

INDEX OF SUBJECTS

- Acoustic wave, 51, 99, 138, 244, 269, 275
 subphotospheric, 263
- Active region, evolution, 283
- Alfvén waves, 140–2, 144, 146, 270, 277, 300, 301
- Anisotropic turbulence, 105
- Arch Filament System (AFS), 36, 161, 183, 198, 219, 223, 283
- Atmospheric turbulence, 28–30
- Bright points
 in CN, 201, 209
 in H α , 41
- Ca II K network, 55–62
- Center to limb variation, 78–80, 177, 179
- Central reversal, 74, 105, 120
- Chromosphere – corona transition region, 194, 279
 magnetic model, 295–6
- Chromospheric heat balance, 270–8
- Chromospheric network, 12–17, 36–40, 45, 55–62, 71–82, 89, 91, 257, 279–84; *see also*
 Supergranulation boundary
 evolution of K and H α profiles, 243
 heat source, 276–8
- Cloud model, 16, 93, 113, 131, 247
- Conductive flux, 36
- Convection cell, 35, 41
- Doppler effects, 10, 16, 61, 208
 broadening, 100
 shifts, 108, 116–8, 120, 127, 138
- Diamagnetic acceleration, 39
- Emerging flux region (EFR), 161–4, 169, 235
- Emission in K
 double peaked, 31, 75, 107
 single peaked, 110
- Extreme ultra violet (EUV, XUV), 71, 78, 91
- Fe II, 89
- Fibrils, 14, 49, 55, 143, 161, 167–8, 184, 187, 190, 239, 241
 model, 40
 in sunspots, 144
- Field transition arches, 161, 167, 172
- Filigree, 45–6, 168, 257–61
- Filaments, 283
- Flare, 155, 283
- observed 9 June 1973, 66
- Flux tubes, twisted, 197, 278
- Grains, 15, 18, 51, 143–4, 239, 241, 244
- Granule, 258
 facular, 177, 179
 motions, 277
- Gravity waves, 277
- Ground based observations, 27–30
- High resolution profile, 98
- H α network, 257
- Hydrodynamic wave, 274, 282, 293
- Hydromagnetic wave, 279
- Internal motions, 128
- Interspicular medium, 8
- K line, 103
 asymmetries, 107–10
 grains, 15, 18, 51, 241, 244
 model, 74
 plages, 168
- Layered motion, 99, 106–7
- Light bridge, 187, 221
- Limb and disk comparison, 130
- Line profiles, 74
 broadening, 105
 Ca⁺, 72
 Helium, 72
 Hydrogen, 72
 K and H α evolution in network and cell, 243–7
 Lyman α , 23
 widths, 123–7
- Local thermodynamic equilibrium (LTE), 177
- Low resolution profile, 98, 101
- Lyman continuum profile, 78–80, 89
- Macroturbulence, 258
- Magnetic field
 bay, 205
 convection zone, 275–6, 285–7
 effects, 273–4
 enhancements, 18
 fluxules, 214
 frozen, 203
 horizontal component, 190

- knots, 209
- longitudinal, 164, 167
- moats, 205, 207, 215, 221, 235
- wreath, 205, 221
- Magnetic flux**, 35, 210
 - dissipation, 39
 - evolution, 235
 - transfer, 216–8
- Magnetic flux inflow (MFI)**, 203, 218–23
- Magnetic flux outflow (MFO)**, 203–18
- Mass motion**, 99, 127
- Microturbulence**, 74, 99–102
- Models**
 - acoustic, 270
 - conductive, 270–1
 - interspicular, 81
 - lower chromosphere, 31
 - shock flow, 180
 - spherical symmetric shell, 23, 36, 271–3, 295
- Motions at limb**
 - horizontal, 115
 - rotational, 118–120
 - vertical, 115
- Mottles**, 65, 75, 110–4, 131, 239
 - bright, 13, 15–6, 25, 241
 - dark, 13, 15–6, 46, 240, 258, 260
 - evolution at network boundary, 247–54, 281
- Moving magnetic features (MMF's)**, 201–27, 233–4
- Network**; *see* Chromospheric network, Supergranulation boundary
- Optically thick features**, 59–60
- Optically thin features**, 60
- Oscillations**, 18
 - network and cell, 242–3
 - plages, 144, 153
 - sunspots, 137–43
 - supergranulation, 143
 - supergranulation boundary, 143
 - trapped, 157
- Phase coherency**, 145
- Photoionization**, 57–60
- Photospheric network**, 177, 179
- Plage evolution**, 161–72
- Prominence-corona interface**, 193–6
- Radio emission**, 65–8, 76–8, 91
- Rosettes**, 8, 13, 45, 112, 143
- Shockwaves**, 37
- Slow mode waves**, 274
- Solar wind flux**, 91
- Spicules**, 3–18, 23, 25, 37–40, 46, 49, 65, 71–5, 168, 263, 279–83
 - central reversal, 9
 - cold, 77, 80
 - descriptive, 3–8
 - Doppler shifts, 9–12
 - emission in H, He, Ca⁺, 12
 - inclination, 17
 - narrow, 124, 126, 129
 - rotation, 74, 129
 - velocity, 7, 9, 16–7
 - wide, 124, 126, 129
- Sunspots**, 137–143
 - chromospheric and photospheric structures, 183–90
 - decay rates, 233–4
 - energy deficit, 283
 - evolution, 204–227
 - evolution of magnetic flux, 235–6
 - penumbral filaments, 216
- Supergranulation boundary**, 14, 16, 23, 35–6, 71, 143–4, 157, 223, 239, 259, 263, 273, 279, 295;
 - see also* Chromospheric network
 - evolution of mottles, 247–54
- Supergranulation**, 37, 45–6, 143–4, 157, 184, 207, 223, 235, 239, 241, 279, 281
- Temperature**
 - enhanced, 18, 89
 - instability, 38
- Transition sheath**, 18
- Transition zone**, 42, 89, 91
- Transverse wave**, 138–9
- Turbulent pressure**, 101
- Ultraviolet network (UV)**, 36–7, 78–82, 89, 91
- Umbral flashes**, 138
- Velocity**
 - layer model, 113
 - rotational, 75
 - transverse, 81
 - turbulent, 55, 62