

Table 1. Annotations of Selected Observational References

| Reference | Field(s) | Data Int./filter | Season | Region | Analysis methods |
|--|---|--------------------------------|--------------------------|------------------|--|
| Barnett 1985 | SLP | >18 month | n/a | NH +>40S | Complex EOF pattern correlation std dev. Between ENSO & pre ENSO composites |
| Barnett 1988 | SLP | >18 month | n/a | NH +>60S | |
| . | | Low pass | | | |
| Bjerknes 1972 | SLP, Z ₂₀₀ | 1- month | Nov. | Pacific | Composite of 1 ENSO & prev yr. |
| Deser & Wallace 1990 | SST, OLR sfc data | 3-5 m aves (ENSO) | DJF Ju-Nv | Eq. Pac. | OLR-sfc u, v wind corel anomalies composites, |
| Emery & Hamilton 1985 | SLP, SST | 1-month | wint & spring | N. Pac. | Subjctv clas. of 3 patrn. 2-pt SLP diff index dynamics interp. |
| Gershunov & Barnett 1998 | SLP, P | 3 mo. | DJF | A&P, N.Amer. | composites: ENSO vs NPO bins, signif. tests |
| Grotjahn, 1996 | many fields 1000, 500, 200 | 2x day | DJF | NW Pac. | Composites of terms in PE vort. Eqn scale analysis & theoretical |
| Holopainen 1984 | 100-1000 mb ave. | 2.5-6 d 10-90 d | DJF | NH | Devel. "energy method" comp w/ 4 others. e.g. L&H and E-vector |
| Houseago et al 1998 | Z ₅₀₀ , Z ₇₀₀ T ₇₀₀ | month aves | all 4 | SH | composites, Hovmoller |
| Kiladis & Weickmann 1992a,b | OLR, Z ₁₀₀₀ Z ₂₀₀ , Z ₈₅₀ | 6-14 day 14-30 d | DJF | Pac & E. Asia | 1-pt lagged corel. (u, v regression) |
| Kiladis & Weickmann 1997 | OLR, Z ₂₀₀ , Z ₈₅₀ | 6-30day 3-month | all 4 | Pac | 1-pt lagged corel. (u, v regression) composites |
| Kiladis 1998 | OLR Various levels | 6-30 d | DJF | N. Pac | Above, plus misc diagnostics: E vctr, Ro wave#. Mass circ., Wk/Str jet composites: OLR variance, Signif tests |
| Mathews & Kiladis 1999 | 200 mb u, v. OLR | 6-30 d (ENSO) | DJF | Pac. | |
| Lau & Phillips 1986 Lau & Sheu 1991 | OLR, Z ₅₀₀ P, SLP.. Misc. | 20-70 day monthly (ENSO) | Nov-March all 4 | NH global | 1-pt lagged corr. complex EOF P EOFs incl. Time series of proj. scatter diagram, Harmonic analysis. |
| Lau and Holopainen, 1984 "L&H" | Z ₁₀₀₀ , Z ₃₀₀ , .. | 2.5-6d 10-90d | DJF | NH | Ht. tend. from vorticity & heat fluxes in QGPV eqn. |
| Liebmann & Hartmann 1984 | OLR, Z ₅₀₀ | 5 & 10 day boxcar aves | winter | NH | lag/lead corr. between 2-d & 1-d flds worked both ways. |
| Livezey & Chen 1983 | SOI vs Z ₇₀₀ | seasonal aves | winter | NH | Develops: Monte Carlo signif. test based on areas. Time between indep samples. |
| Mo & Higgins 1998 . | OLR, SLP, P, Z ₅₀₀ , other flds | lo pass >10d bpass 2.5-6d | JFM | Pac & | Seas. Cycle (=total ave + 1 +0.5 yr cycl) removed. wet-dry. composites w/ signif tests. Lag/lead composites |
| Mo 1999 | | 40d & 22d oscil. | | | Similar, but decomp into two time scales |
| Plumb 1985, 1986 | 500 & 150 500 & 250 | 2.5-6 d & >10 d | mid Nov. to mid March | NH | Devel. 2 variations on EP3 meth. Srce/sink QGPV kept, not eval. |

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|----------------------------|----------------|-------------------------|---------------|------------------------|--|
| Quintana & Mechoso 1995 | 300, 500 | >15d & <15d | 4 Seas. | SH: >20S ~60S emph. | EP3 and L&H methods |
| Rasmusson & Carpenter 1982 | sfc data SST | monthly | all 4 | Pac. | ENSO-based Composites, X-spectral anal. |
| Rasmusson 1991 | SLP, V_{div} | (ENSO) | DJF, JJA | Pac | composites, anomalies, Hovmoller |
| Trenberth & Paolino 1981 | SLP | seas & ann aves | all 4 | NH >20N | 1 pt correlation standard dev. Spectra (in time) EOF & EOF proj. |
| Tyrrell et al 1996 | winds @ ~200mb | transient & time ave | DJF | Aus-E.Asia | Rossby wave source |
| van Loon 1986 | SLP, SST | 1-month | wint & spring | ~global | ENSO & pre composites t-test of anomalies |
| van Loon & Shea 1987 | SLP, SST | 3-month | all 4 | SH | ditto |
| Van Loon & Madden 1981 | SLP, Tsfc | 3-month aves | DJF | NH & SH | 1 pt correlation spectra (in time) |

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