

Index

- A-type granite 51
abrupt truncation 641
absolute gravity measurement 593
absolute gravity value 526
accretionary complex 26, 208
accretionary prism
 Alexander Island 377
 South Shetland Islands 426
Ackerman Formation 237
acoustic basement 641
active continental margin 389
active dynamics, Bransfield Strait 414
active tectonic regions 487
active volcanic arc 354
Adare-Hallett region, xenolith 265
Admiralty Intrusives (Complex) 211, 229, 238
aeromagnetic survey 317, 545, 557
aftershock 493
age
 apatite fission track 325, 334
 ⁴⁰Ar/³⁹Ar 61, 157, 196, 292
 ¹⁰Be 711
 ¹⁴C 741, 749
 cooling 159, 328
 isochron 4, 31, 45
 K-Ar 61, 196, 395, 407, 440
 ²⁰⁷Pb/²⁰⁶Pb 155
 Rb-Sr 4, 31, 40, 45, 183
 Sm-Nd 4, 32, 40, 235
 U-Pb zircon 4, 41, 68, 123
airborne gravity survey 465, 572
 CASERTZ 571
Alexander Island 341, 377, 389
Alexandra Mountains 295
alkali basalt 265
alkaline contents 441
alkaline dike (dyke) 139
alkaline magmatism 462
alkaline volcanic center 353
alkaline-ultrabasic rock 163
alluvial fan deposits (sequences)
 Eocene 607
 Mesozoic 348
alphanumeric data 721
alpine moraine 685
Aluk Ridge 395
Amery Ice Shelf 179, 644, 686
amphibian specimens 252
amphibolite facies 10, 38, 139
amphibolite-granulite transition 299
Amundsen Sea 319
anatexis 297
Anchorage Island 347
Andean granitoid 353
Andean Intrusive Suite 432
Andean-type orogenic belt 557
angiosperms 371
anomaly field vector 649
anorthosite 91
Antarctic continent 485
Antarctic continental margin 237, 423, 657
Antarctic continental shelf 763, 781
Antarctic deglaciation 742
Antarctic environmental changes 781
Antarctic glacial fluctuations 741
Antarctic glaciation 699, 773
Antarctic Ice Sheet (Ice Cap) 633, 677, 781
 reconstruction 686
Antarctic lithosphere 465
Antarctic Ocean 490
Antarctic Peninsula 357, 371, 395, 412, 450,
 485, 609, 657, 741, 745, 781
Antarctic Peninsula cordillera 347
Antarctic Peninsula magmatic arc 383, 405
Antarctic Peninsula Pacific margin 417, 423
Antarctic Peninsula Tectonic Province 341
Antarctic plate 319, 644
Antarctic seismic data library system (SDLS)
 657
Antarctic Seismological Bulletin 475
Antarctic-Phoenix Ridge 423
anticlockwise *P-T-t* path 90, 101
ANTOSTRAT (Antarctic Offshore Acoustic
 Stratigraphy) 655
Anxiety Nunataks 223
apatite fission track age 325, 332
Apfels Glacier 689
apparent velocities 510
APWP (Apparent Polar Wander Path) 198
⁴⁰Ar/³⁹Ar age 61, 157, 196, 292
aragonite 703
Archean (Archaean) 4, 119, 135
 Sm-Nd model ages 235
Arctowski Interglacial 407
Arctowski Peninsula 396
Argentina Range 236
Argentine Islands 347
Argosy Formation 235
asthenosphere 318
Astrid Fracture Zone 653
Astrid Ridge 641
Atdabanian 236
Aurora orthogneiss 235
Austkampene Granite 45
B-type events 501
back arc basin 405, 431
 early Permian 345
back arc cycle 412
back arc spreading 417, 431
back scattering 424
Barton Horst 440
Barton Peninsula granitoids 440
Barton Peninsula Volcanics 441
basal seismic sequence 641
basal sliding velocity 582
basanite 273
basic dike (dyke) 173, 431
batholith
 Rouen Mountains 383
 Yule Bay 229
bathymetric chart (map) 413, 607, 628
bathymetric measurement 641
bathymetry 627, 763
¹⁰Be age (cosmogenic-radiometric age) 711
Beacon Supergroup 235, 257, 722
Beardmore Glacier 236, 305
Beardmore Glacier region
 geochemistry 241
 stratigraphy 249
Beardmore Group 208
Beardmore Orogeny 208, 230, 235
Beaver Rift System 163
Belgica Mountains 65
Berg Group 221
Berg Mountains 221, 525
Bergersenfjella 679
Berkner Island 550
Billing, Mt. 716
biostratigraphic method 701
bioturbation 348
Bird Bluff assemblage 295
Block Hill Formation 372
block faulting 353
block movement 497
blueschist 380
bone-bearing horizon 250
borosilicate 149
Botany Bay 421
Botany Bay Group 353
Botomian 236
Bouguer gravity anomaly 318, 377, 443, 510,
 527, 537, 581, 592
Bouma sequences 359
Bouvet Triple Junction 644
Bowen, Mt. 716
Bowers Mountains 523
Bowers Terrane 211, 227, 236
Brabant Island 436
Bransfield Basin 405, 419
Bransfield Platform 421
Bransfield (Strait) Rift 405, 412, 421, 444, 450
Bransfield Strait 411, 417, 431, 450
Brattnipene (Brattnipane) 9, 18, 29, 37, 677
Brattstrand Bluffs
 granulite 119
 metapelite 103
Bridgeman Island 413
Bridgeman volcano 409
Brimstone Peak 717
brittle crust 645
brittle fault 303, 632

- broad-band seismograph 585
 - FDSN 479, 595
 - GEOSCOPE 479
 - IDA/IRIS 479
 - POSEIDON 479, 595
- Buckley Formation 243
- Bunger Hills 3, 691
- Byers Peninsula 742, 757
- Byrd Coast Granite 279
- Byrd Glacier 236
- Byrd Group 208
- Byrd Subglacial Basin 317, 507
- "C" Fracture Zone 423
- ¹⁴C dates (radiocarbon) 741, 749
- calc-alkaline magmatism 383
- calc-alkaline series 421, 441
- calc-silicate rock 55, 96, 214
- calcite isotopic data 132
- calcite spar 225
- caldera structure 447
- Cambrian
 - carbonates 236
 - orogeny 71
 - Swanson Formation 295
- Camp Hill 421
- Camp Ridge Quartzite 238
- Campbell Block 528
- Campbell Glacier 500, 722, 737
- Campbell Plateau 284, 320
- Cape McCormick Crater, xenolith 265
- Cape Melville 409
- Cape Washington 304, 632
- Cape Wiman 348
- carbon isotope 56
- carbonate 223
- carbonate deposition 225
- carbonate platform sediments 237
- carbonate ramp 225
- Carryer Conglomerate 238
- Carylon granodiorite 236
- cataclasis 382
- Cenozoic 315, 347, 405, 632, 773
 - glacial strata 619
 - granitoids 400
 - history, Antarctica 773
 - magmatism 439
 - rift 315, 710
 - rifting 636
 - structure 405
 - uplift 636, 710, 718
 - volcanism 319
- cetacean fauna 701
- channel fill 359
- channel-levee system 615
- charnockite 97
 - Mawson 192
 - Mt. McCarthy 97
- chemical weathering 760
- Chester Cone 757
- chilled margin 140
- Chopin Ridge Group 409
- Christensen Coast 191
- Circum-Pacific warm current 373
- clay mineral 245
- clayey till 679
- climatic optimum 783
- clockwise *P-T-t* path 13, 75, 106, 126
- cluster analysis 243
- CO₂ concentration 783
- CO₂ flushing 126
- CO₂-infiltration 134
- CO₂-rich fluid inclusions 129
- Cobham Formation 235
- Cobham Range 235
- cold based glacier 671
- cold ice 675
- Collins, Mt., igneous rock 176
- collision 26, 232
 - continental 208
 - ridge-trench 400
- collision-extension model 126
- compression 141, 237
- compression stress 645
- compressional deformation 110
- compressive orogen 232
- Con Rod Hills Member 221
- contact metamorphism 13, 216
- Continent-Ocean Boundary 550
- continental Antarctic 757
- continental collision 208
- continental crust 513
- continental margin 657, 763
- continental shelf 507, 655, 676, 695, 763
- continental-margin island arc 26
- cooling 103, 300
 - isobaric 101
 - near-isobaric 87, 106, 140
- cooling age 159, 328
- cooling history 292
- cooling rate 334
- cordierite 78, 122
- coring stations, heat flow measurements 632
- Coriolis force 644
- corona texture 109, 116, 299
- cosmogenic-radiometric age 661, 711, 774
- Cotton Plateau 236
- coupon collector statistics 768
- covariance function 485
- Cox Peaks 236
- Crary Fan 613
- Crashite Quartzite Group 341
- Cretaceous 316, 336, 341, 347, 357, 364, 418
 - Byrd Coast Granite 279, 289
 - magnetic quiet zone 653
- Crooked Lake gneiss 2
- Crooked Lake granodiorite 2
- Cross Valley Formation 349, 604
- crust
 - evolution 545
 - structure 405, 510, 535, 551, 567
 - thickness 510, 540
- crustal model 510
 - 2D 435
 - 2.5D 567
- crustal seismology 465
- crustal thickening 141, 535
- crustal uplift 494
- Cynognathus* Zone 250
- Danco Coast granitoids 396
- Daniels Range 216, 236, 709
- dated marbles 221
- David Glacier 733
- Davies Bay 525
- debris-rich ice 680
- decarbonation 135
- Deception Island 407, 413, 443, 449
- decompression 106, 116, 146
 - isothermal 13
 - near-isothermal 124
- Deep Freeze Range 211, 721
- deep seismic sounding 409
- deep-sounding reflection profiles 510
- deformation 91, 94, 289, 641
 - compressional 110
- Fosdick Metamorphic Complex 289
 - mechanism 381
- deformed metabasite dike 119
- deglaciation 494, 663, 677, 689, 742, 749
- density structure 510
- denudation 336
- desert pavement 662, 717
- Destruction Bay Formation 409
- detachment faulting 286
- Devonian, Beacon 235
- diabase dike 421
- diagenesis 221, 247
- diamictites 219, 242
- Dicroldium* 253
- diffusion 56
- digital processing 727
- digital seismograph 475, 595
- digital seismological station 483
- dike (dyke)
 - alkaline 139
 - deformed metabasite 119
 - lamprophyre 257
 - mafic 5, 95, 138, 283, 291, 421, 431
- dike swarm 5, 138, 173
- dike trend 307
- discriminant function 21
- discrimination diagrams 441
- disequilibrium 295
- distal eruption 354
- diurnal magnetic variations 557
- diverging reflectors 641
- dolerite dike swarms 303
- Dome C 782
- Douglas Conglomerate 238
- down faulting 641
- Drake Passage 373, 417, 436, 487
- drift sheet 685
- Dronning Maud Land (Queen Maud Land) 4, 7, 19, 310, 323, 545, 639, 661, 669, 774
- Drygalski Basin 627
- Drygalski Glacier 502
- Drygalski Ice Tongue 540, 628, 733
- DSDP drilling site 620
- ductile shear 104, 139
- Dufek Granite 46
- Dufek intrusion 315
- Duncan Formation 237
- Early Cambrian 235
- Early Paleozoic (Palaeozoic) granitic rock 45
- Early Permian back-arc basin 344
- earthquake detection capability 481
- earthquake seismology 479, 596
- East Antarctica 129, 137, 155, 163, 173, 485, 529, 644, 773
 - craton 320, 323
 - ice sheet 763, 774
 - lithosphere 518
 - shield 38, 179
- echo sounding 424, 641
- edge enhancement techniques 728
- Edisto Moraines 695
- Eisenhower Range 721
- elastic thickness 766
- Elephant Island 417, 742
- elevated (raised) beach 494
- Elgar Uplands volcanic rocks 390
- Ellsworth Land 316, 341
- Ellsworth Mountains 317, 331, 341
- Ellsworth Whitmore Mountains (crustal) block 303, 331, 561
- Emison, Mt. 724

- enderbitic gneiss 29
- Enderby Basin 649
- Enderby Land 87, 487, 774
- Endurance shear zone 235
- English Coast 341
- entire-margined species 372
- Eocene 347, 369, 371, 407, 607
- Eötvös correction 572
- Equisetum* 343
- Erebus and Terror Gulf 604
- Erehwon beds 341
- Erehwon Nunatak 343
- erosion 516, 607, 621, 763
- ETOPO 5 468
- eustatic changes 606, 617
- Everett Range 710
- evolution, foreland basin 249
- Executive Committee Range 273
- exhumation rate 84
- expansion velocity 413
- Explora Anomaly 550
- extension 137
- extensional tectonism 303
- extention stress 645
- extentional-compressional tectonic cycle 137
- Fairchild Formation 243
- Fairweather Formation 237
- Falla Formation 249
- fault
 - kinematics 310
 - orientation 307
- Ferrar Group 722
- Ferrar magmatism 309
- Fildes Block 441
- Fildes Peninsula 363, 371, 439
- finite element modeling 516
- Finlandia Foothills 390
- Fisher Massif 683
- fission track
 - age 325, 334
 - profile 305
- FitzGerald Bluffs 342
- FitzGerald quartzite beds 341
- flexural basin 520
- flexural rigidity 766
- flexural uplift model 543
- fluid activity 123
- fluid inclusions, CO₂-rich 129
- fluvial 703
- fluvioglacial deposit 750
- FMAS system 122
- folded sediments 641
- Ford Granodiorite 279, 293
- Ford Ranges 279, 289, 296
- fore-arc basin 417
- foreland basin, Late Permian and Triassic 344
- Fosdick Metamorphic Complex 280, 289, 295
- Fosdick Mountains 289
- Fossil Hill Formation 372
- fractional crystallization 387
- fracture zone trends 650
- free air gravity anomaly 574, 650
- freeze-thaw weathering 757
- Fremouw Formation 249
- frost heave 746
- full graben 513
- fumarolic emissions 444
- foraminiferid fauna 702
- G.I.S. (Geographic Information System) 721
- Gambacorta Formation 237
- Gamburtsev Mountains 473
- Gazzi-Dickinson method 350
- geo-electrical resistivity 748
- geochemistry
 - Jetty Peninsula 185
 - King George Island 435
 - mafic to ultramafic granulite 114
 - mantle nodule 165
 - metamorphic rocks 21
 - Permian mudrocks 241
 - Rouen Mountains batholith 384
 - xenolith 276
- geochronology
 - East Antarctica 1, 61
 - Jetty Peninsula 182
 - Larsemann Hills 151, 158
 - Lützow-Holm Complex 67
 - Mawson charnockite 196
 - Sør Rondane Mountains 29, 39
- Geologists Range 203
- geomagnetic observatory 586
- geomagnetism 585
- geomorphological map 721, 727, 751
- geopetal features 223
- geophones 451, 499, 508
- geophysical imaging technologies 465
- geophysical observatory 585
- geophysical survey 619
- geopotential model
 - GEM-T2 468
 - GEM10B 489
- George VI Sound 559
- GEOSAT 490
- Geoscope network 483
- geostrophic current 361
- geotherm 518
- geothermal gradient 457
- geothermobarometry 11, 81, 98, 122, 140, 150, 164, 214, 299, 398
- geotranssect 417
- Gerlache Strait, plutonic rocks 395
- glacial decoupling 636
- glacial depression 663
- glacial erosion 603, 633, 672
- glacial fluctuation(s) 613, 753
- glacial geology 669, 707
- glacial geomorphology 679
- glacial history 658, 665, 718, 741, 773
- glacial landforms 681, 685, 731
- glacial processes 606, 724
- glacial readvance 742
- glacial record 687
- glacial sequence 606
- glacial terrace 710, 716
- glacial-interglacial cycles 428
- glaciation 619, 671
 - level 716
 - present-day 675
- glacier
 - modeling 675
 - reconstruction 676
 - simulation 674
 - velocity 675
- glacigene (glaciogene) deposit 219, 348
- glacio-isostatic rebound 782
- glacio-marine deposit (sediment) 407, 639
- Glasgow Volcanics 227
- glauconic sands 349
- glaucony 348
- glaucophane 380
- Global Change 699
- GLORIA sidescan sonar 423
- Glossopteris erehwonensis* 341
- Goldie Formation 235
- Gondwana
 - breakup 235, 309, 320, 329, 338, 559, 632
 - fragmentation 303
 - margin 361
 - reconstruction 84
 - rifting 284
- Gondwanaland 26, 37, 72, 75, 178, 200, 274, 294, 644
 - paleo-Pacific margin 249, 342
- Gondwanide Orogeny 238, 331
- Gordon Valley 249
- GPS (Global Positioning System) 525, 579, 603, 627
- GPS differential positioning 470, 535, 572, 579
- graben
 - Lambert 200
 - Rennick 528, 708
- graben formation 647
- graben structure 309, 318
- graded sandstone 223, 359
- Graham Land 421, 559
- grandidierite 149
- Granite Harbour Intrusives 211, 228, 235, 263, 722
- granite
 - A-type 51
 - I-type 121, 228, 282, 384
 - M-type 51
 - S-type 4, 228
 - volcanic arc 52
 - within-plate 52
- granitoid, Cenozoic 400
- granulite 18, 29, 55, 95, 113, 129, 266, 275
 - Napier Complex 87
 - polycyclic 119
 - Sri Lanka 75
- granulite facies 1, 7, 29, 42, 75, 103
 - earlier relic 145
- gravimetry 443
- gravitational secular change 581
- gravity 424, 535, 571, 627
 - anomalies 413, 444, 468, 489, 510
 - change 581
 - current 361
 - faults 407
 - flow 254
 - gradient 318
 - network 593
 - survey 443, 470, 523
 - values 581
- gravity meter
 - airborne 572
 - BGM-3 575
 - NIPRORI-I 489
 - surface-ship 489
- Great Wall Formation 440
- greenhouse effect (scenario) 699, 783
- greenschist 382
- greenschist facies 10, 38, 150
- Griffin Nunatak 716
- ground temperature 747
- grounded ice 695
- grounded ice-sheets 656
- grounding line 676, 768
- Gustav Group 348
- Gustav Rift 405
- Gutenberg-Richter law 452
- gymnosperms 371
- gypsum crystal 664
- Haag Nunataks 548, 559
- Haag Nunataks anomalies 549, 556

- Handler Formation 238
 heat flow (HF) 317, 421, 627
 height changes 581
 Helliwell Hills 525, 711
 Henkle Peak 343
 Hero Fracture Zone 417, 423
 high resolution seismics 613
 Hobbs Formation 221
 Holocene 693, 703, 741, 750, 778, 782
 landform 742
 marine limit 741
 tephrochronology 741
 Hope Bay 421
 Horlick Mountain Traverse 576
 Horlick Mountains 315
 Horseshoe Island 347
 horst and graben structures 318
 hot soils 444
 hotspot 319
 Howard Peaks 726
 Hurd Peninsula 357, 751
 hydration 761
 hydrothermal mineralization 459
 hydrothermal structure 461
 I-type granite 121, 228, 282, 384
 ice discharge 736
 ice dynamics 633
 ice flow
 model 675
 velocity 733
 ice grounding line 768
 ice level increase 686
 ice lobe 681
 ice margin 695
 ice sheet
 Antarctic 677, 781
 grounded 656
 paleodrainage 607
 "polar" 774
 seismic refraction arrival 510
 thinning rate 581
 volume 683
 "warm" (sub-polar) 774
 ice softening 675
 ice stream C 507
 ice surface topography 674
 ice thickness 695
 ice tongue 734
 ice-cored moraine 717
 ice-surface fluctuations 683
 ice-wedge 745
 icequakes 500
 igneous activity 178
 igneous intrusions 432
 IGRF (International Geomagnetic Reference Field) 586
 IGSN71 (International Gravity Standardization Net 71) 525
 incongruent melting 146
 Inmarsat satellite unit 587
 intense reflections 641
 interglacial 407, 703
 interglacial climate 742
 intermittent crustal uplift 497
 International Absolute Gravity Basestations Network (IAGBN) 589
 International Seismic Centre (ISC) 481
 interstadial period 781
 intracontinental rift 317
 Intrusives
 Admiralty 211, 229, 238
 Granite Harbour 211, 228, 235, 263, 722
 inversion methods 485
 ion microprobe 1, 67, 123
 irregular extension 436
 island arc 405
 continental-margin 26
 isobaric cooling 101
 isochron age 4, 31, 45
 isostatic compensation (adjustment) 336, 766
 isostatic depression 695
 isostatic force 516
 isothermal decompression 13
 isotope
 calcite 132
 carbon 56
 oxygen 56
 ratio 183
 stable 58, 132
 Italian Absolute Gravity Station (IAGS) 590
 James Ross Basin 347
 James Ross Island 347, 559, 603, 742, 749
 Jetty peninsula 165, 179
 geochemistry 185
 granite 187
 Joinville Island Platform 606
 Joyce, Mt. 716
 Juan Fernandez Islands 372
 Jurassic 249, 341, 348, 353, 357, 421
 Ferrar magmatism 309
 K-Ar age 61, 196, 395, 407, 440
 Kamb method 307
 Kavrayskiy Hills 525
 Kerguelen Islands 457
 Kerguelen-Gaussberg ridge 457
 KFMAS system 87
 khardalite 78
 kinematic axes 306
 King George Bay 409
 King George Island 363, 371, 405, 414, 421, 439, 741, 781
 Kirkpatrick, Mt. 250
 KMAS system 90
 Koettlitz Group 221, 235, 257
 kornerupine 149
 Kraków Peninsula 409
 Kukri Peneplain 227, 304, 515
 kyanite 9, 78
 La Gorce Formation 237
 La Gorce Mountains 237
 La Meseta Formation 348, 604
 LaCoste and Romberg gravimeter 411, 508, 525, 581, 592
 lake sediment 703, 742
 Lamatia sp. 372
 Lambert Glacial Trough 774
 Lambert Glacier 61, 685
 Lambert Graben 200
 Lambert-Amery rift 173
 lamprophyre
 Jetty Peninsula 163
 Southern Victoria Land 257
 Vestfold Hills 173
 land-based amphibian 250
 land-based reptiles 250
 Landing Bluff granite 186
 Landsat (TM) image 723, 727
 Lanternman Fault Zone 238
 Lanternman Metamorphics 237
 Larsemann Hills 64, 126, 145, 702
 geochronology 151, 158
 Larsemann Hills paragneiss 104
 Larsen Basin 347, 603
 Lassiter Coast Intrusive Suite 341
 last glacial maximum 609, 675, 686, 703, 781
 last glaciation 686, 689, 742, 749, 782
 last interglacial stage 782
 last major glaciation 741
 Latady Formation 341
 Late Carboniferous 357
 Late Proterozoic 9, 182
 mobile belt 101, 137
 tonalite 45
 latercula elliptica 693
 Laurentia breakup 235
 leaf physiognomy method 372
 Leap Year Fault 238
 Leap Year Group 238
 least squares collocation 465, 489
 Legru Bay Group 409
 Legru Glaciation 407
 LeMay Group 377, 383
 levee deposit 359
 Leverett Formation 237
 Levick, Mt. 723
 linear features 729
 Litell Rocks 525
 lithologic unit 19
 lithosphere 273, 320
 Antarctic 465
 lithospheric transect 405
 Liv Group 237
 Livingston Island 357, 419, 742, 751, 757
 Lonely Ridge granodiorite 236
 Long Island Sound 573
 long term monitoring 589
 long-period seismograph 479
 López de Bertodano Formation 348
 Love wave 586
 low *P*, high *T* regional metamorphism 216
 low velocity 485
 lower crust 270, 277
 Lunckeryggen Granite 46
 Lützw-Holm Bay 493
 Lützw-Holm Complex 65, 67, 84
 Lystrosaurus Zone 249
 M-type granite 51
 Mackellar Formation 242
 mafic dike 95, 283, 291, 421, 431
 swarm 5, 138, 173
 mafic to ultramafic granulite 113
 magma generation 237
 magmatic arc 347, 405, 419
 Antarctic Peninsula 383
 Palmer 603
 magmatic arc provenance 343
 magmatic differentiation 384
 magmatic gas emission 447
 magmatic island-arc 405, 439
 magmatism 238, 319, 439, 457
 rift-related 178
 magnetic anomaly 431, 586
 lineation 550, 568, 649
 vector 649
 magnetic basement 431
 magnetic contouring 548, 557
 magnetic map 545, 564
 magnetic structure
 2D 650
 2.5D 567
 magnetic survey
 airborne 317, 444, 545, 555
 ground 563
 magnetic susceptibility 282, 563
 Magsat magnetic anomalies 465, 550
 mantle nodule, Prince Charles Mountains 163

- mantle peridotite 274
mantle plume 316
Marambio Group 348, 604
marble 55, 131
marginal moraine 695
Marguerite Bay 741
Marie Byrd Land 289, 316, 523, 557
 metamorphism 295
 volcanic rock 284
Marie Byrd Land block 312
Marie Byrd Land Volcanic Province 273
Marine Plain 701, 781
marine basin 405
marine cut platform 353
marine diatom 701, 716
marine magnetic profiles 444
marine sediments 609, 702
marine seismic reflection 318, 641
marine terrace 412, 745
Mariner Group 238
maritime Antarctic 757
mass balance 669
Matusevich Glacier 525
Mawson charnockite 192
Mawson Escarpment
 dike rock 176
 granitic intrusion 187
McMurdo Sound 528, 592
McMurdo volcanic province 523
mechanical weathering 757
Mefjell 679
Mefjell Granite 45
mélange 377
Melbourne, Mt. 499, 523, 535, 592
melting
 incongruent 146
 partial 125, 161, 263, 269, 442
Melville Glaciation 409
Meserve Hill Member 221
Mesozoic 303, 347, 357, 377
Mesozoic alluvial fan sequence 348
meta-carbonate 129
metacumulates 114
metamorphic assemblage 221
metamorphic evolution 110
metamorphic fluid 55
metamorphic grade 354
metamorphic rocks 17, 279
metamorphic zonation 211
metamorphism 220
 amphibolite facies 38, 139
 contact 13, 216
 granulite facies 1, 7, 29, 42, 75, 103, 145
 greenschist facies 10, 38, 150
 low *P*/high *T* 216
 prehnite-pumpellyite facies 377
 prograde 9, 75, 81, 100, 207
 retrograde 110
metapelite 87, 122, 213
 Brattstrand Bluffs 103
metasomatic reaction zones 132
metasomatism 168
Michelson interferometer 589
micro-earthquake 493
Middle Jurassic 353
Middle-Upper Jurassic 341
Miers Bluff Formation 357, 419, 751
migmatite, Fosdick Metamorphic Complex 295
migmatite gneiss 289
Millen Schists 238
Miller Formation 235
Miller Range 203, 235
Miocene 348, 409, 628, 665, 774
Mizuho Plateau 583
mobile belt
 Late Proterozoic 101, 137
 Proterozoic 67
model age 2, 33, 41, 235
modeling
 finite element 516
 two dimensional 435
Moho 318, 507
Moho dip 465
monomictic breccia 359
moraine
 field 662
 ridge 695, 751
MORB (mid-ocean ridge basalt) 22, 267, 381
Morozumi Range 525
morphometry 724
Morris Basin 716
moss bank 742
Mossel gneiss 2, 121
mountain uplift 712, 718
Mountaineer Range 713, 721
Mt. Billing 716
Mt. Bowen 716
Mt. Collins, igneous rocks 176
Mt. Emison 724
Mt. Joyce 716
Mt. Kirkpatrick 250
Mt. Levick 723
Mt. Liptak Formation 334
Mt. McCarthy charnockite 97
Mt. Melbourne 499, 592
 Quadrangle 523, 535
Mt. Poster Formation 341
Mt. Queensland 722
Mt. Riiser-Larsen granulites 91
Mt. Walcott Formation 237
Mt. Wegener thrust 229
Mt. Willing intrusion 177
mud flake 352
mudstone 241, 357
multi electrode sparker 641
multichannel seismic reflection 657
multivariate statistical analysis 241
mylonite 139
mylonitization 29
Nansen Ice Sheet 722, 736
Napier Complex 3, 87
nappe 142, 232
Nd-depletion 457
near-isobaric cooling 87, 106, 140
near-isothermal decompression 124
nearest living relative method 372
needle probe 632
Nelson Limestone 236
Neogene 419, 699, 773
 glacial history 773
 sedimentation 423
 sediments 628
Neogenic oblique extension 636
Neptune Group 238
Nils Larsen Group 7, 55
Nils Larsen Tonalite 46
Nils Larsenfjellet 664
Nimrod Dynamothermal Events 204
Nimrod Group 203, 235
Nimrod metamorphic terrain 207
Nimrod Orogeny 235
NNSS (Navy Navigation Satellite System) 579
nodule 163
non-channelized facies 359
non-deciduous species 372
non-graded sandstone 359
north-facing lee-side slope 662
northern aspect 759
Northern Foothills 723, 728
Northern (North) Victoria Land 211, 235, 502,
 525, 535, 563, 592, 707, 715, 733
 xenolith 265
Nothofagus 372
NRM (Natural Remanent Magnetization) 192
Oates Coast (Land) 221, 523
oblique extension 310
ocean ridge granite 385
ODP site 613, 644
Oligocene 373, 405, 774
olivine, corona 116
Ongul Islands 61
Ongulkalven block 496
organic carbon 244
Orion Anomaly 545
orogen
 compressive 232
 Ross 227, 235
orogenic belt, Paleozoic (Palaeozoic) 67
orogeny
 Beardmore 208, 230, 235
 Gondwanide 238, 331
 Nimrod 235
 Ross 213, 219, 237, 257
orthogneiss 103, 121, 145
osumilite 87
Otter Highlands thrust 229
Outback Nunataks 708
outlet glacier 671, 685, 709
Outrider Nunatak 223
overbank environments 250
overriding hypothesis 773
oxygen isotope 56
P phase (P-wave) 453, 500
P-T evolution 116
P-T-displacement evolution 207
P-T-t path 58, 93, 119, 140
 anticlockwise 90, 101
 clockwise 13, 75, 106, 126
 prograde 81, 100, 207
 retrograde 82, 100
Pacific Margin Anomaly 545, 556
Pacific margin
 Antarctic Peninsula 417
 Gondwana 361
Pagoda Formation 242
Pagodroma Tillite 662, 685, 774
paleo ice flow 711, 717
paleoanalogue (palaeoanalogue) 699
paleobotanical studies 373
Paleocene (Palaeocene)
 plutons 347
 strata 347
 tuffs 354
 volcanic rocks 348
paleoclimate 369, 372, 741
paleoclimatology 609
paleocurrent 250, 359
paleoecologic significance 249
paleoflow 251
Paleogene (Palaeogene) 364, 373, 421
paleogeography 644
paleogeothermal gradient 338
paleohydrothermalism 457
paleomagnetism 191, 286
paleontology 609
paleoshelf edge 768

- paleoslope 225
paleostress patterns 306
Paleozoic (Palaeozoic) 42, 341, 348
 orogenic belt 67
 peneplain 329
Palmer Land 341
Palmer Land-Granham Land transition zone 549
Palmer Magmatic Arc 603
palynomorph 363
Pan-African events 42, 67, 161
Pannotios event 237
paragneiss 103, 145, 295
partial melting 125, 161, 263, 269, 442
passive margin regime 237
patterned ground 663
Patuxent Formation 235
²⁰⁷Pb/²⁰⁶Pb age 155
peneplain 353, 710
 Kukri 227, 304, 515
 Paleozoic 329
Penguin Island 409, 413
Pensacola Mountains 235
 Plutonism 238
Pentaneurum dusenii 372
peridotite 166, 262
periglacial observation 758
permafrost 745
Permian
 back arc basin 345
 mudrocks 241
petrochemistry 45
petrogenesis 203
petrology 93, 179, 341, 383, 455
Phanerozoic 177
phase velocity 484
photointerpretation 722
Phyllothea 343
physical volcanology 499
physiographic break 309
pirrite 163
pillow lava 377
Pingvinane Granite 46
Pipecleaner Glacier 221
plagiogranite 266
planolites-type trace fossil 357
plant fossils 371
plate velocity 319
plateau age 61
Pleistocene 662, 702, 712, 718, 774, 781
Pliocene 661, 701, 712, 718, 774
plume head event 319
plutonic activity 38
plutonic rocks, Gerlache Strait 395
Polar Plateau 592
"polar" ice sheet 774
Polarstar Formation 331, 341
Polonez Glaciation 407
polygenetic breccia 359
polygenetic conglomerate 359
polygon 663, 745
polymetamorphism 41, 87, 119
Port Foster 450
POSEIDON (Pacific Orient Seismic Digital Observation Network) 479, 595
positive uplift 415
Prebble Formation 253
Precambrian 37, 179
Precambrian/Cambrian boundary 236
prehnite-pumpellyite facies 377
present-day glaciation 675
pressure melting 675, 681
Priestley Formation 221
Priestley Glacier 722, 736
Prince Albert Mountains 715
Prince Charles Mountains 42, 110, 179, 684, 774
 igneous rocks 177
 mantle nodule 163
 P-T-t path 93
Prince Gustav Channel 604
Prince Olav Coast 493
Princess Astrid Coast 644
Proclamation Island 3
progradation 361
prograde *P-T-t* path 9, 81, 100, 207
prosauropod 254
Proterozoic 9, 42, 119, 173, 182, 219, 295
 Complex 103
 mobile belt 67, 101, 137
 tectonic evolution 103
provenance, Crashsite Quartzite 342
Prydz Bay 103, 113, 119, 622, 644, 657, 763, 774
pseudotachylite 138
pteridophytes 371
pterosaur 254
pyroclastic flow 439
pyroxenite 275
Qm-P-P ternary 353
Qp-Lv-Ls ternary 353
Qt-F-L ternary 350
Quaternary 419, 699, 741
Queen Mary Land 3
Queen Maud Land (Dronning Maud Land) 7, 19, 310
Queen Maud Mountains 236
Queensland, Mt. 722
Radian Glacier 221
radio echo sounding 582, 672
radio-telemetry 493
radiocarbon dating (dates) 693, 703, 741, 749, 774
raised (elevated) beach 494, 691, 751, 782
Ramsay-Granham shear zone 291
Rauer Group 103, 113, 119, 129, 145
Rauer Islands 2, 140, 703
Rayleigh wave 484, 586
Rayner Complex 72, 84, 120, 145
Rb-depletion 33
Rb-Sr age 4, 31, 40, 45, 183
Read Group 203
recent uplift 754
Reeves Glacier 722, 736
reflection seismics 616, 627
reflective zone 513
regional earthquakes 502
regional tectonics 555
regional unconformity 238
relative gravimeter 591
renewed marine inundation 742
renewed subduction 426
Rennick Bay 528
Rennick Graben 528, 708
Rennick Schists 237
retro-arc, James Ross Basin 347
retrograde gneiss 29
retrograde *P-T-t* path 10, 82, 100, 110
reworking 119
Richter slopes 671
Ricker Hills 716
ridge BC 507
ridge crest 641
ridge crest-trench collision 400, 423
rift 411
 Lambert-Amery 173
 kinematics 303
 structure 187
 West Antarctic 317
rifting 178, 318, 405, 627
 episodic 305
 Gondwana 284
 Ross Sea 535
Rüiser-Larsen, Mt. 87
rising, Antarctic beaches 782
Robertson Bay 311
Robertson Bay Group 238
Robertson Bay Terrane 211, 227, 236
rock glacier 726
Rogerstoppane Granite 46
Ross deformation 237
Ross (Sea) Embayment 316, 320, 523, 636, 774
 rift system 311
Ross Ice Shelf 318
Ross interval 237
Ross intrusion 238
Ross orogen 219, 227, 235
Ross Orogeny 67, 213, 237, 257
Ross Sea 317, 465, 499, 507, 523, 540, 619, 632, 657
Rouen Mountains batholith 383
S phase (S-wave) 453, 500
S-P time (interval) 453, 502
S-type granite 4, 228
salt weathering 760
sapphire 10, 88, 122
satellite altimeter data
 Exact Repeat Mission 490
 Geodetic Mission 468, 489
 GEOSAT 465, 489
 SEASAT 653
satellite
 communication 585
 geometry 581
 geophysics 465
 positioning 582
satellite image
 LANDSAT 723, 727, 733
 SPOT 727, 733
sauropod 254
Scintrex gravimeter 443
Scotia Arc 406, 418, 449
Scott Glacier 237, 689
seour surface 250
Scullin Monolith 64
sea bottom temperature 632
sea level change 496, 656, 763, 783
sea surface heights 489
sea water temperature 447
seafloor spreading 425, 644, 650
Seal Islands 418
seamount chain 427
secondary ion mass spectrometry (SIMS) 125
secular variation correction 564
sedimentary basins 622
sedimentary history 633
sedimentology 242, 249, 357
seismic activity 502
seismic data 500, 631
 library system 655
seismic energy 452
seismic line (profile) 318, 609, 628, 763
seismic network 450, 500
seismic observation 475, 493
seismic record 508, 641

- seismic reflection 424
 seismic refraction 453, 471, 510, 619
 seismic velocity model 510
 seismic wave propagation 493
 seismicity 450, 493, 499
 seismostratigraphic model 613
 selective linear erosion 672
 Sentinel Range 337, 559
 sequence stratigraphy 613
 Seymour Island 347, 603, 745
 Seymour Island Group 348
 Shackleton Coast 208
 Shackleton Fracture Zone 417
 Shackleton Limestone 236
 Shackleton Range 229
 shaded-relief images 565
 Shafer Peak 725
 sheet drape sediment 641
 shelf bathymetry 763
 shell-bearing marine sediments 742
 shelly fauna 703
 Sherratt Bay Formation 409
 shield-type 487
 Shipboard Three Component Magnetometer 649
 Shirase Glacier 580
 short-period seismograph 479, 493
 SHRIMP (ion microprobe) 1, 67, 123
 single channel seismic reflection profiling system 641
 Sirius Group (Formation) 662, 718, 773
 skarn 55
 Skelton Group 235, 257
 Sm-Nd age 2, 32, 40, 184
 smaller ice cap 701
 Smith Island 417
 snow reflectivity 727
 Sobaco Nunatak 343
 Sobral Formation 348
 sonobuoy reflections and refractions 619
 South Orkney Islands 742
 South Shetland block 412
 South Shetland fore-arc region 423
 South Shetland Islands 354, 357, 405, 412, 417, 439, 443, 450, 751, 757, 774
 South Shetland Microplate 405
 South Shetland (subductional) Trench 405, 417
 southern aspect 759
 Southern Cross Mountains 721
 Southern Victoria Land 235, 257
 Southwestern Indian Ridge 644, 650
 spessartine 351
 spore-pollen 363
 spreading rates 645
 Square Peninsula 347
 Sr-enrichment 457
 Sri Lanka, granulite 72, 75
 stable isotope 58, 132
 Starshot Formation 238
 staurolite 10, 80, 207
 stratigraphic mapping 306, 617
 stratigraphy, Falla and Fremouw Formations 249
 stratovolcano 443
 striation pattern 711
 strike-slip lineations 632
 structural domains 145
 structural kinematic approach 306
 structural maps 309, 636
 structural style 110
 STS (Streckeisen Seismograph) 585, 595
 Sturgeon Island granodiorite 236
 Sub-Antarctic Kingdom 371
 subduction 208, 231, 237, 263, 383, 418, 423
 subduction zone 95, 402
 subglacial abrasion 679
 subglacial topography 576, 674
 submarine platform 405
 submarine volcano 317, 414
 subvolcanic basalt 440
 summit plateau 709, 716
 supracrustal rocks 275
 suprafan lobes 361
 supraglacial deposits 662
 supraglacial moraines 679
 surface brightness 727
 surface layers 485
 surface wave 586
 Swanson Formation 280
 symplectic intergrowth 116, 207
 symplectite 90, 103
 Sør Rondane Mountains (Sør-) 7, 17, 29, 38, 45, 55, 61, 661, 669, 679, 774
 taffoni 661
 taphonomic modification 255
 taxonomy 254
 Taylor Formation 237
 tectonic cycle 137
 tectonic events 500
 tectonic evolution 235, 543
 Proterozoic 103
 tectonic processes 632
 tectonic setting 138
 tectonics 235, 411, 627, 656
 tectonomagmatic dome 316
 teleseisms 452
 Teltet-Vengen Group 7, 55
 temnospondyl amphibian 250
 temperature gradient 633, 747
 temperature regime 669
 tensile stress 639
 tephrite 273
 Terra Nova Bay 499, 523, 538, 587, 589, 728, 733
 terrain correction 526, 535
 Terror Rift 312, 529, 627
 Tertiary 348, 364, 371, 419, 607, 709
 floras 371
 glacial history 774
 marine diatoms 781
 volcanic rocks 341
 texture, reaction 119
 therapsid reptilian 250
 thermal anomalies 443
 thermal conductivity 632
 thermal disturbances 633
 thermal event, Pan African 161
 thermal gradient 328, 633
 thermal history 333
 thermal plume mechanism 319
 thermal spring 444
 thermal uplift 516
 thermodynamics 675
 thermometric survey 447
 theropod 254
 thick glacial drift (till) 662, 689
 Thiel Mountains 236
 Thiel Mountains porphyry 236
 thinning rates 581
 tholeiite 139, 352, 354, 439, 457
 thrusting 230
 till 661, 716
 clayey 679
 tillites 220
 tilted block 332
 tonalite, Proterozoic 45
 tourmaline 149
 Tourmaline Plateau 724
 Transantarctic Mountains 203, 235, 303, 315, 485, 515, 523, 535, 592, 707, 718, 773
 transect
 Drake Passage-Weddell Sea 417
 lithospheric 405
 morphological 721
 transgression 750, 782
 transport phenomena 55
 transportable absolute gravimeter 589
 travel-time 510
 Triassic 249, 357
 Beacon Supergroup 235
 trilobite, Middle Cambrian 237
 trimline 710
 Trinity Peninsula 347
 Trinity Peninsula Group 348, 357, 421, 603
 tripartite seismic array 493
 tropospheric correction 581
 truncated reflector 644
 Tula Mountains 90
 turbidite 223, 235, 238, 359
 turbidity current 361, 423
 U-Pb age 4, 41, 68, 123, 183
 U-shaped valley 672
 ultramafic granulite 113
 unconformity 613, 623
 unconsolidated sediment 510
 underplating 382
 underthrusting 91
 unroofing rate, Vinson Massif 336
 uplift 13, 141, 284, 300, 329, 336, 411, 494, 695
 mechanism 515
 rate 693
 recent 754
 upper mantle
 structure 483
 nodule 163
 uppermost mantle 487
 upthrust fault 645
 Usarp Mountains 523, 709
 Usnea Plug 757
 V-shaped valley 726
 Vauréal Peak Formation 407
 velocity
 contrast 485
 discontinuity 619
 model 453
 structure 510
 Vengen Granite 46
 vertebrate locality 249
 vertical faults 641
 Vestfold Block
 P-T-t path 140
 tectonic setting 138
 Vestfold Hills 1, 173, 701, 781
 VGP (virtual geomagnetic pole) 61, 198
 Victoria Land 227, 303, 315, 593, 632, 721, 727, 733
 Victoria Land Basin 318, 523, 627
 Viking Valley till 665
 Vikinghøgda Granite 45
 Vinson Massif 336
 Volcanic Province, West Antarctica 277
 volcanic activity 409, 443, 450, 499, 592
 volcanic arc 419

- granite 52
- volcanic component 254
- volcanic enclaves 440
- volcanic glass, Paleocene 351
- volcanic island 443
- volcanic plateaus 513
- volcanic rock
 - Elgar Uplands 390
 - Marie Byrd Land 284
- volcanic submarine chain 413
- volcanic substratum 409
- volcanic suite 237
- volcanism (vulcanism) 237, 316, 341, 352, 450, 523
- volcano 443, 499
- volcanology 455
- Vostok ice core 675, 782
- “warm” (sub-polar) Antarctic ice sheets 774
- warmer environment 663
- water gun 604
- water temperature, Pliocene 701
- weathering
 - degree 710, 716
 - processes 757
 - rind 758
 - stage 661
- Weddell Sea 347, 421, 545, 555, 603, 613, 657
- Weddell Sea gyre 644
- Weddell Sea opening 338
- Werner deconvolution 557
- Wesele Interglacial 407
- West Antarctic rift 317
- West Antarctica 371, 405, 485, 513, 529, 555, 571, 774
 - ice sheet 774
 - Volcanic Province 277
- wetting and drying 760
- WGS72 (World Geodetic System 72) 581
- WGS84 581
- Whitmore Mountains 317
- wide-angle reflections 510
- Wiens Formation 237
- Wilkes Basin 515
- Wilkes Land 657
- Willing, Mt., igneous rocks 177
- Wilson Hills 523, 709
- Wilson Terrane 211, 221, 227, 235, 722
- Wiman formation 349
- Windmill Islands 702
- within-plate granite 52
- Wonoka Formation 225
- Wood Bay 738
- Worsley Formation 235
- Wright Valley 221
- Wyatt Formation 236
- Wyatt porphyries 237
- xenolith
 - Cape McCormick Crater 265
 - mantle nodule 163
 - Marie Byrd Land 274
 - Northern Victoria Land 265
- Yamato Mountains 65
- Yamato-Belgica Complex 67, 84
- Yule Bay Batholith 229
- zeolitization 457
- zircon, U-Pb age 1, 68, 123, 158, 182
- zoneography, zeolites 460