

DEEPWAVE Model Summary (Draft)

| Model | Type | Org. | Horizon Res. | Vertical Levels | Top | Fcst Length | Freq./ day | Purpose |
|----------------|--------|-------|--------------|-----------------|-------|-------------|------------|---------------------------------|
| GFS | Global | NCAR | 27km | 64? | 50km? | 240 h | 4x | Medium range |
| IFS | Global | DLR | 16km | 137 | 100km | 240 h | 4x | Medium range – high alt GWs |
| NAVGEM | Global | NRL | 37km | 50 | 70 km | 120 h | 4x | Medium range |
| UM | Global | NIWA | 17km | 70 | 80 km | 144 h | 4x | Medium range – high alt GWs |
| NZLAM | Meso | NIWA | 12km | 70 | 80 km | 72 h? | 4x | GWs, meso |
| NZCSM | Meso | NIWA | 1.5km | 70 | 40 km | 36 h? | 4x | Fine scale GWs, local mesoscale |
| COAMPS | Meso | NRL | 10-15km | 80 | 50 km | 48h | 4x | GWs, meso |
| WRF | Meso | Inns. | 6 km | | 50 km | 48h | 2x | GWs, meso |
| WRF | Meso | Yale | 3 km | | 30 km | 48h | 2x | Fine scale GWs, |
| Cosmo | Meso | BGS | 2.8 km | | | 48h | 2x | Fine scale GWs, |
| COAMPS Adjoint | Meso | NRL | 20 km | 60 | 30 km | 48h | 4x | Targeting |

Standard Products (Rough Draft)

| Variables | Levels | Time Frequency | Forecast Length |
|---|---|----------------|---|
| SLP, 3-h rain fall hPa, mm | Sea level | Every 3 h | 120 h global 48 h mesoscale |
| Heights-Winds Meters, m/s vectors | 850, 700, 500, 300, 200, 100, 50, 10, 2mb | Every 3 h | 120 h global 48 h mesoscale |
| Vertical velocity m/s | 850, 700, 500, 300, 200, 100, 50, 10, 2mb | Every 3 h | 120 h global 48 h mesoscale |
| Divergence $10^{-3} /s$? | 850, 700, 500, 300, 200, 100, 50, 10, 2mb | Every 3 h | 120 h global 48 h mesoscale |
| Theta, vertical velocity, horizontal wind | 3 standard cross sections Top at model top | Every 3 h | 48 h mesoscale |
| Targeting products | Vertically integrated energy, u, v, t, q sensitivity for 850, 700mb etc. | Every 3-6 h | 24 h sensitivity with various lead times |
| Theta, vertical velocity, horizontal | Meridional cross section | Every 3 h | |