21J](#))
- [G01V 1/04](#) . . Details
- [G01V 1/047](#) . . . Arrangements for coupling the generator to the ground
- [G01V 1/0475](#) . . . . {for controlling "Ground Force"}
- [G01V 1/053](#) . . . . for generating transverse waves

- G01V 1/06 . . . Ignition devices ([G01V 1/393 takes precedence](#))
- G01V 1/08 . . . . involving time-delay devices
- G01V 1/09 . . . Transporting arrangements, e.g. on vehicles ([G01V 1/38 takes precedence](#))
- G01V 1/104 . . using explosive charges ([G01V 1/157 takes precedence](#))
- G01V 1/108 . . . by deforming or displacing surfaces of enclosures
- G01V 1/112 . . . . for use on the surface of the earth
- G01V 1/116 . . . where pressurised combustion gases escape from the generator in a pulsating manner, e.g. for generating bursts
- G01V 1/13 . . . Arrangements or disposition of charges to produce a desired pattern in space or time
- G01V 1/133 . . using fluidic driving means, e.g. highly pressurised fluids; {using implosion} ([G01V 1/104 takes precedence](#))
- G01V 1/135 . . . by deforming or displacing surfaces of enclosures {, e.g. by hydraulically driven vibroseis™}
- G01V 1/137 . . . which fluid escapes from the generator in a pulsating manner, e.g. for generating bursts {, airguns}
- G01V 1/143 . . using mechanical driving means {e.g. motor driven shaft} ([G01V 1/104, G01V 1/133 take precedence](#))
- G01V 1/145 . . . by deforming or displacing surfaces {, e.g. by mechanically driven vibroseis™}
- G01V 1/147 . . . using impact of dropping masses
- G01V 1/153 . . . using rotary unbalanced masses
- G01V 1/155 . . . using reciprocating masses
- G01V 1/157 . . using spark discharges; using exploding wires (spark gaps, {non-enclosed} discharge apparatus, not otherwise provided for [H01T](#))
- G01V 1/159 . . {using piezoelectric or magnetostrictive driving means (generating mechanical vibrations by using piezoelectric or magnetostrictive effect in general, [B06B 1/06, B06B 1/08](#))}
- G01V 1/16 . Receiving elements for seismic signals ([electromechanical transducers H04R](#)); Arrangements or adaptations of receiving elements
- G01V 1/162 . . {Details}
- G01V 1/164 . . . {Circuits therefore}
- G01V 1/166 . . . {Arrangements for coupling receivers to the ground}
- G01V 1/168 . . {Deployment of receiver elements ([G01V 1/3843 takes precedence](#))}
- G01V 1/18 . Receiving elements, e.g. seismometer, geophone {or torque detectors, for localised single point measurements}
- G01V 1/181 . . . {Geophones}
- G01V 1/182 . . . . {with moving coil}
- G01V 1/183 . . . . {with moving magnet}
- G01V 1/184 . . . . {Multi-component geophones}
- G01V 1/185 . . . . {with adaptable orientation, e.g. gimballed}
- G01V 1/186 . . . {Hydrophones}
- G01V 1/187 . . . . {Direction-sensitive hydrophones}
- G01V 1/188 . . . . {with pressure compensating means}

- G01V 1/189 . . . {Combinations of different types of receiving elements}
- G01V 1/20 . . Arrangements of receiving elements, e.g. geophone pattern
- G01V 1/201 . . . {Constructional details of seismic cables, e.g. streamers (integrated optoseismic systems [G01V 1/226](#); line connectors in general [H01R](#), transducer mountings in general [G10K 11/004](#))}
- G01V 1/202 . . . . {Connectors, e.g. for force, signal or power}
- G01V 2001/204 . . . . {Reinforcements, e.g. by tensioning cables}
- G01V 2001/205 . . . . {Internal damping}
- G01V 2001/207 . . . . {Buoyancy}
- G01V 1/208 . . . . {having a continuous structure (detecting traffic [G08G](#), transducers in general [G10K](#))}
- G01V 1/22 . . Transmitting seismic signals to recording or processing apparatus (signal transmitting systems in general [G08C](#); transmission systems in general [H04B](#))
- G01V 1/223 . . {Radioseismic systems}
- G01V 1/226 . . {Optoseismic systems}
- G01V 1/24 . . Recording seismic data (transforming one recording into another [G01V 1/32](#); recording measured values in general [G01D](#))
- G01V 1/242 . . {Seismographs}
- G01V 1/245 . . {Amplitude control for seismic recording (control of amplification in general [H03G](#))}
- G01V 1/247 . . {Digital recording of seismic data, e.g. in acquisition units or nodes}
- G01V 1/26 . . Reference-signal-transmitting devices, e.g. indicating moment of firing of shot
- G01V 1/28 . . Processing seismic data, e.g. analysis, for interpretation, for correction ([G01V 1/48](#) takes precedence)
- G01V 1/282 . . {Application of seismic models, synthetic seismograms}
- G01V 1/284 . . {Application of the shear wave component and/or several components of the seismic signal}
- G01V 1/286 . . . {Mode conversion}
- G01V 1/288 . . {Event detection in seismic signals, e.g. microseismics (earthquakes [G01V 1/008](#); [G01V 1/36](#) takes precedence)}
- G01V 1/30 . . Analysis ([G01V 1/50](#) takes precedence)
- G01V 1/301 . . . {for determining seismic cross-sections or geostructures}
- G01V 1/302 . . . . {in 3D data cubes}
- G01V 1/303 . . . {for determining velocity profiles or travel times}
- G01V 1/305 . . . . {Travel times}
- G01V 1/306 . . . {for determining physical properties of the subsurface, e.g. impedance, porosity or attenuation profiles}
- G01V 1/307 . . . {for determining seismic attributes, e.g. amplitude, instantaneous phase or frequency, reflection strength or polarity}
- G01V 1/308 . . . {Time lapse or 4D effects, e.g. production related effects to the formation (fluid flow per se [E21B 47/00](#))}
- G01V 1/32 . . Transforming one recording into another {or one representation into another}
- G01V 1/325 . . . {Transforming one representation into another}
- G01V 1/34 . . Displaying seismic recordings {or visualisation of seismic data or attributes}

- G01V 1/345 . . . {Visualisation of seismic data or attributes, e.g. in 3D cubes}
- G01V 1/36 . . Effecting static or dynamic corrections on records, e.g. correcting spread; Correlating seismic signals; Eliminating effects of unwanted energy
- G01V 1/362 . . . {Effecting static or dynamic corrections; Stacking}
- G01V 1/364 . . . {Seismic filtering ([G01V 1/37](#) takes precedence)}
- G01V 1/366 . . . . {by correlation of seismic signals}
- G01V 1/368 . . . . {Inverse filtering}
- G01V 1/37 . . . specially adapted for seismic systems using continuous agitation of the ground, {e.g. using pulse compression of frequency swept signals for enhancement of received signals}
- G01V 1/375 . . . . {Correlating received seismic signals with the emitted source signal}
- G01V 1/38 . specially adapted for water-covered areas ([G01V 1/28](#), {[G01V 1/42](#) take precedence})
- G01V 1/3808 . . {Seismic data acquisition, e.g. survey design (in general [G01V 1/003](#))}
- G01V 1/3817 . . {Positioning of seismic devices}
- G01V 1/3826 . . . {dynamic steering, e.g. by paravanes or birds}
- G01V 1/3835 . . . {measuring position, e.g. by GPS or acoustically}
- G01V 1/3843 . . {Deployment of seismic devices, e.g. of streamers (equipment for marine deployment in general [B63B](#))}
- G01V 1/3852 . . . {to the seabed}
- G01V 1/3861 . . {control of source arrays, e.g. for far field control}
- G01V 1/387 . . Reducing secondary bubble pulse, i.e. reducing the detected signals resulting from the generation and release of gas bubbles after the primary explosion
- G01V 1/393 . . Means for loading explosive underwater charges, e.g. combined with ignition devices
- G01V 1/40 . specially adapted for well-logging
- G01V 1/42 . . using generators in one well and receivers elsewhere or vice-versa ([G01V 1/52](#) takes precedence)
- G01V 1/44 . . using generators and receivers in the same well ([G01V 1/52](#) takes precedence)
- G01V 1/46 . . . Data acquisition
- G01V 1/48 . . . Processing data
- G01V 1/50 . . . . Analysing data
- G01V 1/52 . . Structural details
- G01V 1/523 . . . {Damping devices}
- G01V 2001/526 . . . {Mounting of transducers}
- G01V 3/00** **Electric or magnetic prospecting or detecting (by optical means [G01V 8/00](#)); Measuring magnetic field characteristics of the earth, e.g. declination, deviation (for navigation, for surveying [G01C](#); {measuring direction or magnitude of magnetic fields or magnetic flux in general [G01R 33/02](#))}**
- G01V 3/02 . operating with propagation of electric current
- G01V 3/04 . . using dc
- G01V 3/06 . . using ac

- G01V 3/08 . operating with magnetic or electric fields produced or modified by objects or geological structures or by detecting devices (with electromagnetic waves [G01V 3/12](#); measuring the magnetic field characteristics of the earth [G01V 3/40](#))
- G01V 3/081 . . {the magnetic field is produced by the objects or geological structures (characterised by the method of magnetic field measurement [G01R 33/00](#))}
- G01V 3/082 . . {operating with fields produced by spontaneous potentials, e.g. electrochemical or produced by telluric currents ([G01V 3/26](#) takes precedence)}
- G01V 3/083 . . {Controlled source electromagnetic [CSEM] surveying}
- G01V 2003/084 . . . {Sources}
- G01V 2003/085 . . . {Receivers}
- G01V 2003/086 . . . {Processing}
- G01V 3/087 . . {the earth magnetic field being modified by the objects or geological structures}
- G01V 3/088 . . {operating with electric fields ([G01V 3/082](#) takes precedence)}
- G01V 3/10 . . using induction coils
- G01V 3/101 . . . {by measuring the impedance of the search coil; by measuring features of a resonant circuit comprising the search coil (measuring impedance or characteristics derived therefrom [G01R 27/00](#), e.g. quality factor [G01R 27/26](#))}
- G01V 3/102 . . . . {by measuring amplitude}
- G01V 3/104 . . . . {using several coupled or uncoupled coils ([G01V 3/101](#) takes precedence)}
- G01V 3/105 . . . . {forming directly coupled primary and secondary coils or loops}
- G01V 3/107 . . . . . {using compensating coil or loop arrangements}
- G01V 3/108 . . . . . {the emitter and the receiver coils or loops being uncoupled by positioning them perpendicularly to each other}
- G01V 3/12 . operating with electromagnetic waves {(operating with millimetre waves [G01V 8/005](#))}
- G01V 3/14 . operating with electron or nuclear magnetic resonance
- G01V 3/15 . specially adapted for use during transport, e.g. by a person, vehicle or boat
- G01V 3/16 . . specially adapted for use from aircraft ([G01V 3/165](#) to [G01V 3/175](#) take precedence)
- G01V 3/165 . . operating with magnetic or electric fields produced or modified by the object or by the detecting device (with electromagnetic waves [G01V 3/17](#))
- G01V 3/17 . . operating with electromagnetic waves {(operating with millimetre waves [G01V 8/005](#))}
- G01V 3/175 . . operating with electron or nuclear magnetic resonance
- G01V 3/18 . specially adapted for well-logging
- G01V 3/20 . . operating with propagation of electric current
- G01V 3/22 . . . using dc
- G01V 3/24 . . . using ac
- G01V 3/26 . . operating with magnetic or electric fields produced or modified either by the surrounding earth formation or by the detecting device (with electromagnetic waves [G01V 3/30](#))
- G01V 3/265 . . . {Operating with fields produced by spontaneous potentials, e.g. electrochemicals or produced by telluric currents}
- G01V 3/28 . . . using induction coils
- G01V 3/30 . . operating with electromagnetic waves

- G01V 3/32 . . . operating with electron or nuclear magnetic resonance
- G01V 3/34 . . . Transmitting data to recording or processing apparatus; Recording data
- G01V 3/36 . . . Recording data ([G01V 3/34 takes precedence](#))
- G01V 3/38 . . . Processing data, e.g. for analysis, for interpretation, for correction ([computing in general G06](#))
- G01V 3/40 . . . specially adapted for measuring magnetic field characteristics of the earth
  
- G01V 5/00** **Prospecting or detecting by the use of nuclear radiation, e.g. of natural or induced radioactivity** ([determining the properties of materials G01N](#); [measuring nuclear radiation G01T](#))
  - WARNING**

Pending reclassification, the subgroups of this group are not complete; see also this group
  
- G01V 5/0008 . . . {[Detecting hidden objects, e.g. weapons, explosives \(sorting of materials or articles according to radioactive properties B07C 5/342; investigating or analysing materials by the use of wave or particle radiation G01N 23/00\)](#)}
- G01V 5/0016 . . . {[Active interrogation, i.e. using an external radiation source, e.g. using pulsed, continuous or cosmic rays](#)}
- G01V 5/0025 . . . . {[Measuring scattered radiation](#)}
- G01V 5/0033 . . . . {[Mixed interrogation beams, e.g. using more than one type of radiation beam](#)}
- G01V 5/0041 . . . . {[Multiple energy techniques using one type of radiation, e.g. X-rays of different energies \(multi-beam applications, e.g. X-rays and neutrons G01V 5/0033; spectroscopic applications G01V 5/0016\)](#)}
- G01V 5/005 . . . . {[using Tomography, e.g. CT or SPECT \(detector details in CT applications G01T 1/2985\)](#)}
- G01V 5/0058 . . . . {[using stereoscopic means](#)}
- G01V 5/0066 . . . . {[having relative motion between the source, detector and object other than by conveyor \(G01V 5/005 takes precedence\)](#)}
- G01V 5/0075 . . . {[Passive interrogation \(for hand, feet or portals G01T 1/167; for contaminated surface areas G01T 1/169\)](#)}
- G01V 5/0083 . . . {[utilizing a network, e.g. a remote expert, accessing remote data or the like](#)}
- G01V 5/0091 . . . {[detecting special nuclear material \[SNM\], e.g. Uranium-235, Uranium-233 or Plutonium-239](#)}
- G01V 5/02 . . . specially adapted for surface logging, e.g. from aircraft
- G01V 5/025 . . . {[specially adapted for use from aircraft](#)}
- G01V 5/04 . . . specially adapted for well-logging
- G01V 5/045 . . . {[Transmitting data to recording or processing apparatus; Recording data](#)}
- G01V 5/06 . . . for detecting naturally radioactive minerals
- G01V 5/08 . . . using primary nuclear radiation sources or X-rays {(e.g. [for inducing radioactivity; investigating or analysing materials by the use of wave or particle radiation, e.g. X-rays, neutrons G01N 23/00](#))}
- G01V 5/085 . . . . {[using another radioactive source](#)}
- G01V 5/10 . . . . using neutron sources {(neutron generating tubes [H05H 5/00](#); neutron sources using isotopes [G21G 4/00](#))}

- G01V 5/101 . . . . {and detecting the secondary Y-rays produced in the surrounding layers of the bore hole}
- G01V 5/102 . . . . {the neutron source being of the pulsed type}
- G01V 5/104 . . . . {and detecting secondary Y-rays as well as reflected or back-scattered neutrons}
- G01V 5/105 . . . . {the neutron source being of the pulsed type}
- G01V 5/107 . . . . {and detecting reflected or back-scattered neutrons}
- G01V 5/108 . . . . {the neutron source being of the pulsed type}
- G01V 5/12 . . . using gamma or X-ray sources {(gamma sources using isotopes [G21G 4/00](#); X-ray tubes [H01J 35/00](#))}
- G01V 5/125 . . . . {and detecting the secondary gamma- or X-rays in different places along the bore hole}
- G01V 5/14 . . . using a combination of several sources, e.g. a neutron and a gamma source
- G01V 5/145 . . . . {using a neutron source combined with a gamma- or X-ray source}

**G01V 7/00****Measuring gravitational fields or waves; Gravimetric prospecting or detecting**

- G01V 7/005 . {using a resonating body or device, e.g. string ([G01V 7/08](#) to [G01V 7/12](#) take precedence; measuring resonant frequency of mechanical vibrations [G01H 13/00](#); measuring frequency per se [G01R 23/00](#))}
- G01V 7/02 . Details
- G01V 7/04 . . Electric, photoelectric, or magnetic indicating or recording means
- G01V 7/06 . . Analysis or interpretation of gravimetric records
- G01V 7/08 . using balances ([balances in general G01G](#))
- G01V 7/10 . . using torsion balances, e.g. Eötvös balance
- G01V 7/12 . using pendulums
- G01V 7/14 . using free-fall time
- G01V 7/16 . specially adapted for use on moving platforms, e.g. ship, aircraft

**G01V 8/00**

**Prospecting or detecting by optical means** (measurement of characteristics of light [G01J](#); optical scanning systems [G02B 26/10](#); discharge tubes detecting the presence of radiation [H01J 40/00](#), [H01J 47/00](#); semiconductor devices sensitive to light [H01L 31/00](#))

**NOTE**

This group covers the use of {millimetre waves,} infra-red, visible or ultra-violet light.

- G01V 8/005 . {operating with millimetre waves, e.g. measuring the black body radiation}
- G01V 8/02 . Prospecting
- G01V 8/10 . Detecting, e.g. by using light barriers (by reflection from the object [G01S 17/00](#); counting of objects carried by a conveyer [G06M 7/00](#); signalling or calling arrangements [G08B](#); detecting movement of traffic to be counted or controlled [G08G 1/01](#); proximity switches [H03K 17/945](#), [H03K 17/965](#))
- G01V 8/12 . . using one transmitter and one receiver
- G01V 8/14 . . . using reflectors



G01V 8/16	<ul style="list-style-type: none"> <li>using optical fibres</li> </ul>
G01V 8/18	<ul style="list-style-type: none"> <li>using mechanical scanning systems</li> </ul>
G01V 8/20	<ul style="list-style-type: none"> <li>using multiple transmitters or receivers</li> </ul>
G01V 8/22	<ul style="list-style-type: none"> <li>using reflectors</li> </ul>
G01V 8/24	<ul style="list-style-type: none"> <li>using optical fibres</li> </ul>
G01V 8/26	<ul style="list-style-type: none"> <li>using mechanical scanning systems</li> </ul>
<b>G01V 9/00</b>	<b>Prospecting or detecting by methods not provided for in groups <a href="#">G01V 1/00</a> to <a href="#">G01V 8/00</a></b>
G01V 9/002	<ul style="list-style-type: none"> <li>{using fields or radiation detectable only by persons susceptible therefor, e.g. radio-esthesis, dowsing}</li> </ul>
G01V 9/005	<ul style="list-style-type: none"> <li>{by thermal methods, e.g. after generation of heat by chemical reactions}</li> </ul>
G01V 9/007	<ul style="list-style-type: none"> <li>{by detecting gases or particles representative of underground layers at or near the surface (analysing earth materials <a href="#">G01N 33/24</a>; analysing gases per se <a href="#">G01N</a>)}</li> </ul>
G01V 9/02	<ul style="list-style-type: none"> <li>Determining existence or flow of underground water</li> </ul>
<b>G01V 11/00</b>	<b>prospecting or detecting by methods combining techniques covered by two or more of main groups <a href="#">G01V 1/00</a> to <a href="#">G01V 9/00</a></b>
G01V 11/002	<ul style="list-style-type: none"> <li>{Details, e.g. power supply systems for logging instruments, transmitting or recording data, specially adapted for well logging, also if the prospecting method is irrelevant (means for transmitting well survey signals <a href="#">E21B 47/12</a>; signal transmission systems in general <a href="#">G08C</a>; transmission in general <a href="#">H04B</a>)}</li> </ul>
G01V 11/005	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{Devices for positioning logging sondes with respect to the borehole wall (centralising devices for drilling rods or pipes <a href="#">E21B 17/10</a>; setting or locking tools in boreholes <a href="#">E21B 23/00</a>; Locating objects in boreholes <a href="#">E21B 47/09</a>)}</li> </ul> </li> </ul>
G01V 11/007	<ul style="list-style-type: none"> <li>{using the seismo-electric effect}</li> </ul>
<b>G01V 13/00</b>	<b>Manufacturing, calibrating, cleaning, or repairing instruments or devices covered by the preceding groups</b>
<b>G01V 15/00</b>	<b>Tags attached to, or associated with, an object, in order to enable detection of the object (record carriers for use with machines <a href="#">G06K 19/00</a>; signs, labels <a href="#">G09F</a>)</b>
<b>G01V 99/00</b>	<b>Subject matter not provided for in other groups of this subclass</b>
G01V 99/005	<ul style="list-style-type: none"> <li>{Geomodels or geomodelling, not related to particular measurements}</li> </ul>
<b>G01V 2200/00</b>	<b>Details of seismic or acoustic prospecting or detecting in general</b>
G01V 2200/10	<ul style="list-style-type: none"> <li>Miscellaneous details</li> </ul>
G01V 2200/12	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Clock synchronization-related issues</li> </ul> </li> </ul>
G01V 2200/14	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Quality control</li> </ul> </li> </ul>
G01V 2200/16	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Measure-while-drilling or logging-while-drilling</li> </ul> </li> </ul>
<b>G01V 2210/00</b>	<b>Details of seismic processing or analysis</b>
G01V 2210/10	<ul style="list-style-type: none"> <li>Aspects of acoustic signal generation or detection</li> </ul>
G01V 2210/12	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Signal generation</li> </ul> </li> </ul>



G01V 2210/121	. . .	Active source
G01V 2210/1212	. . . .	Shot
G01V 2210/1214	. . . .	Continuous
G01V 2210/1216	. . . .	Drilling-related
G01V 2210/123	. . .	Passive source, e.g. micro-seismics
G01V 2210/1232	. . . .	Earthquakes
G01V 2210/1234	. . . .	Hydrocarbon reservoir, e.g. spontaneous or induced fracturing
G01V 2210/1236	. . . .	Acoustic daylight, e.g. cultural noise
G01V 2210/125	. . .	Virtual source
G01V 2210/127	. . .	Cooperating multiple sources
G01V 2210/129	. . .	Source location
G01V 2210/1291	. . . .	Air
G01V 2210/1293	. . . .	Sea
G01V 2210/1295	. . . .	Land surface
G01V 2210/1297	. . . .	Sea bed
G01V 2210/1299	. . . .	Subsurface, e.g. in borehole or below weathering layer or mud line
G01V 2210/14	. .	Signal detection
G01V 2210/142	. . .	Receiver location
G01V 2210/1421	. . . .	Air
G01V 2210/1423	. . . .	Sea
G01V 2210/1425	. . . .	Land surface
G01V 2210/1427	. . . .	Sea bed
G01V 2210/1429	. . . .	Subsurface, e.g. in borehole or below weathering layer or mud line
G01V 2210/144	. . .	with functionally associated receivers, e.g. hydrophone and geophone pairs
G01V 2210/16	. .	Survey configurations
G01V 2210/161	. . .	Vertical seismic profiling [VSP]
G01V 2210/163	. . .	Cross-well
G01V 2210/165	. . .	Wide azimuth
G01V 2210/167	. . .	Very long offset
G01V 2210/169	. . .	Sparse arrays
G01V 2210/20	. .	Trace signal pre-filtering to select, remove or transform specific events or signal components, i.e. trace-in/trace-out ( <a href="#">removing noise G01V 2210/32</a> )
G01V 2210/21	. .	Frequency-domain filtering, e.g. band pass
G01V 2210/22	. .	Time-domain filtering
G01V 2210/23	. .	Wavelet filtering
G01V 2210/24	. .	Multi-trace filtering
G01V 2210/242	. . .	F-k filtering, e.g. ground roll
G01V 2210/244	. . .	Radon transform
G01V 2210/25	. .	Transform filter for merging or comparing traces from different surveys
G01V 2210/26	. .	Modulation or demodulation, e.g. for continuous sources

G01V 2210/27	. . Other pre-filtering
G01V 2210/30	. Noise handling ( <a href="#">trace signal pre-filtering G01V 2210/20</a> )
G01V 2210/32	. . Noise reduction
G01V 2210/322	. . . Trace stacking
G01V 2210/324	. . . Filtering
G01V 2210/3242	. . . . Flow noise
G01V 2210/3244	. . . . Cultural noise
G01V 2210/3246	. . . . Coherent noise, e.g. spatially coherent or predictable
G01V 2210/3248	. . . . Incoherent noise, e.g. white noise
G01V 2210/34	. . Noise estimation ( <a href="#">quality control G01V 2200/14</a> )
G01V 2210/36	. . Noise recycling, i.e. retrieving non-seismic information from noise
G01V 2210/38	. . Noise characterisation or classification
G01V 2210/40	. Transforming data representation ( <a href="#">for pre-filtering purposes G01V 2210/20</a> )
G01V 2210/41	. . Arrival times, e.g. of P or S wave or first break
G01V 2210/42	. . Waveform, i.e. using raw or pre-filtered trace data
G01V 2210/43	. . Spectral
G01V 2210/44	. . F-k domain
G01V 2210/45	. . F-x or F-xy domain
G01V 2210/46	. . Radon transform
G01V 2210/47	. . Slowness, e.g. tau-pi
G01V 2210/48	. . Other transforms
G01V 2210/50	. Corrections or adjustments related to wave propagation ( <a href="#">noise handling G01V 2210/30</a> )
G01V 2210/51	. . Migration
G01V 2210/512	. . . Pre-stack
G01V 2210/514	. . . Post-stack
G01V 2210/52	. . Move-out correction
G01V 2210/522	. . . Dip move-out [DMO]
G01V 2210/53	. . Statics correction, e.g. weathering layer or transformation to a datum
G01V 2210/532	. . . Dynamic changes in statics, e.g. sea waves or tidal influences
G01V 2210/54	. . Borehole-related corrections
G01V 2210/542	. . . Casing
G01V 2210/544	. . . Invasion zone
G01V 2210/55	. . Array focusing; Phased arrays
G01V 2210/56	. . De-ghosting; Reverberation compensation
G01V 2210/57	. . Trace interpolation or extrapolation, e.g. for virtual receiver; Anti-aliasing for missing receivers
G01V 2210/58	. . Media-related
G01V 2210/582	. . . Dispersion
G01V 2210/584	. . . Attenuation

G01V 2210/586	. . .	Anisotropic media
G01V 2210/588	. . .	Non-linear media
G01V 2210/59	. .	Other corrections
G01V 2210/60	. .	Analysis
G01V 2210/61	. .	Analysis by combining or comparing a seismic data set with other data
G01V 2210/612	. . .	Previously recorded data, e.g. time-lapse or 4D
G01V 2210/6122	. . . .	Tracking reservoir changes over time, e.g. due to production
G01V 2210/6124	. . . .	Subsidence, i.e. upwards or downwards
G01V 2210/614	. . .	Synthetically generated data
G01V 2210/616	. . .	Data from specific type of measurement
G01V 2210/6161	. . . .	Seismic or acoustic, e.g. land or sea measurements
G01V 2210/6163	. . . .	Electromagnetic
G01V 2210/6165	. . . .	Gravitational
G01V 2210/6167	. . . .	Nuclear
G01V 2210/6169	. . . .	using well-logging
G01V 2210/62	. .	Physical property of subsurface
G01V 2210/622	. . .	Velocity, density or impedance
G01V 2210/6222	. . . .	Velocity; travel time
G01V 2210/6224	. . . .	Density
G01V 2210/6226	. . . .	Impedance
G01V 2210/624	. . .	Reservoir parameters
G01V 2210/6242	. . . .	Elastic parameters, e.g. Young, Lam? or Poisson
G01V 2210/6244	. . . .	Porosity
G01V 2210/6246	. . . .	Permeability
G01V 2210/6248	. . . .	Pore pressure
G01V 2210/626	. . .	with anisotropy
G01V 2210/63	. .	Seismic attributes, e.g. amplitude, polarity, instant phase
G01V 2210/632	. . .	Amplitude variation versus offset or angle of incidence [AVA, AVO, AVI]
G01V 2210/64	. .	Geostructures, e.g. in 3D data cubes
G01V 2210/641	. . .	Continuity of geobodies
G01V 2210/642	. . .	Faults
G01V 2210/643	. . .	Horizon tracking
G01V 2210/644	. . .	Connectivity, e.g. for fluid movement
G01V 2210/645	. . .	Fluid contacts
G01V 2210/646	. . .	Fractures
G01V 2210/647	. . .	Gas hydrates
G01V 2210/65	. .	Source localisation, e.g. faults, hypocenters or reservoirs
G01V 2210/66	. .	Subsurface modeling
G01V 2210/661	. . .	Model from sedimentation process modeling, e.g. from first principles
G01V 2210/663	. . .	Modeling production-induced effects

- G01V 2210/665 . . . using geostatistical modeling
- G01V 2210/6652 . . . . Kriging
- G01V 2210/667 . . . Determining confidence or uncertainty in parameters
- G01V 2210/67 . . Wave propagation modeling
- G01V 2210/671 . . . Raytracing
- G01V 2210/673 . . . Finite-element; Finite-difference
- G01V 2210/675 . . . Wave equation; Green's functions
- G01V 2210/677 . . . Spectral; Pseudo-spectral
- G01V 2210/679 . . . Reverse-time modeling or coalescence modelling, i.e. starting from receivers
- G01V 2210/70 . Other details related to processing
- G01V 2210/72 . . Real-time processing
- G01V 2210/74 . . Visualisation of seismic data