

Interannual Variation Of Tropical Cyclone Energy Matrix Over North Indian Ocean

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Regional Specialised Meteorological Centre (RSMC), New Delhi, has prepared average Velocity Flux, Accumulated Cyclone Energy (ACE) and Power Dissipative Index (PDI) of cyclonic disturbances (Depression and above) for different seasons and year as a whole over the Bay of Bengal, Arabian Sea and North Indian Ocean from 1990 to the present.

These are presented in Table1 to Table 4. 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 1: Velocity Flux, Accumulated Cyclone Energy (ACE) and Power Dissipative Index (PDI) of cyclonic disturbances (Depression and above) over the BOB, AS and NIO

Period	Annual								
Basin	BOB			AS			NIO		
YEAR	VF	ACE	PDI	VF	ACE	PDI	VF	ACE	PDI
1990	4481	246069	19169423	228	6552	189972	4709	252621	19359395
1991	3930	210240	16678830	0	0	0	3930	210240	16678830
1992	4683	225861	14263047	1455	46425	1531875	6138	272286	15794922
1993	822	41004	2441658	810	33650	1565250	1632	74654	4006908
1994	1993	117141	8616157	1280	50250	2104375	3273	167391	10720532
1995	2526	115912	6738024	670	22100	754000	3196	138012	7492024
1996	2932	121054	5641408	1160	47150	2123000	4092	168204	7764408
1997	4647	173879	7767033	320	9350	274250	4967	183229	8041283
1998	2252	94404	4488908	2995	144025	8408875	5247	238429	12897783
1999	2990	190200	16886750	1733	145767	13582913	4723	335967	30469663
2000	3259	153403	9005281	0	0	0	3259	153403	9005281
2001	420	12050	354750	2541	162787	12848649	2961	174837	13203399
2002	1805	57525	1921625	495	14725	447375	2300	72250	2369000
2003	2530	110400	5364250	505	22925	1105375	3035	133325	6469625
2004	2092	84304	4101658	2270	89350	3767750	4362	173654	7869408
2005	3100	99500	3353500	125	3125	78125	3225	102625	3431625
2006	3125	133425	7716875	550	22550	957250	3675	155975	8674125
2007	3255	178775	13411125	2281	148607	12249589	5536	327382	25660714
2008	2857	138329	7834033	305	7775	198875	3162	146104	8032908
2009	1850	61900	2180000	455	13575	427625	2305	75475	2607625
2010	2585	115875	6276125	2805	153125	9421125	5390	269000	15697250
2011	1895	76325	3832625	1720	46750	1285750	3615	123075	5118375
2012	935	28675	923375	395	12325	394625	1330	41000	1318000
2013	6990	377200	26396250	400	11500	332500	7390	388700	26728750
2014	2110	114800	7912000	1990	122000	8893000	4100	236800	16805000
2015	1055	28925	823625	4570	310250	25519000	5625	339175	26342625

Table 3: Velocity Flux, Accumulated Cyclone Energy (ACE) and Power Dissipative Index (PDI) of cyclonic disturbances (Depression and above) over the BOB, AS and NIO during monsoon season (June-September)

Period	Monsoon Season								
Basin	BOB			AS			NIO		
YEAR	VF	ACE	PDI	VF	ACE	PDI	VF	ACE	PDI
1990	1194	32436	882306	0	0	0	1194	32436	882306
1991	1075	28375	754375	0	0	0	1075	28375	754375
1992	1090	30700	871000	525	16825	562125	1615	47525	1433125
1993	0	0	0	0	0	0	0	0	0
1994	0	0	0	510	18400	706500	510	18400	706500
1995	350	8750	218750	0	0	0	350	8750	218750
1996	555	20025	749625	445	18175	810625	1000	38200	1560250
1997	2975	90475	2831375	0	0	0	2975	90475	2831375
1998	170	4850	139250	1295	84375	6088625	1465	89225	6227875
1999	540	12950	317250	0	0	0	540	12950	317250
2000	100	2500	62500	0	0	0	100	2500	62500
2001	25	625	15625	455	14925	493625	480	15550	509250
2002	0	0	0	0	0	0	0	0	0
2003	135	3675	100875	0	0	0	135	3675	100875
2004	615	17325	491625	785	27175	1008875	1400	44500	1500500
2005	610	18100	548500	125	3125	78125	735	21225	626625
2006	1760	46550	1240250	550	22550	957250	2310	69100	2197500
2007	1415	39575	1115375	1636	129632	11689714	3051	169207	12805089
2008	275	7625	213125	200	5000	125000	475	12625	338125
2009	260	7550	220250	150	3750	93750	410	11300	314000
2010	0	0	0	1020	64950	4346250	1020	64950	4346250
2011	770	18950	477500	95	2275	54875	865	21225	532375
2012	0	0	0	0	0	0	0	0	0
2013	435	9575	213375	0	0	0	435	9575	213375
2014	380	10400	287000	565	22425	925375	945	32825	1212375
2015	825	22275	630375	735	26825	1015875	1560	49100	1646250

Table 4: Velocity Flux, Accumulated Cyclone Energy (ACE) and Power Dissipative Index (PDI) of cyclonic disturbances (Depression and above) over the BOB, AS and NIO during post-monsoon season (October-December)

Period	Post Monsoon Season								
Basin	BOB			AS			NIO		
YEAR	VF	ACE	PDI	VF	ACE	PDI	VF	ACE	PDI
1990	1438	48916	1789174	228	6552	189972	1666	55468	1979146
1991	935	27775	873875	0	0	0	935	27775	873875
1992	3173	182311	12991547	930	29600	969750	4103	211911	13961297
1993	822	41004	2441658	810	33650	1565250	1632	74654	4006908
1994	515	22575	1080875	770	31850	1397875	1285	54425	2478750
1995	1476	88162	5999274	670	22100	754000	2146	110262	6753274
1996	2267	97979	4806533	715	28975	1312375	2982	126954	6118908
1997	730	25400	884500	320	9350	274250	1050	34750	1158750
1998	1617	69229	3366783	1700	59650	2320250	3317	128879	5687033
1999	2450	177250	16569500	0	0	0	2450	177250	16569500
2000	2804	139928	8586656	0	0	0	2804	139928	8586656
2001	395	11425	339125	185	5775	182375	580	17200	521500
2002	1690	54200	1825000	0	0	0	1690	54200	1825000
2003	775	31975	1449625	505	22925	1105375	1280	54900	2555000
2004	425	10625	265625	560	20100	790250	985	30725	1055875
2005	2490	81400	2805000	0	0	0	2490	81400	2805000
2006	185	5825	186875	0	0	0	185	5825	186875
2007	1450	126600	11854750	645	18975	559875	2095	145575	12414625
2008	1105	36425	1254625	105	2775	73875	1210	39200	1328500
2009	595	19325	653125	305	9825	333875	900	29150	987000
2010	1865	83325	4734125	0	0	0	1865	83325	4734125
2011	1125	57375	3355125	1625	44475	1230875	2750	101850	4586000
2012	935	28675	923375	395	12325	394625	1330	41000	1318000
2013	5290	321350	24406750	400	11500	332500	5690	332850	24739250
2014	1530	99400	7500000	1425	99575	7967625	2955	198975	15467625
2015	230	6650	193250	3760	281550	24456250	3990	288200	24649500