

Interannual Variation of Tropical Cyclone Energy Matrix over North Indian Ocean

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Regional Specialized Meteorological Centre (RSMC), New Delhi, has prepared annual and seasonal velocity flux, accumulated cyclone energy and power dissipation index for cyclonic disturbances and cyclones over the Bay of Bengal (BOB), Arabian Sea (AS) and North Indian Ocean (NIO) from 1990 to the present.

These are presented in Table1 to Table 3. For details about the data and for referring this data for further research the following publication may kindly be referred.

Mohapatra M. and V.Vijay Kumar., 2016, 'Interannual Variation of Tropical Cyclone Energy Matrix over North Indian Ocean, Climate Dynamics, DOI.10.1007/s 00382- 016-3150-3.

Table 2: Annual VF (knot), ACE (knot²) and PDI (knot³) of cyclone & above over Bay of Bengal

BAY OF BENGAL												
Years	Premonsoon season			Monsoon season			Postmonsoon season			Annual		
	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)
1990	17.28	16.17	16.42	0.00	0.00	0.00	4.59	2.03	0.94	21.87	18.20	17.36
1991	14.70	133.88	14.51	2.05	0.85	0.36	2.75	1.10	0.44	19.50	15.83	15.31
1992	1.75	0.61	0.21	0.00	0.00	0.00	23.83	15.99	12.35	25.58	16.60	12.56
1993	0.00	0.00	0.00	0.00	0.00	0.00	4.87	3.16	2.17	4.87	3.16	2.17
1994	13.93	9.21	7.47	0.00	0.00	0.00	3.45	1.77	0.94	17.38	10.99	8.41
1995	0.00	0.00	0.00	0.00	0.00	0.00	12.56	8.21	5.83	12.56	8.21	5.83
1996	0.00	0.00	0.00	3.90	1.55	0.62	13.77	7.38	4.14	17.67	8.92	4.76
1997	8.27	5.47	3.95	4.30	1.73	0.71	7.00	2.45	0.86	19.57	9.64	5.52
1998	3.35	1.69	0.89	0.00	0.00	0.00	8.57	4.77	2.75	11.92	6.46	3.64
1999	0.00	0.00	0.00	0.00	0.00	0.00	19.65	16.47	16.24	20.85	14.81	15.52
2000	1.50	0.57	0.22	0.00	0.00	0.00	16.84	10.91	7.73	18.34	9.12	7.02
2001	0.00	0.00	0.00	0.00	0.00	0.00	1.40	0.49	0.17	1.40	0.49	0.17
2002	0.00	0.00	0.00	0.00	0.00	0.00	7.85	2.99	1.17	7.85	2.99	1.17
2003	12.05	6.24	3.45	0.00	0.00	0.00	5.20	2.55	1.28	17.25	8.79	4.73
2004	9.12	5.24	3.23	0.00	0.00	0.00	0.00	0.00	0.00	9.12	5.74	3.23
2005	0.00	0.00	0.00	2.10	0.74	0.26	9.05	3.77	1.59	13.60	5.37	2.15
2006	11.25	7.95	6.25	0.00	0.00	0.00	1.05	0.37	0.13	12.30	8.32	6.38
2007	1.35	0.61	0.27	0.00	0.00	0.00	13.65	12.42	11.79	15.00	13.03	12.06
2008	13.92	9.19	6.30	0.00	0.00	0.00	4.40	1.78	0.73	18.32	10.97	7.02
2009	6.00	2.45	1.02	0.00	0.00	0.00	2.00	0.81	0.33	8.00	3.26	1.36
2010	6.15	2.97	1.46	0.00	0.00	0.00	9.65	6.00	4.13	15.80	8.98	5.59
2011	0.00	0.00	0.00	0.00	0.00	0.00	7.90	4.80	3.09	7.90	4.80	3.09
2012	0.00	0.00	0.00	0.00	0.00	0.00	2.40	0.97	0.40	2.40	0.97	0.40
2013	9.05	3.74	1.55	0.00	0.00	0.00	39.50	28.58	23.45	48.55	32.32	25.00
2014	0.00	0.00	0.00	12.60	9.20	7.29	0.00	0.00	0.00	12.60	9.20	7.29
2015	0.00	0.00	0.00	1.80	0.65	0.23	0.00	0.00	0.00	1.80	0.65	0.23
2016	4.45	1.81	0.74	0.0	0.0	0.0	14.55	7.60	4.25	19.00	9.41	4.99
2017	5.40	2.50	1.20	0.0	0.0	0.0	13.60	9.29	6.62	19.00	11.79	7.82

Table 3: Annual VF (knot), ACE (knot²) and PDI (knot³) of cyclone & above over North Indian Ocean

NIO												
Years	Premonsoon season			Monsoon season			Postmonsoon season			Annual		
	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)	VF(10 ²)	ACE(10 ⁴)	PDI(10 ⁶)
1990	17.28	16.17	16.42	0.00	0.00	0.00	4.59	2.03	0.94	21.87	18.20	17.36
1991	14.70	133.88	14.51	2.05	0.85	0.36	2.75	1.10	0.44	19.50	15.83	15.31
1992	1.75	0.61	0.21	1.60	0.65	0.27	27.18	17.25	12.83	30.53	18.51	13.31
1993	0.00	0.00	0.00	0.00	0.00	0.00	10.37	5.84	3.56	10.37	5.84	3.56
1994	13.93	9.21	7.47	3.20	1.32	0.56	9.85	4.62	2.27	26.98	15.15	10.29
1995	0.00	0.00	0.00	0.00	0.00	0.00	16.26	9.59	6.40	16.26	9.59	6.35
1996	0.00	0.00	0.00	6.40	2.82	1.28	17.47	9.35	5.21	23.87	12.17	6.48
1997	8.27	5.47	3.95	4.30	1.73	0.71	7.00	2.45	0.86	19.57	9.64	5.52
1998	3.35	1.69	0.89	11.50	8.02	5.97	15.32	7.95	4.31	30.17	17.65	11.17
1999	15.98	14.21	13.48	0.00	0.00	0.00	19.65	16.47	16.24	36.83	29.01	29.00
2000	1.50	0.57	0.22	0.00	0.00	0.00	16.84	10.91	7.73	18.34	9.12	7.02
2001	17.41	13.78	12.06	2.80	0.98	0.34	2.40	0.83	0.28	22.61	15.58	12.68
2002	1.75	0.61	0.21	0.00	0.00	0.00	7.85	2.99	1.17	9.60	3.61	1.38
2003	12.05	6.24	3.45	0.00	0.00	0.00	9.10	4.51	2.29	21.15	10.75	5.74
2004	17.77	9.27	5.15	0.00	0.00	0.00	6.25	2.72	1.23	24.02	12.49	6.38
2005	0.00	0.00	0.00	2.10	0.74	0.26	9.05	3.77	1.59	13.60	5.37	2.15
2006	11.25	7.95	6.25	4.05	1.83	0.83	1.05	0.37	0.13	16.35	10.15	7.21
2007	1.35	0.61	0.27	15.01	12.60	11.59	13.65	12.42	11.79	30.01	25.62	23.65
2008	13.92	9.19	6.30	0.00	0.00	0.00	4.40	1.78	0.73	18.32	10.97	7.02
2009	6.00	2.45	1.02	0.00	0.00	0.00	3.20	1.30	0.53	9.20	3.75	1.55
2010	7.75	3.61	1.72	10.20	6.50	4.35	9.65	6.00	4.13	27.60	16.11	10.19
2011	0.00	0.00	0.00	0.00	0.00	0.00	8.60	5.04	3.17	8.60	5.04	3.17
2012	0.00	0.00	0.00	0.00	0.00	0.00	4.20	1.62	0.63	4.20	1.62	0.63
2013	9.05	3.74	1.78	0.00	0.00	0.00	39.50	28.58	23.45	48.55	32.32	25.00
2014	0.00	0.00	0.00	17.10	11.48	8.71	12.75	9.58	7.87	29.85	21.06	16.58
2015	0.00	0.00	0.00	7.30	2.84	1.11	32.25	26.92	24.30	39.55	29.76	25.39
2016	4.45	1.81	0.74	0.0	0.0	0.0	14.55	7.60	4.25	19.00	9.41	4.99
2017	5.40	2.50	1.20	0.0	0.0	0.0	13.60	9.29	6.62	19.00	11.79	7.82