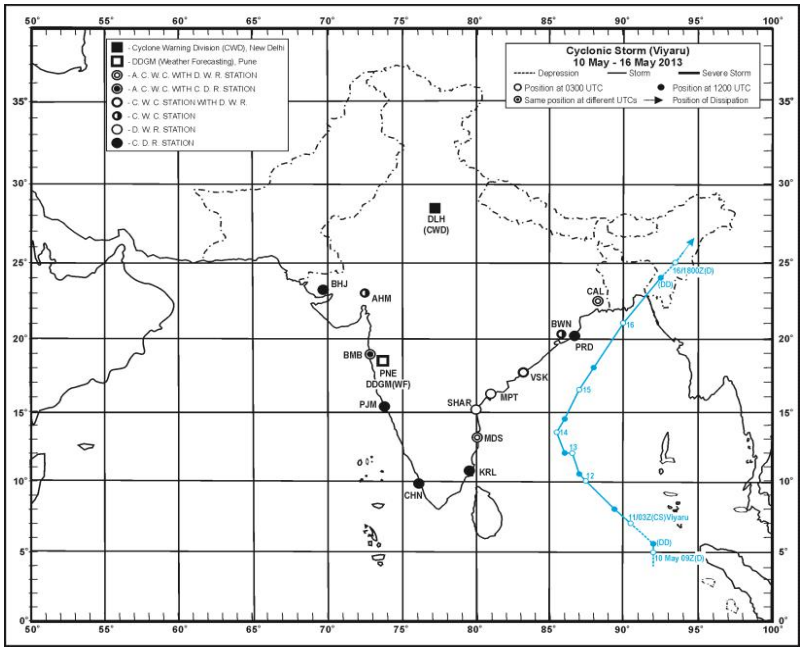
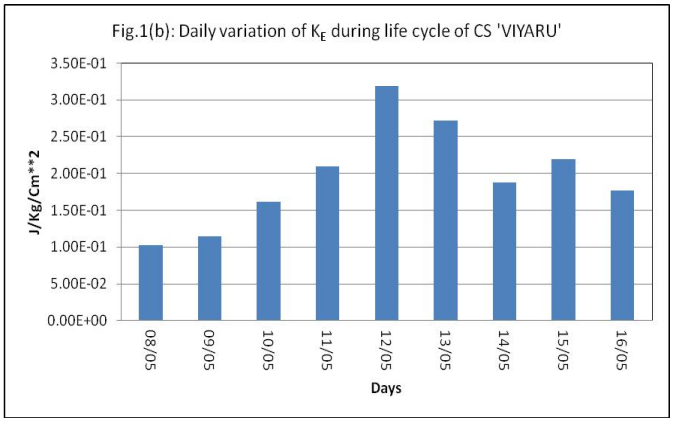
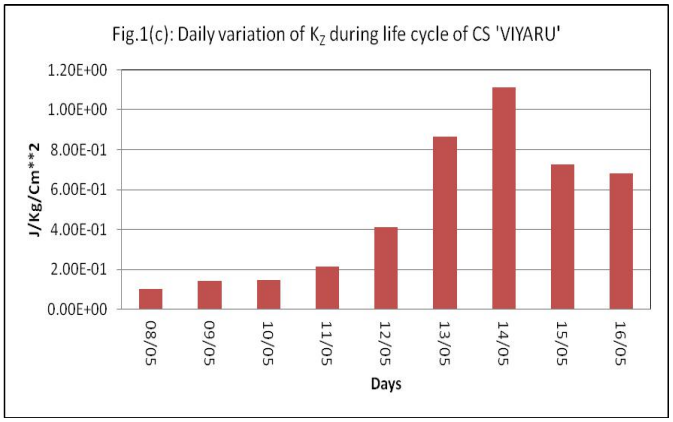
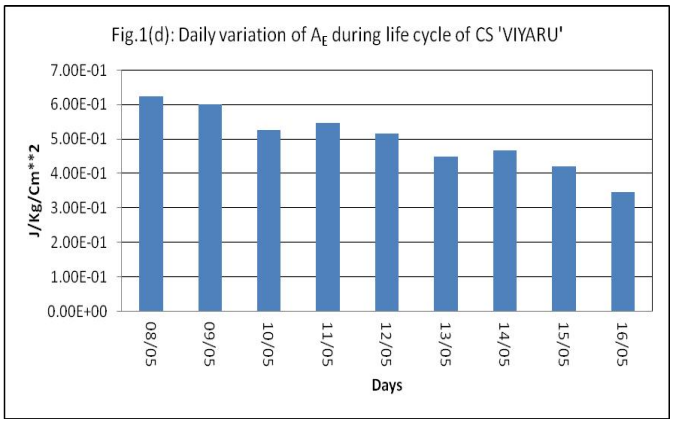
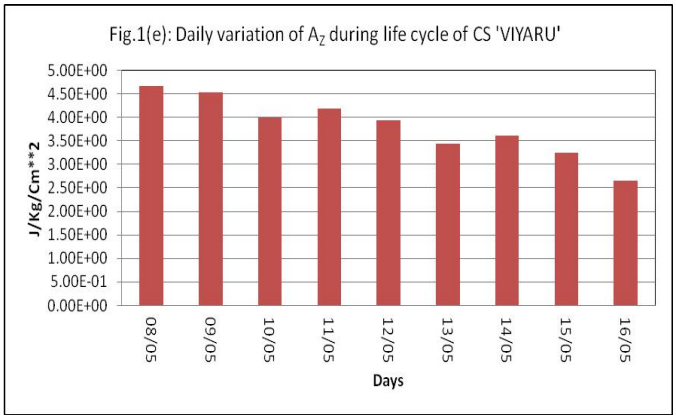


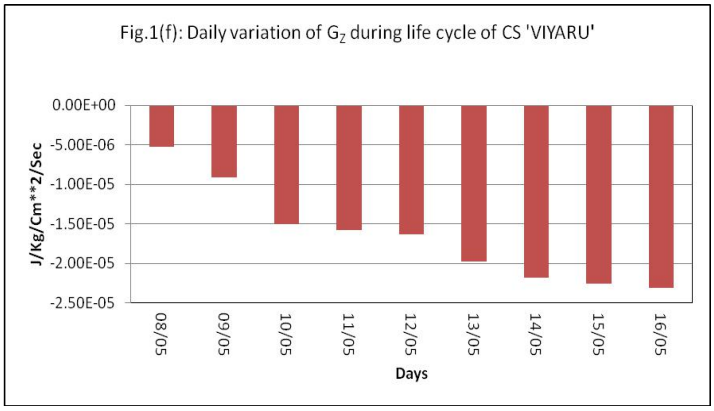
Figure 1(a): Observed track of CS VIYARU

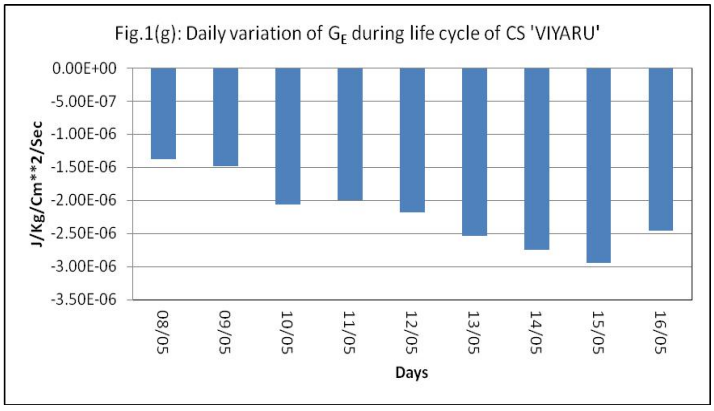


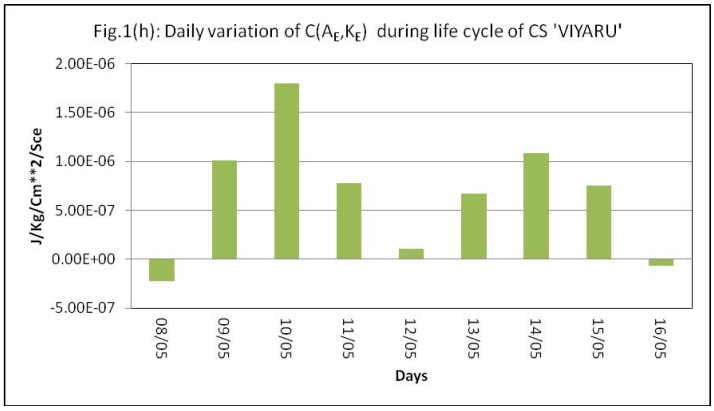


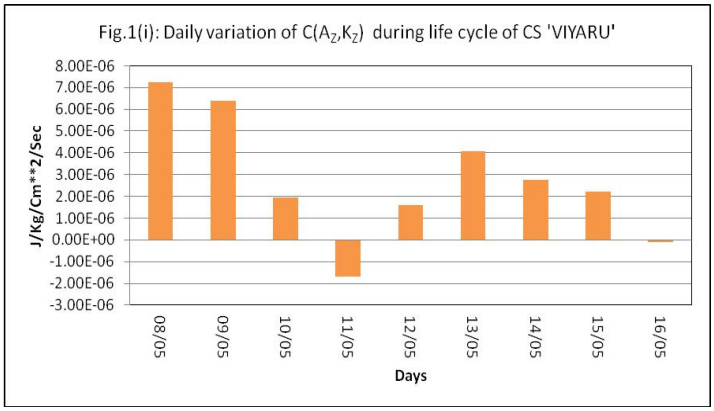


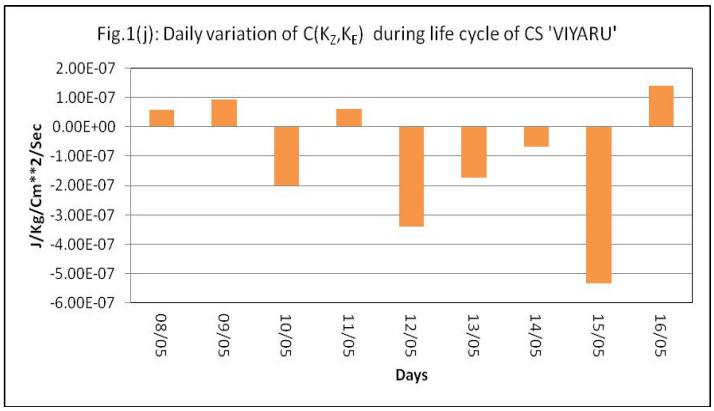












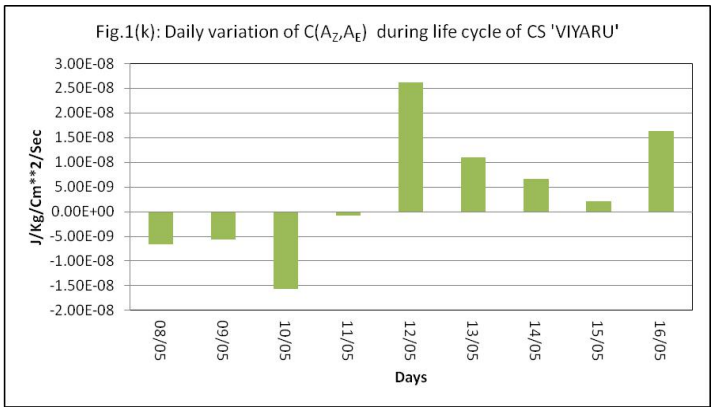


Figure 1 (b-k): Day-to-day variations in energy terms and their conversion terms for the CS VIYARU

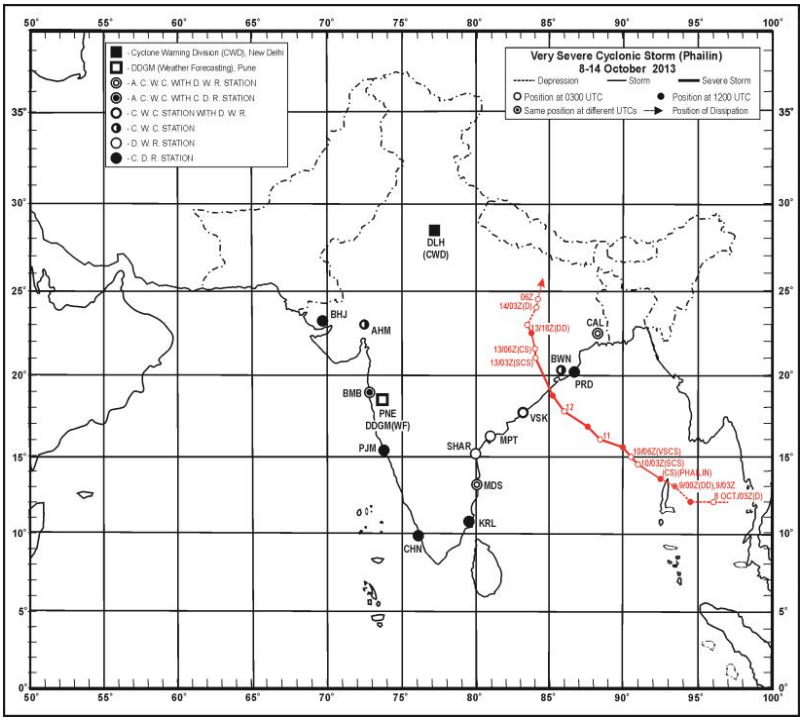
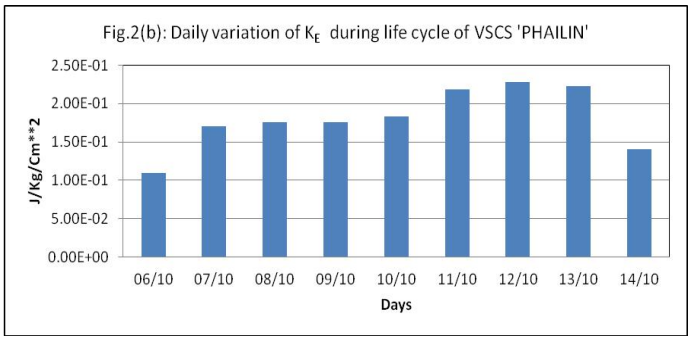
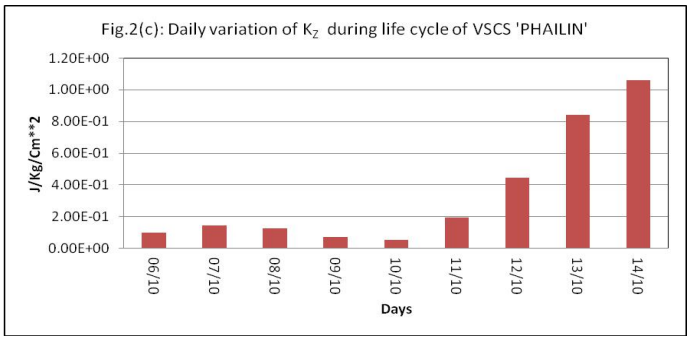
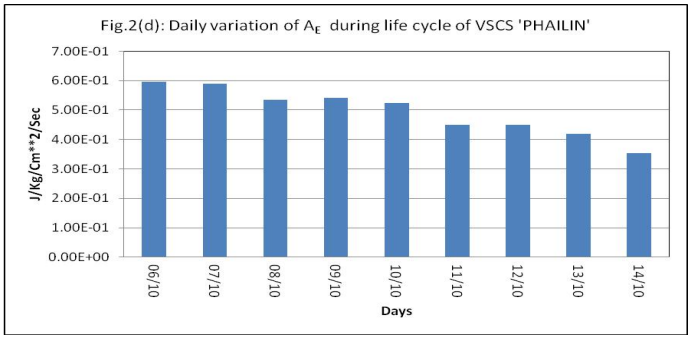
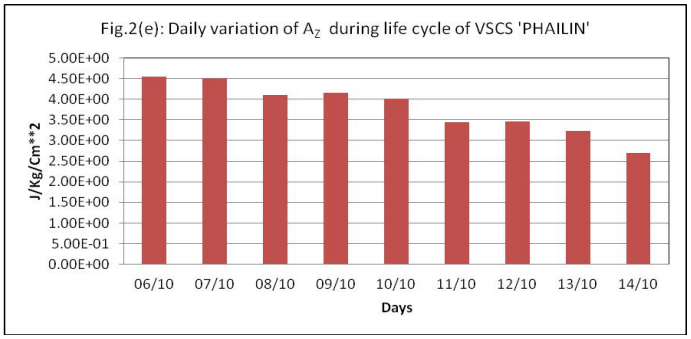


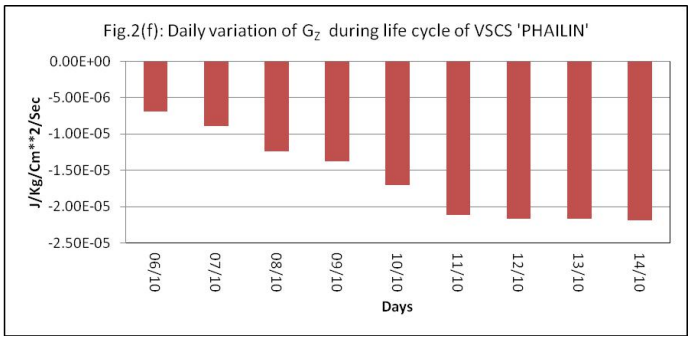
Figure 2(a): The observed track of VSCS PHAILIN

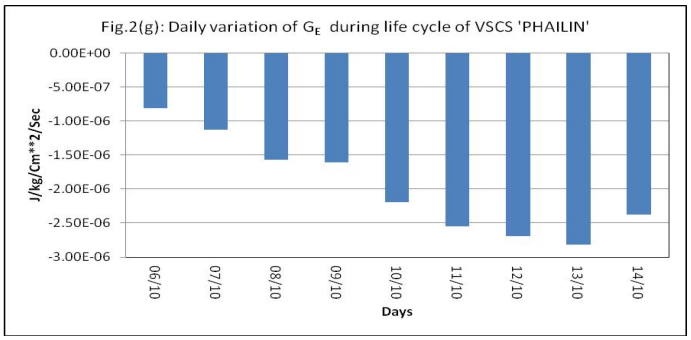


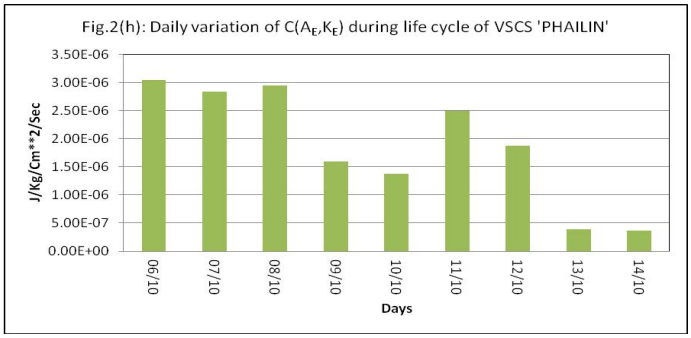


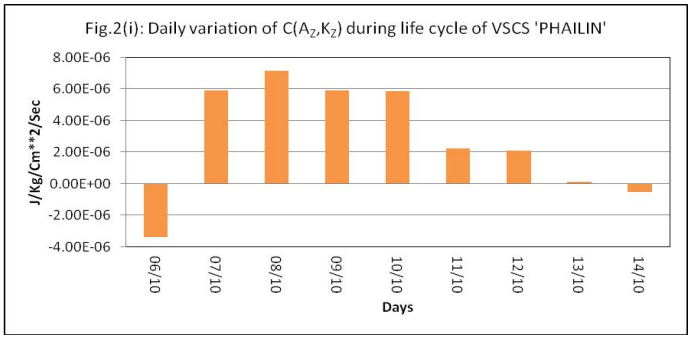


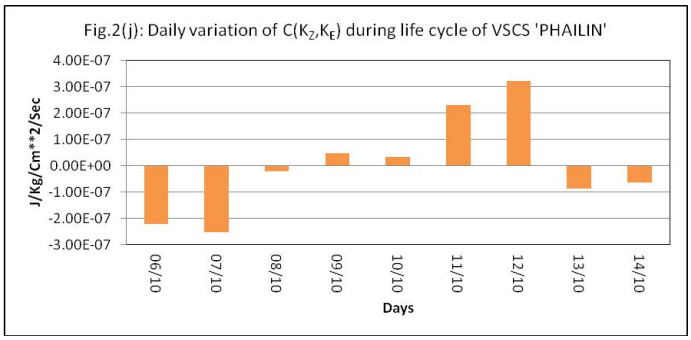












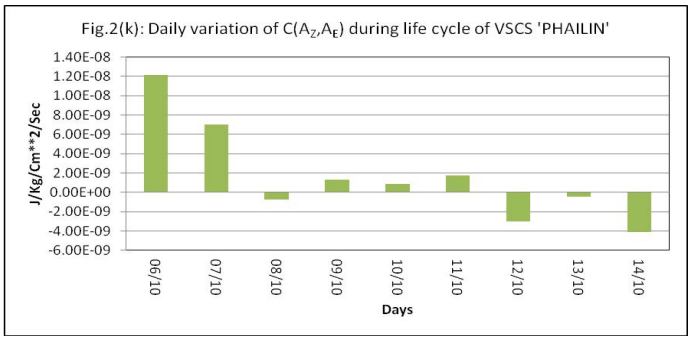


Figure 2 (b-k): Day-to-day variations in energy terms and their conversion terms for the VSCS PHAILIN

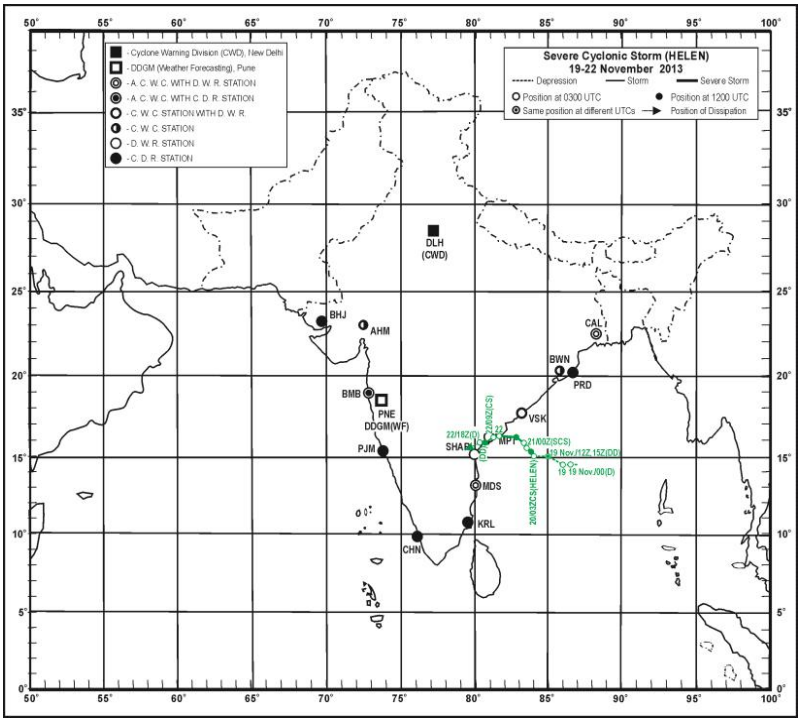
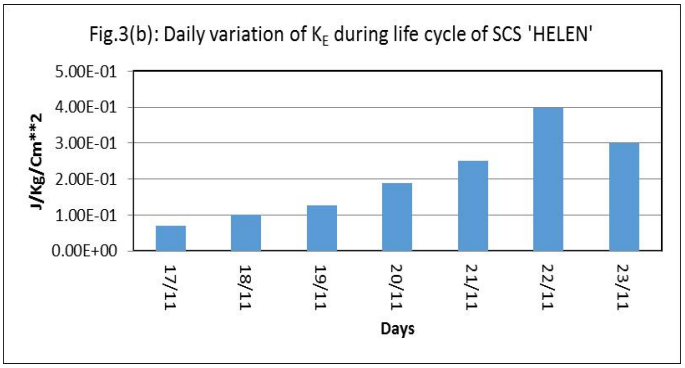
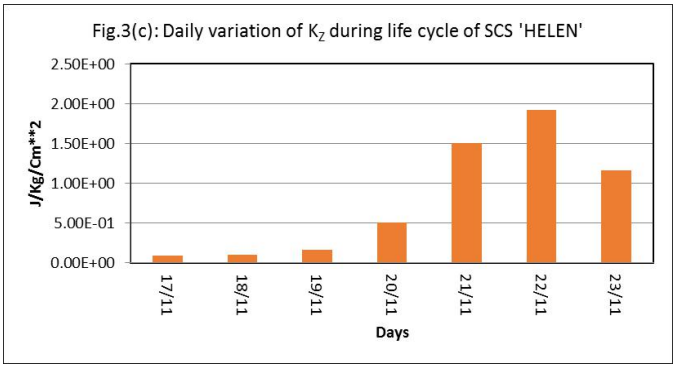
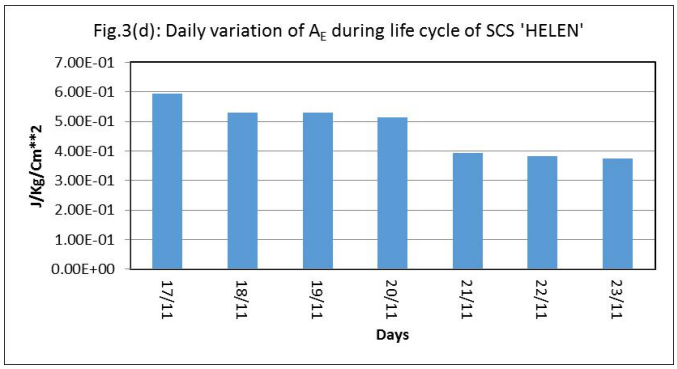
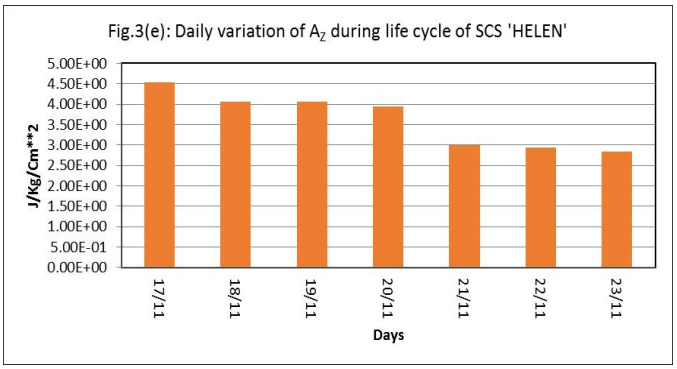


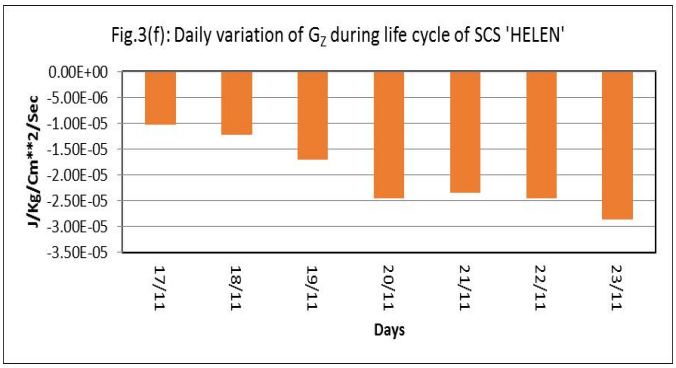
Figure 3(a): Observed track of SCS HELEN

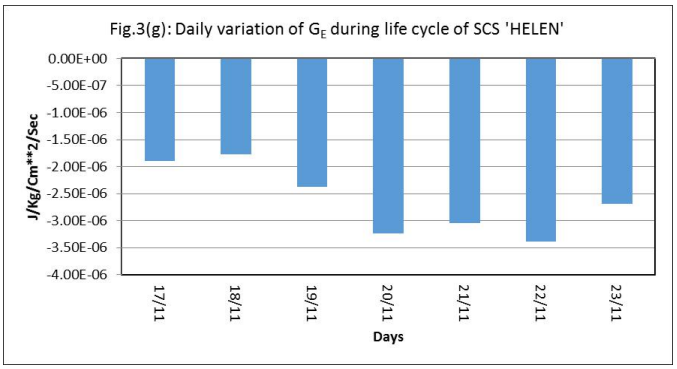


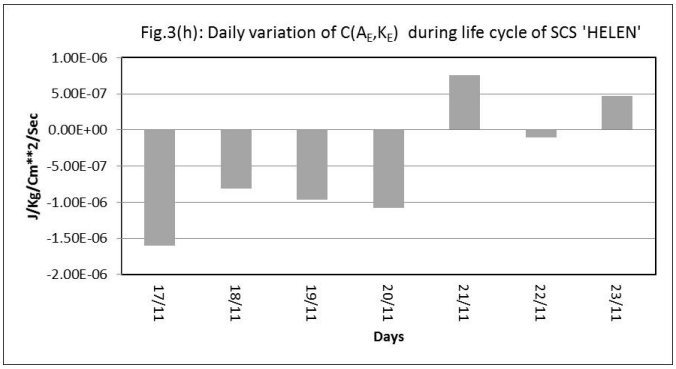


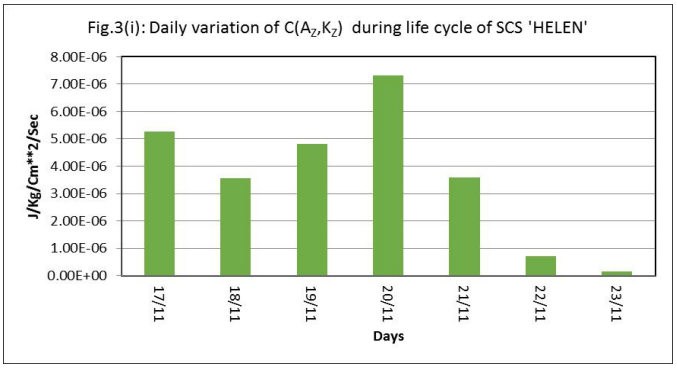


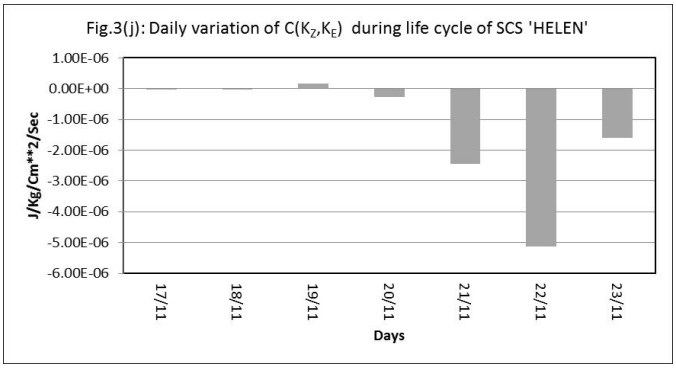












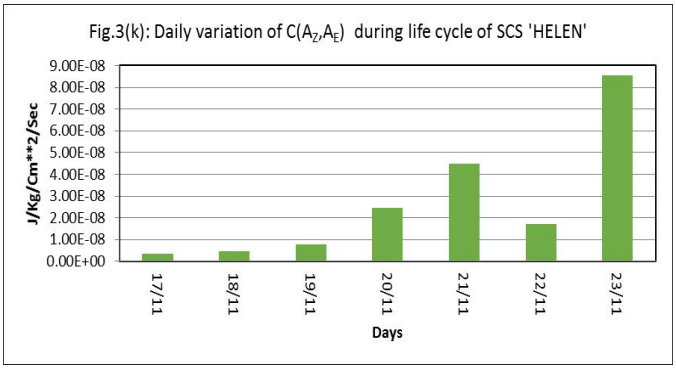


Figure 3 (b-k): Day-to-day variations in energy terms and their conversion terms for the SCS HELEN

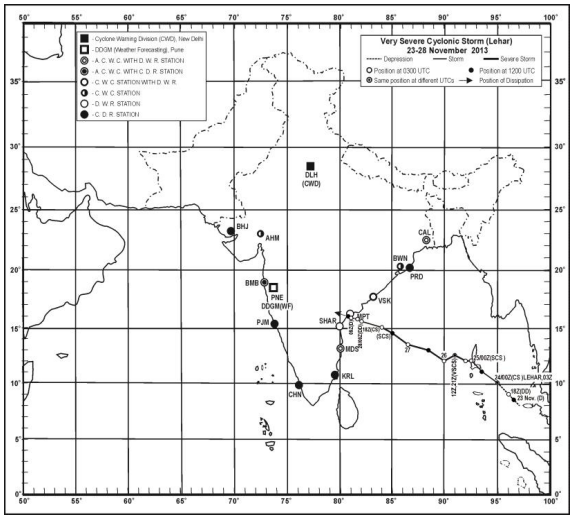
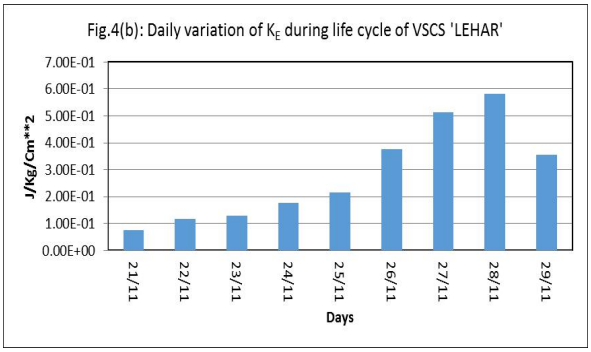
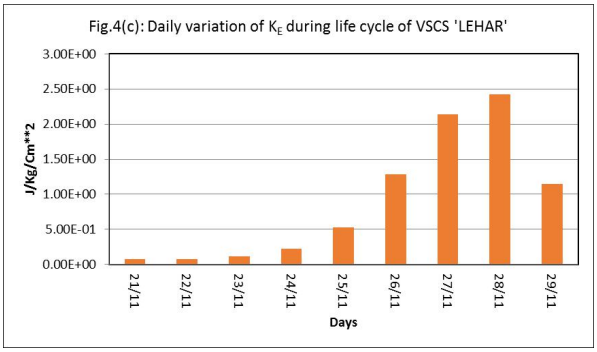
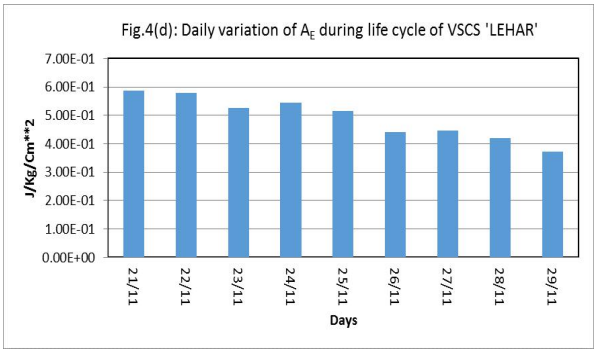
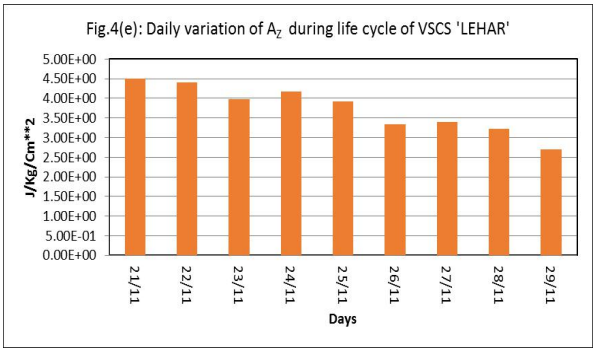


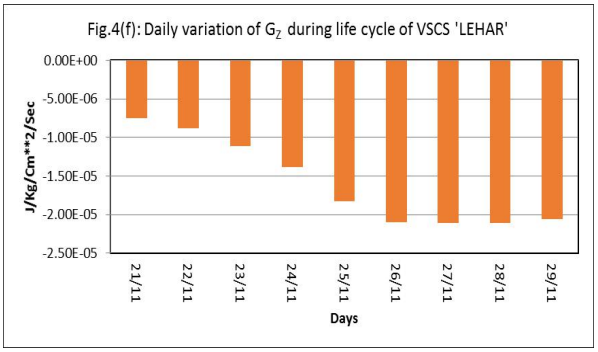
Figure 4(a): Observed track of VSCS











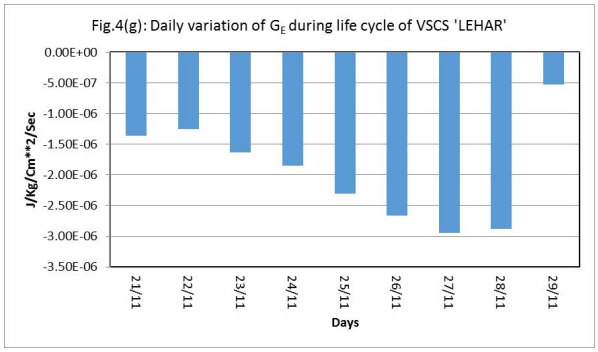


Figure 4 (b-k): Day-to-day variations in energy terms and their conversion terms for the VSCS LEHAR

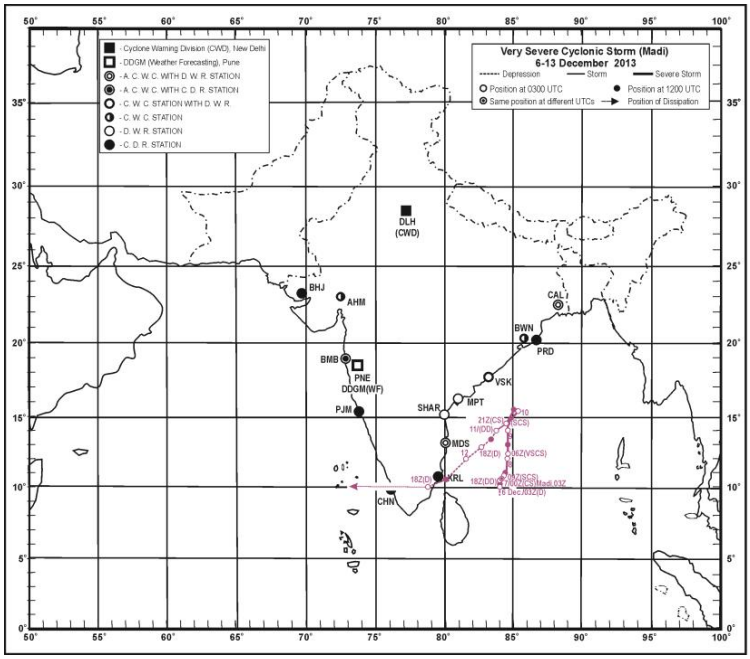
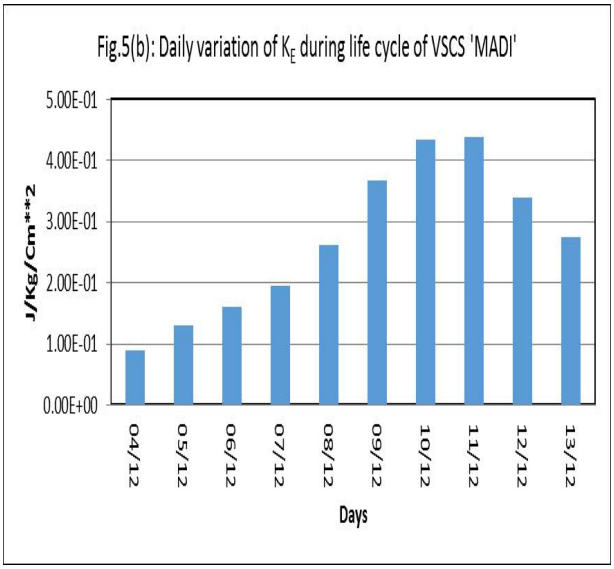
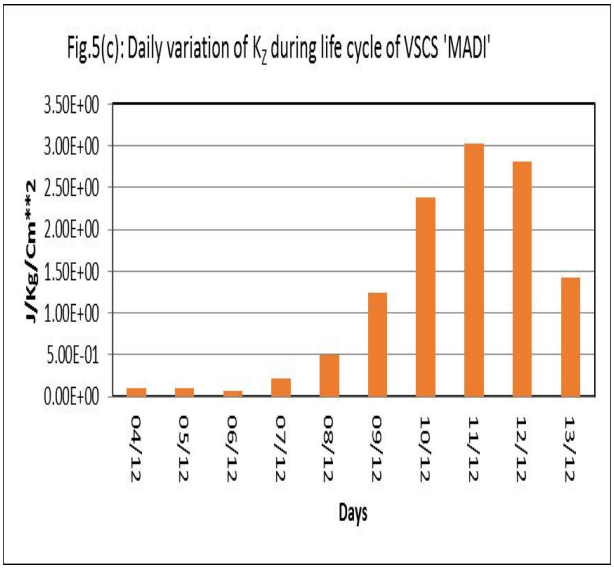
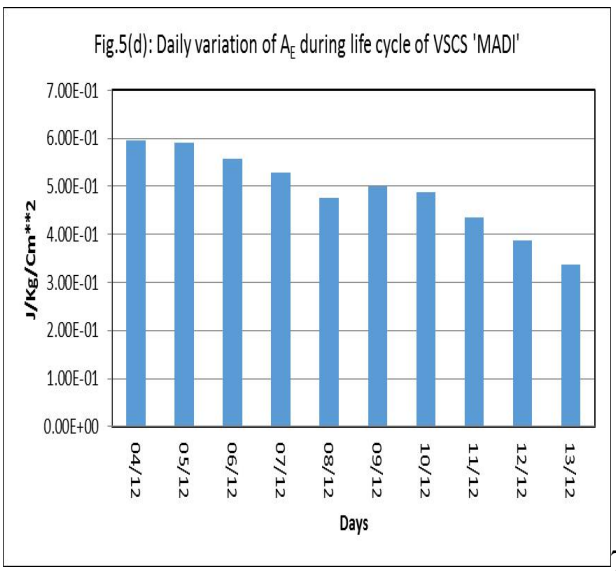
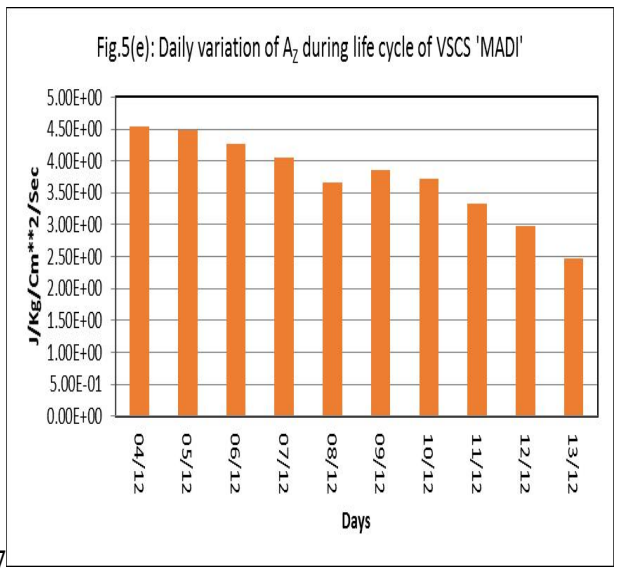


Figure 5(a): Observed Track of VSCS MADI









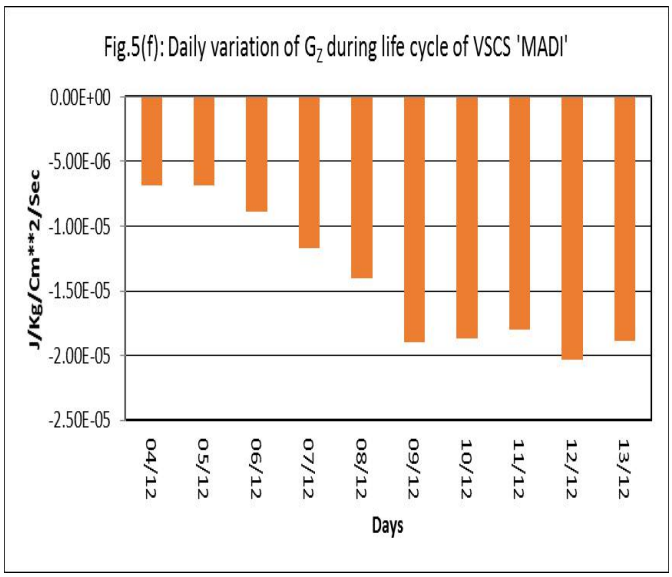


Fig.5(f): Daily variation of G_Z during life cycle of VSCS 'MADI'
0.00E+00
-5.00E-06
-1.00E-05
-1.50E-05
-2.00E-05
-2.50E-05
J/Kg/Cm**2/Sec
04/12
05/12
06/12
07/12
08/12
09/12
10/12
11/12
12/12
13/12
Days

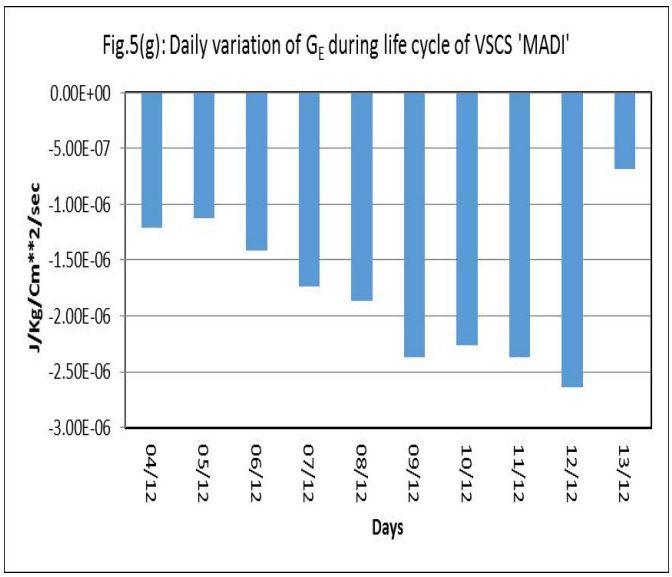


Fig.5(g): Daily variation of G_E during life cycle of VSCS 'MADI'
0.00E+00
-5.00E-07
-1.00E-06
-1.50E-06
-2.00E-06
-2.50E-06
-3.00E-06
J/Kg/Cm**2/sec
04/12
05/12
06/12
07/12
08/12
09/12
10/12
11/12
12/12
13/12
Days

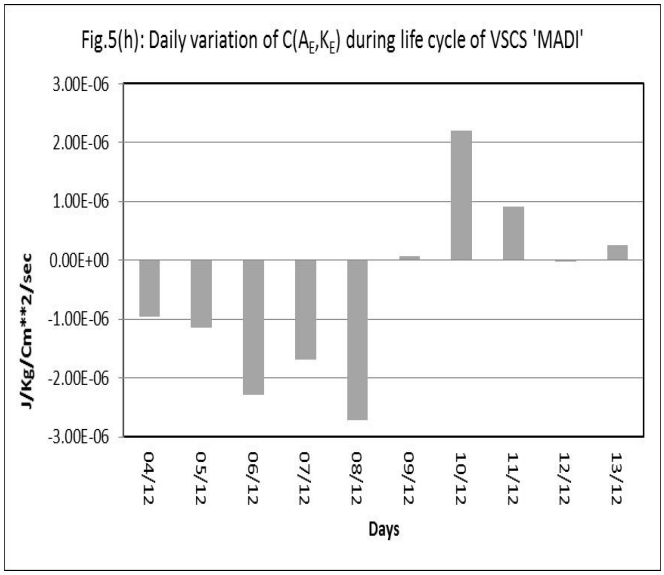


Fig.5(h): Daily variation of $C(A_E,K_E)$ during life cycle of VSCS 'MADI'
3.00E-06
2.00E-06
1.00E-06
0.00E+00
-1.00E-06
-2.00E-06
-3.00E-06
J/Kg/Cm**2/sec
04/12
05/12
06/12
07/12
08/12
09/12
10/12
11/12
12/12
13/12
Days

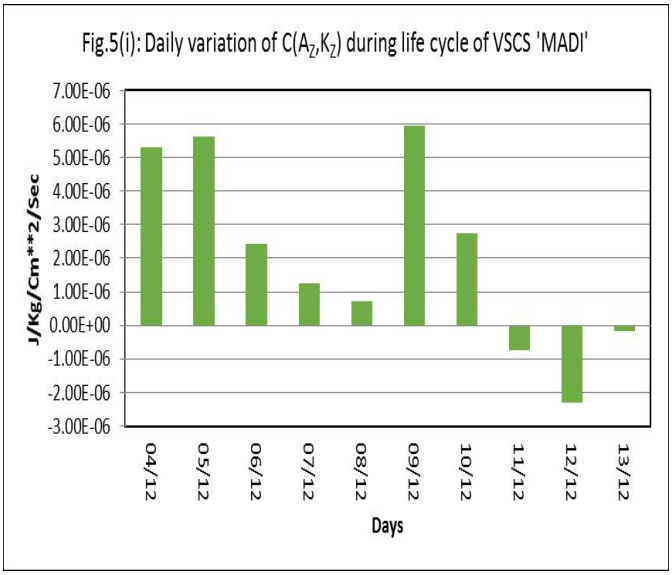


Fig.5(i): Daily variation of $C(A_Z,K_Z)$ during life cycle of VSCS 'MADI'
7.00E-06
6.00E-06
5.00E-06
4.00E-06
3.00E-06
2.00E-06
1.00E-06
0.00E+00
-1.00E-06
-2.00E-06
-3.00E-06
J/Kg/Cm**2/Sec
04/12
05/12
06/12
07/12
08/12
09/12
10/12
11/12
12/12
13/12
Days

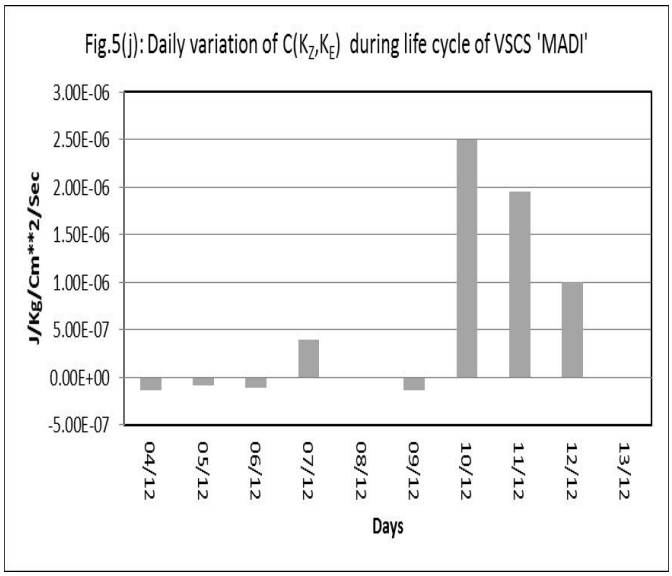


Fig.5(j): Daily variation of $C(K_Z,K_E)$ during life cycle of VSCS 'MADI'
3.00E-06
2.50E-06
2.00E-06
1.50E-06
1.00E-06
5.00E-07
0.00E+00
-5.00E-07
J/Kg/Cm**2/Sec
04/12
05/12
06/12
07/12
08/12
09/12
10/12
11/12
12/12
13/12
Days

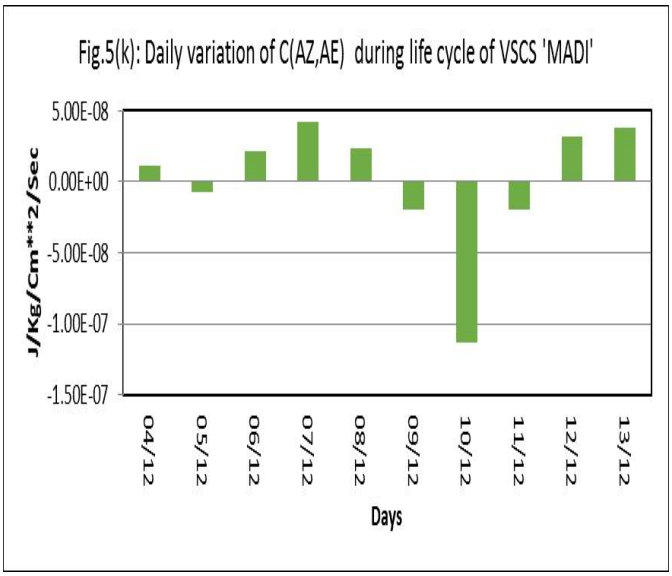
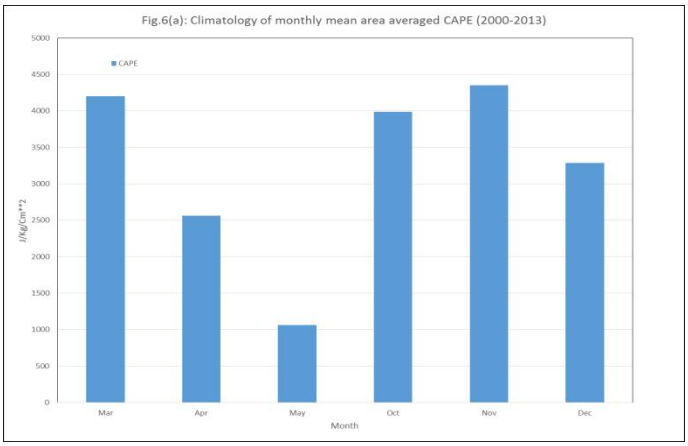
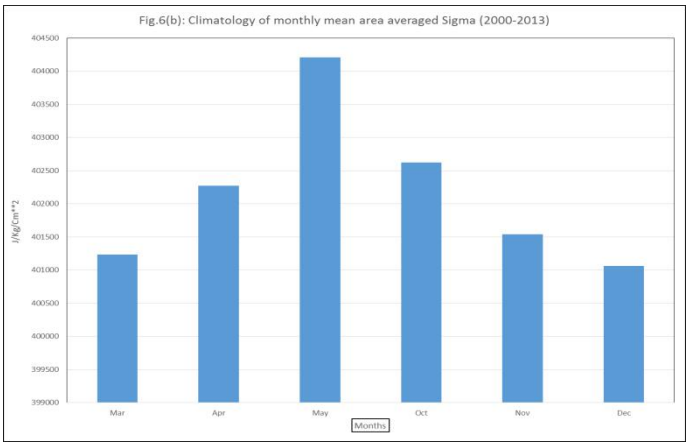
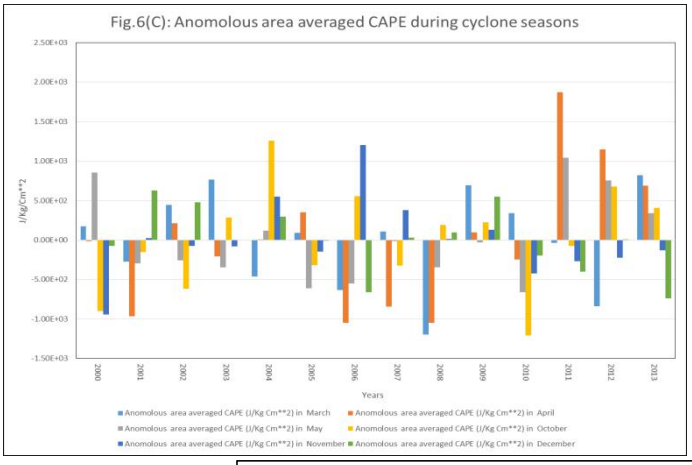


Fig.5(k): Daily variation of C(AZ,AE) during life cycle of VSCS 'MADI'
5.00E-08
0.00E+00
-5.00E-08
-1.00E-07
-1.50E-07
J/Kg/Cm**2/Sec
04/12
05/12
06/12
07/12
08/12
09/12
10/12
11/12
12/12
13/12
Days

Figure 5 (b-k): Day-to-day variations in energy terms and their conversion terms for the VSCS MADI







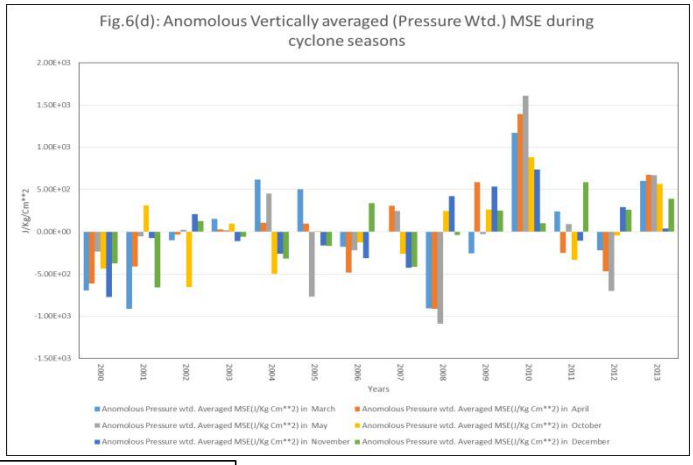
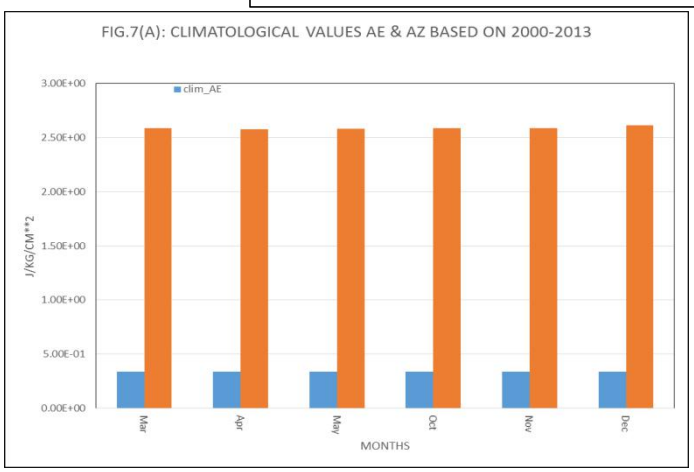
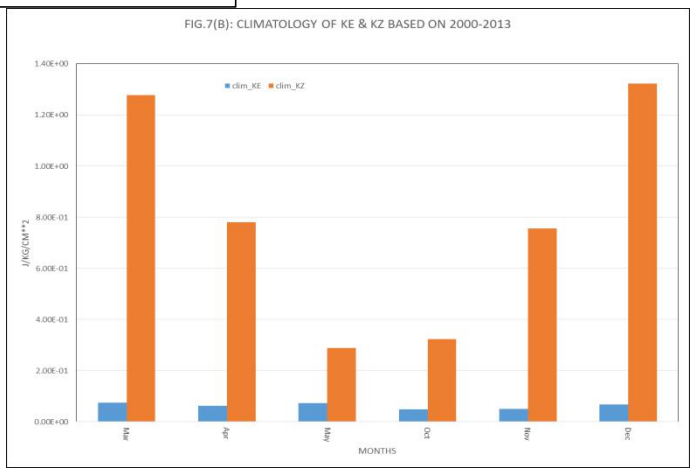
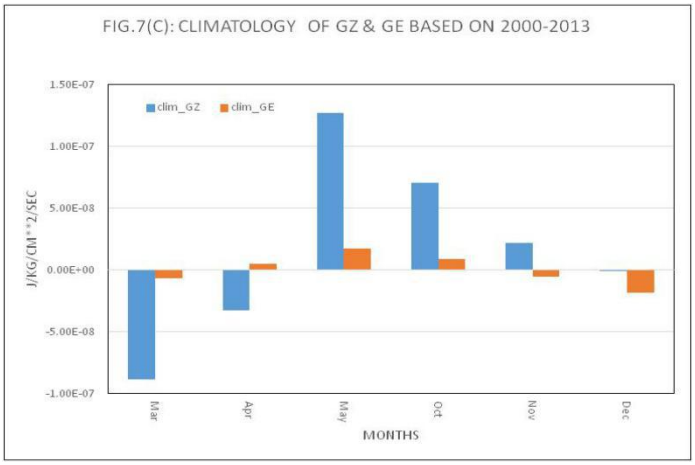
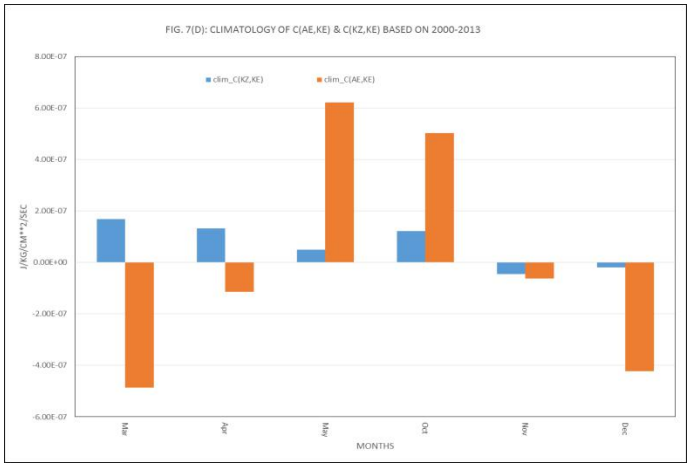


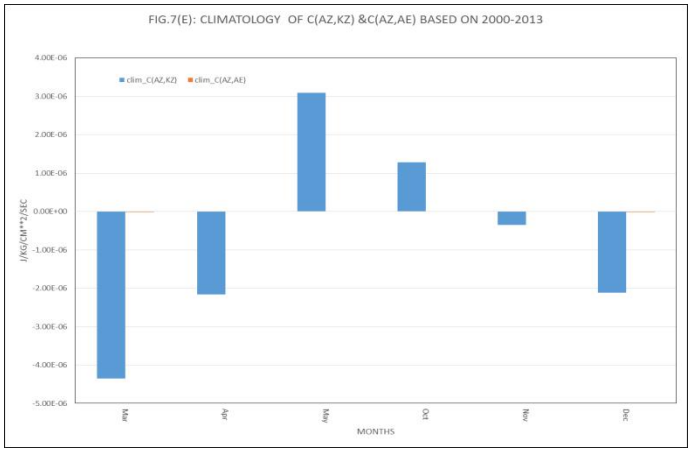
Figure 6 (a-d): Climatology and anomaly of monthly

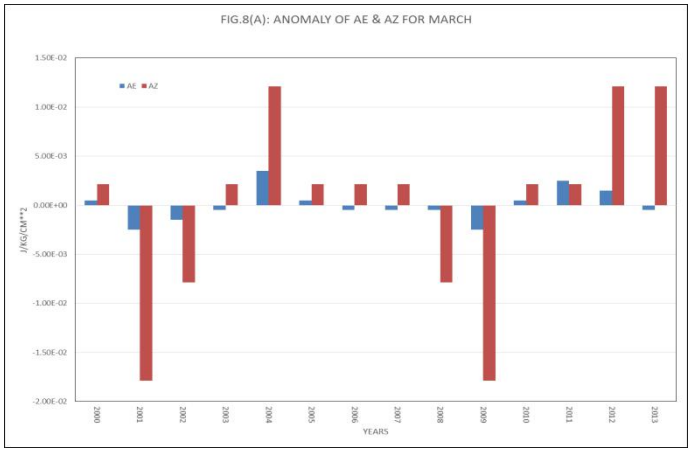


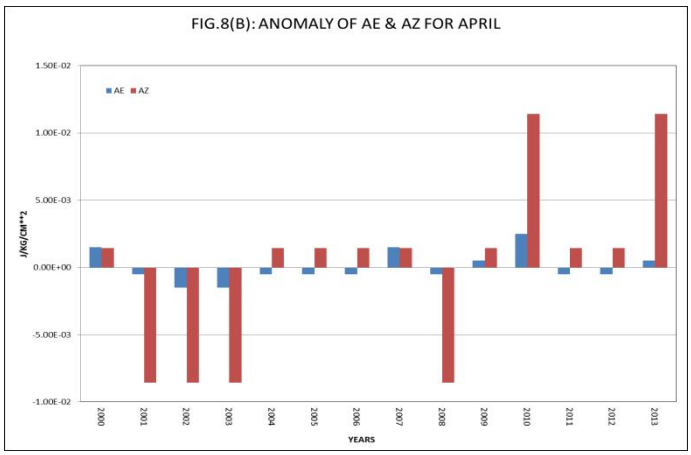


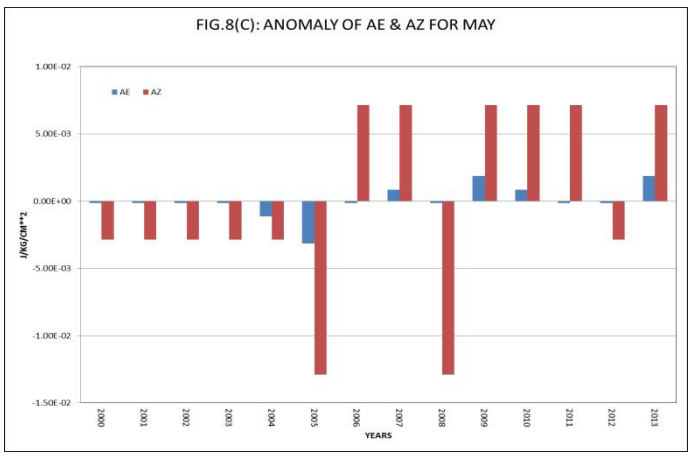


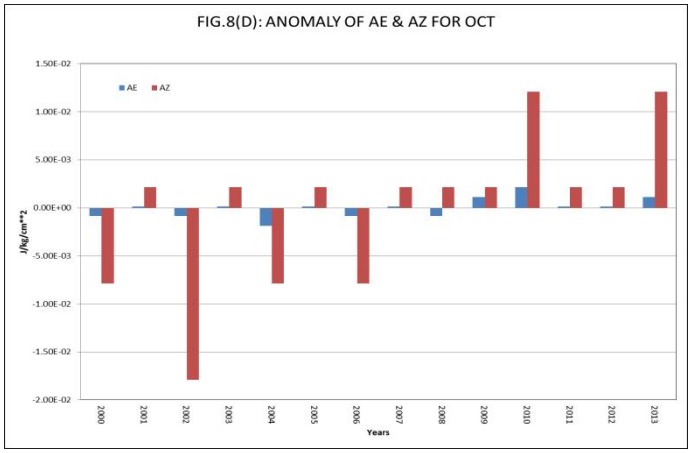


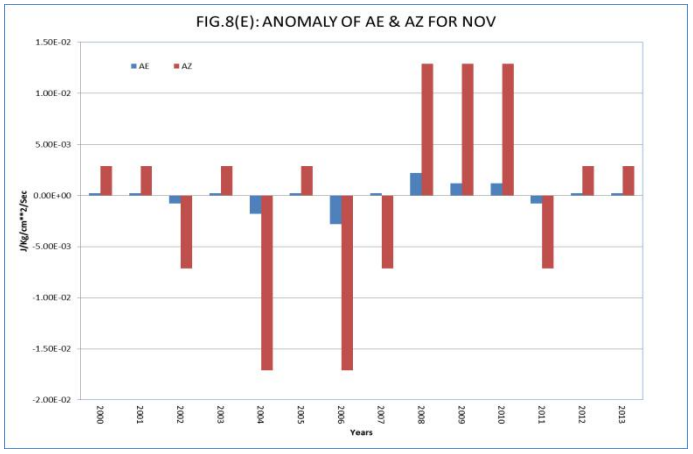


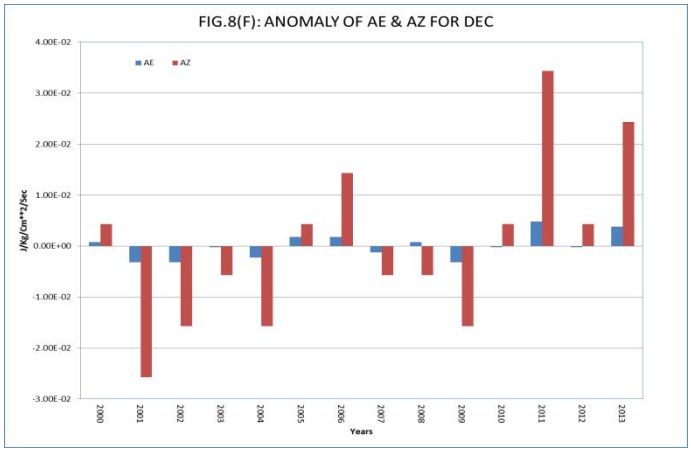












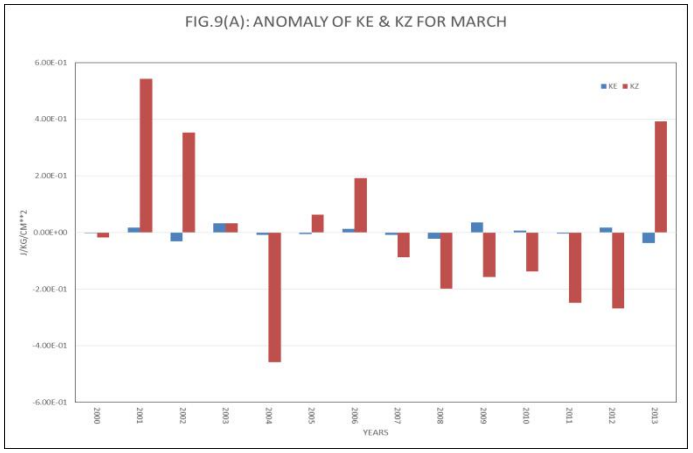


Figure 7 (a-e): Climatology of energy terms and their conversion terms for Mar-May and Oct-Dec

Figure 8 (a-f): Anomaly of A_E & A_Z for Mar-May and Oct-Dec

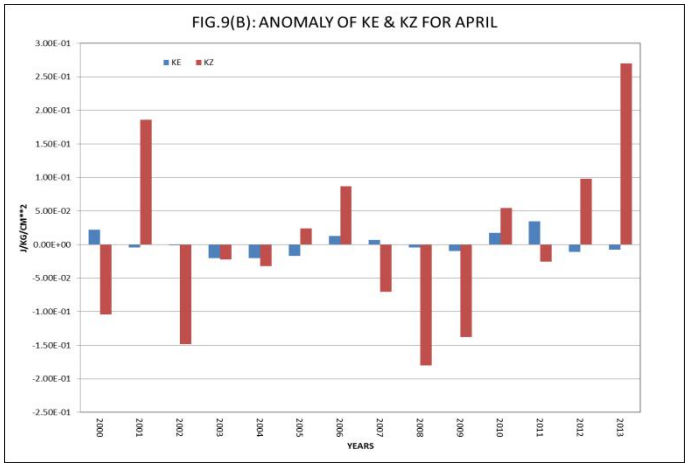


FIG.9(B): ANOMALY OF KE & KZ FOR APRIL
KE
KZ
J/KG/CM**2
YEARS

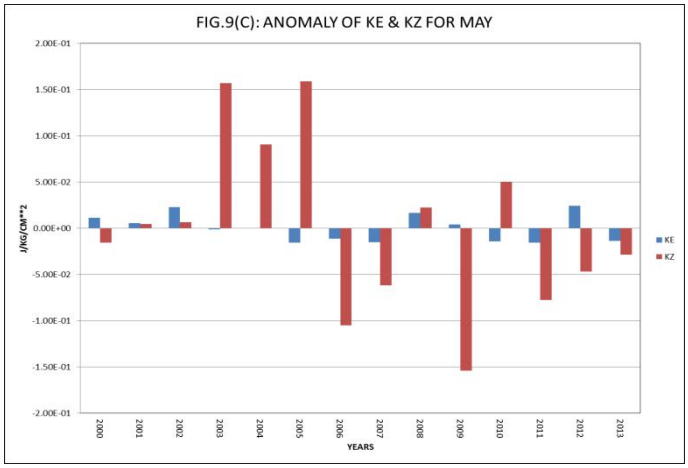


FIG.9(C): ANOMALY OF KE & KZ FOR MAY
KE
KZ
J/KG/CM**2
YEARS

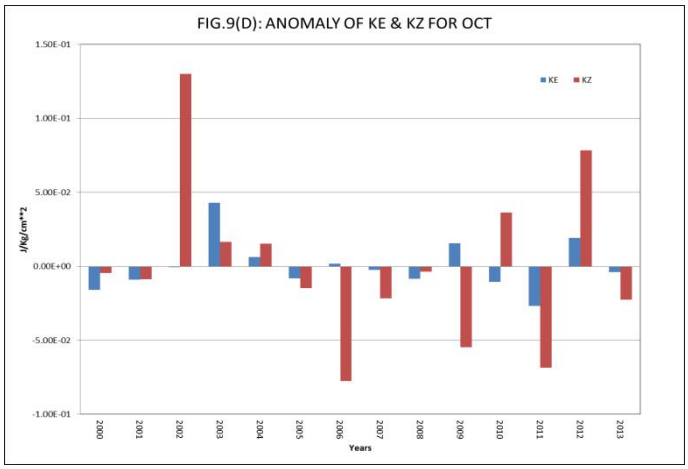


FIG.9(D): ANOMALY OF KE & KZ FOR OCT
KE
KZ
J/kg/cm**2
Years

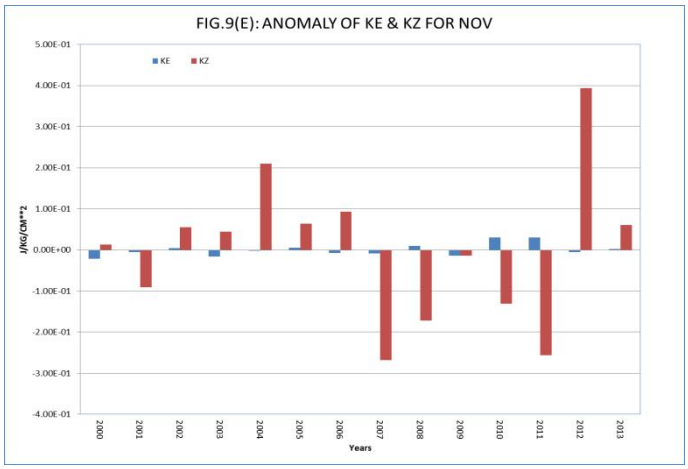


FIG.9(E): ANOMALY OF KE & KZ FOR NOV
KE
KZ
J/KG/CM**2
Years

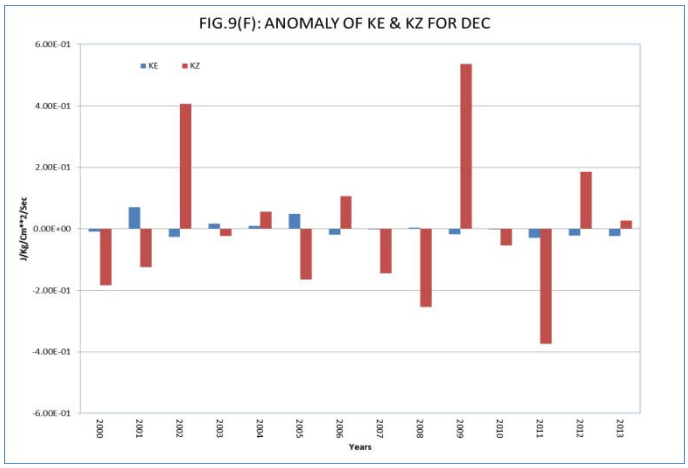


FIG.9(F): ANOMALY OF KE & KZ FOR DEC
KE
KZ
J/kg/Cm**2/sec
Years

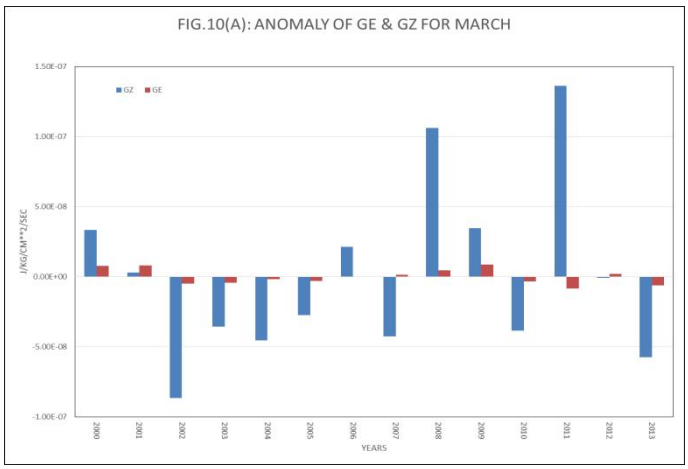


FIG.10(A): ANOMALY OF GE & GZ FOR MARCH
GZ
GE
YEARS

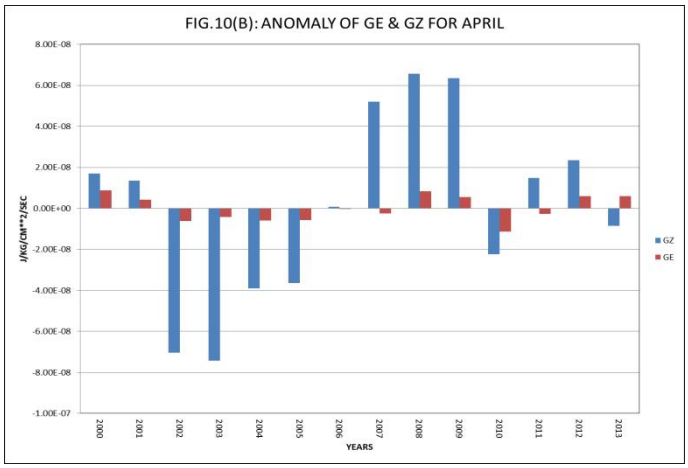


FIG.10(B): ANOMALY OF GE & GZ FOR APRIL
GZ
GE
J/KG/CM**2/SEC
YEARS

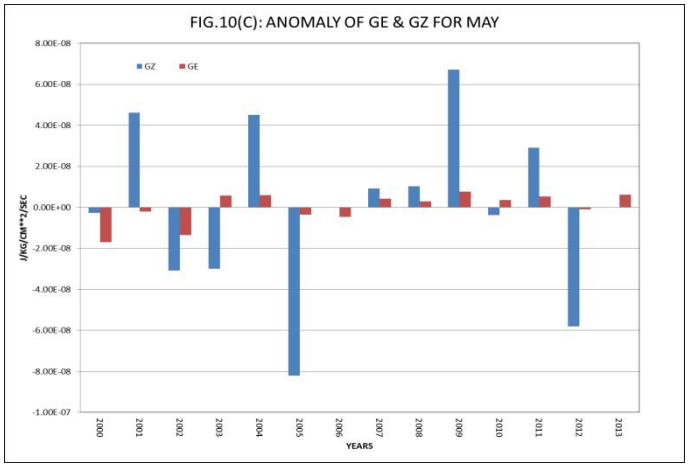


FIG.10(C): ANOMALY OF GE & GZ FOR MAY
GZ
GE
J/KG/CM**2/SEC
YEARS

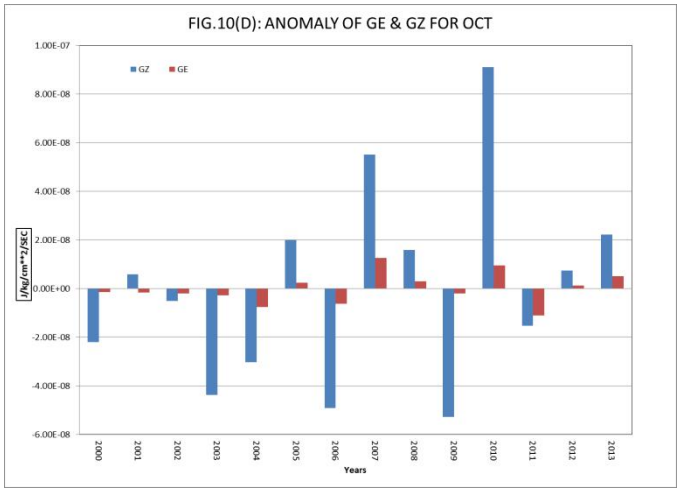


FIG.10(D): ANOMALY OF GE & GZ FOR OCT
GZ
GE
J/Kg/cm**2/SEC
Years

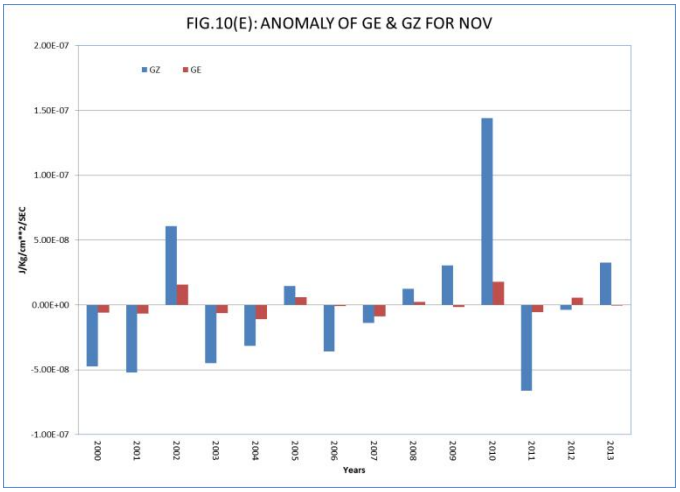


FIG.10(E): ANOMALY OF GE & GZ FOR NOV
GZ
GE
J/Kg/cm**2/SEC
Years

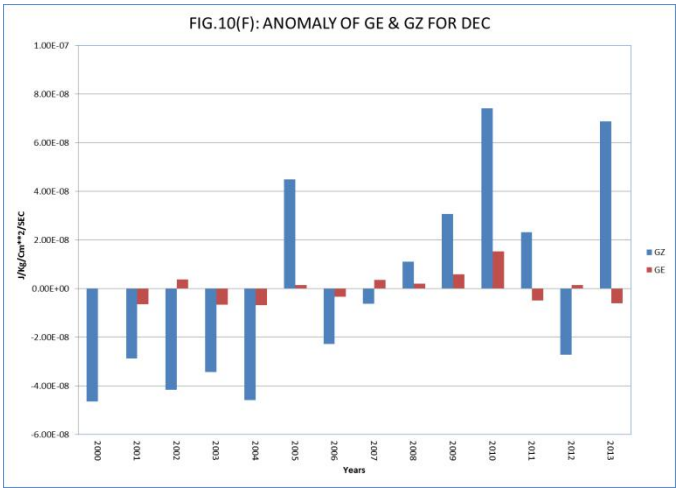


FIG.10(F): ANOMALY OF GE & GZ FOR DEC
J/Kg/Cm**2/SEC
GZ
GE
Years

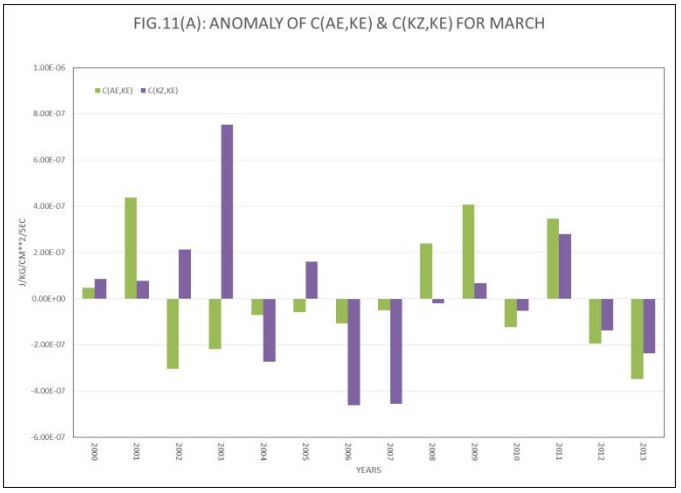


FIG.11(A): ANOMALY OF C(AE,KE) & C(KZ,KE) FOR MARCH
C(AE,KE)
C(KZ,KE)
J/KG/CM**2/SEC
YEARS

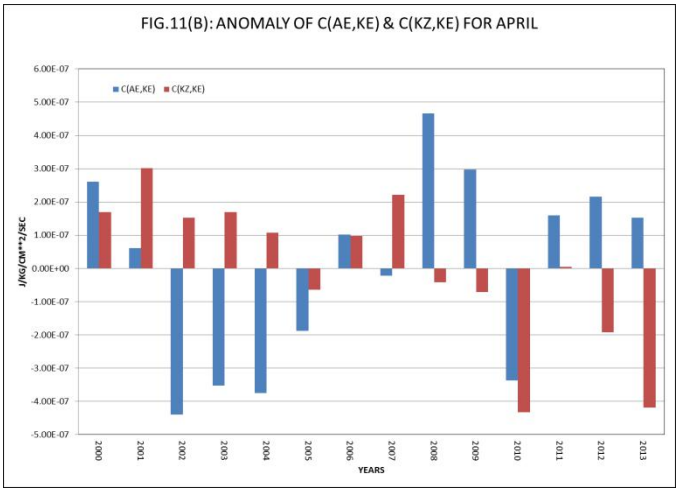


FIG.11(B): ANOMALY OF C(AE,KE) & C(KZ,KE) FOR APRIL
C(AE,KE)
C(KZ,KE)
J/KG/CM**2/SEC
YEARS

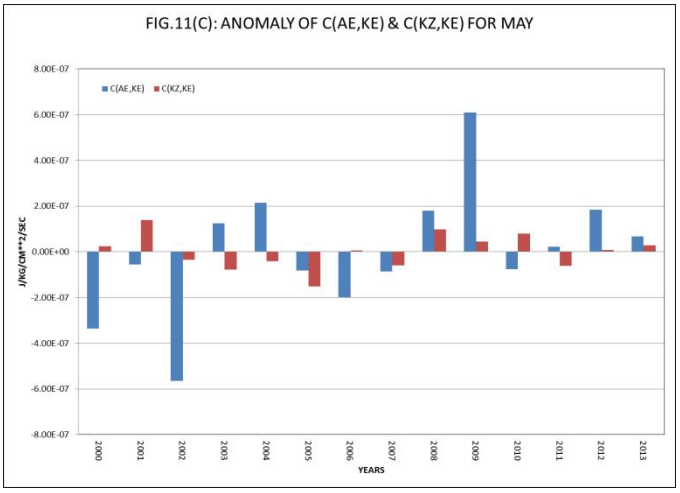


FIG.11(C): ANOMALY OF C(AE,KE) & C(KZ,KE) FOR MAY
C(AE,KE)
C(KZ,KE)
J/KG/CM**2/SEC
YEARS

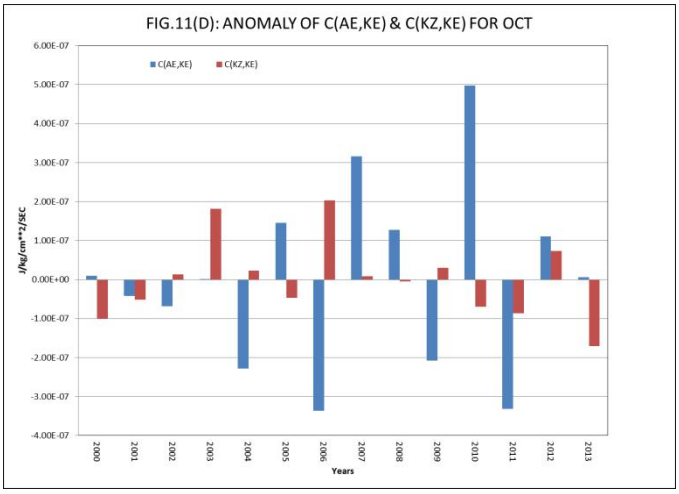


FIG.11(D): ANOMALY OF C(AE,KE) & C(KZ,KE) FOR OCT
C(AE,KE)
C(KZ,KE)
J/kg/cm**2/SEC
Years

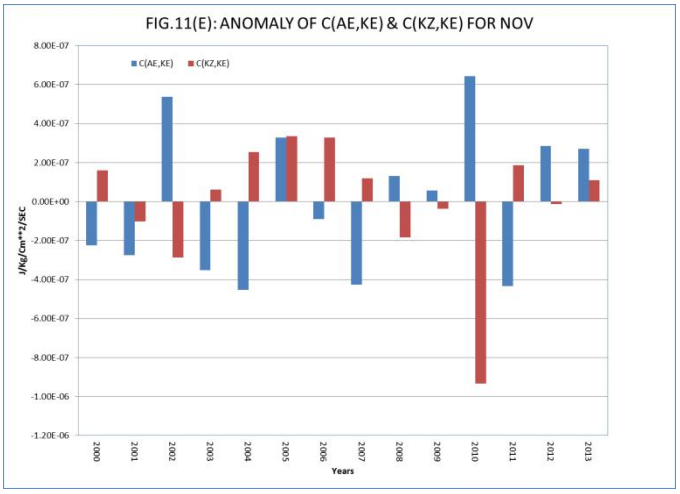


FIG.11(E): ANOMALY OF C(AE,KE) & C(KZ,KE) FOR NOV
C(AE,KE)
C(KZ,KE)
J/Kg/Cm**2/SEC
Years

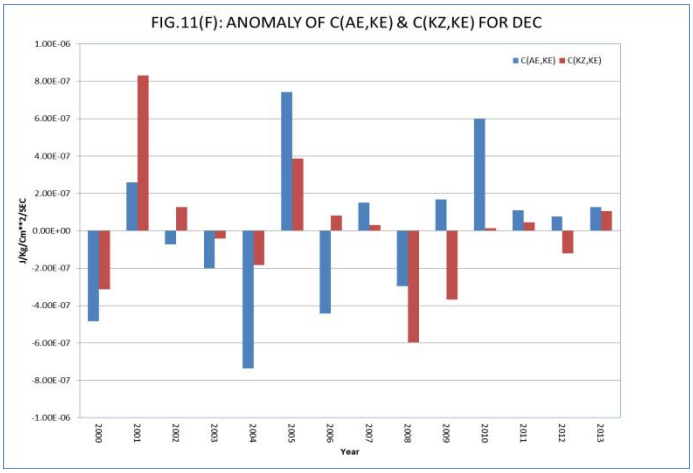


FIG.11(F): ANOMALY OF C(AE,KE) & C(KZ,KE) FOR DEC
C(AE,KE)
C(KZ,KE)
J/Kg/Cm**2/SEC
Year

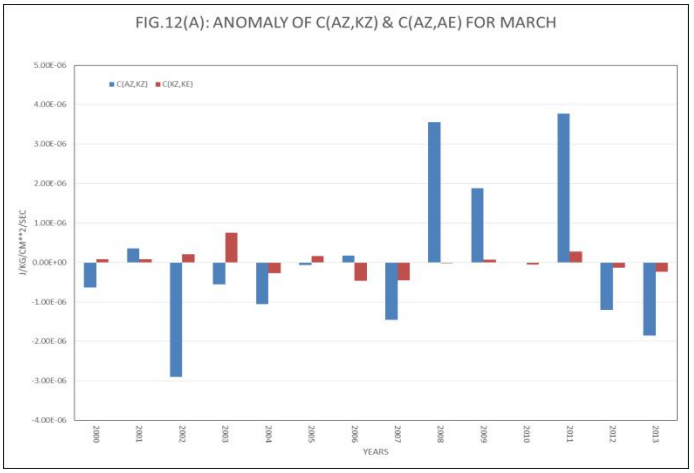


FIG.12(A): ANOMALY OF C(AZ,KZ) & C(AZ,AE) FOR MARCH
C(AZ,KZ)
C(KZ,KE)
YEARS

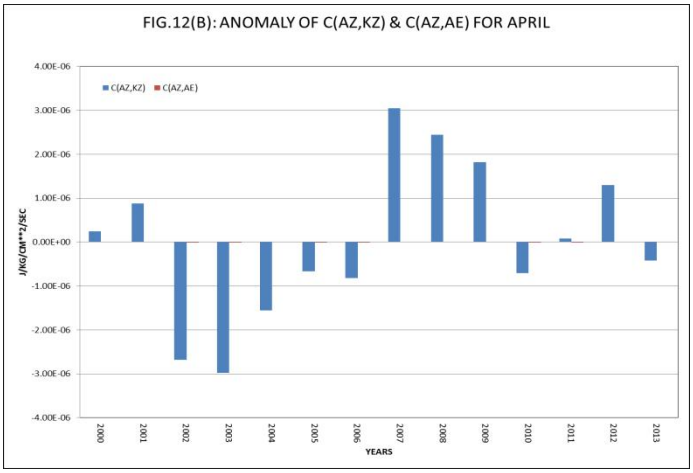


FIG.12(B): ANOMALY OF C(AZ,KZ) & C(AZ,AE) FOR APRIL
C(AZ,KZ)
C(AZ,AE)
J/KG/CM**2/SEC
YEARS

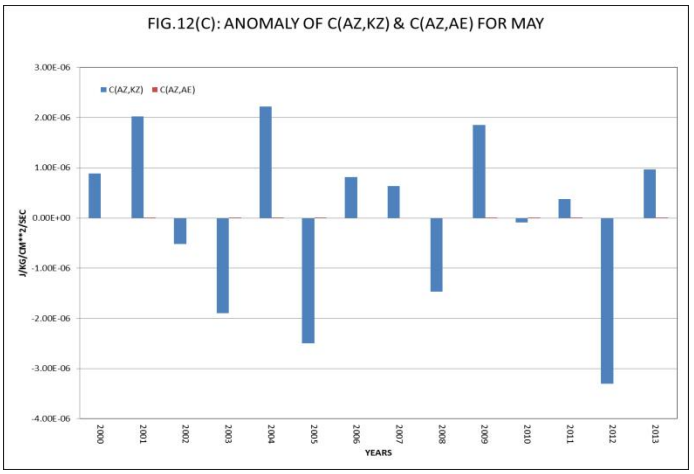


FIG.12(C): ANOMALY OF C(AZ,KZ) & C(AZ,AE) FOR MAY
C(AZ,KZ)
C(AZ,AE)
J/KG/CM**2/SEC
YEARS

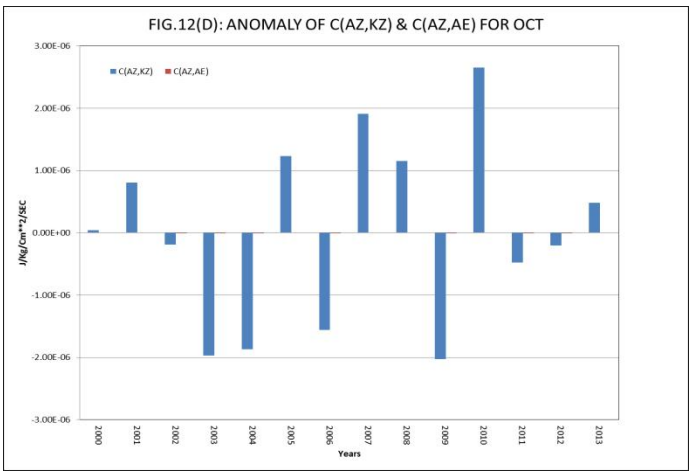


FIG.12(D): ANOMALY OF C(AZ,KZ) & C(AZ,AE) FOR OCT
C(AZ,KZ)
C(AZ,AE)
J/Kg/(Cm**2/SEC
Years

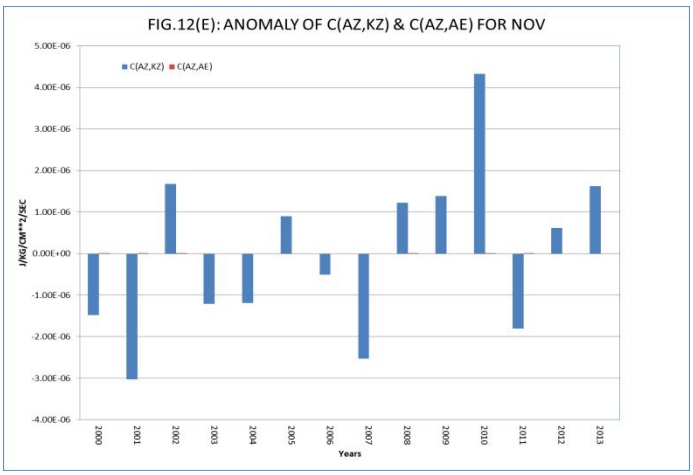


FIG.12(E): ANOMALY OF C(AZ,KZ) & C(AZ,AE) FOR NOV
C(AZ,KZ)
C(AZ,AE)
J/Kg/(CM**2/SEC
Years

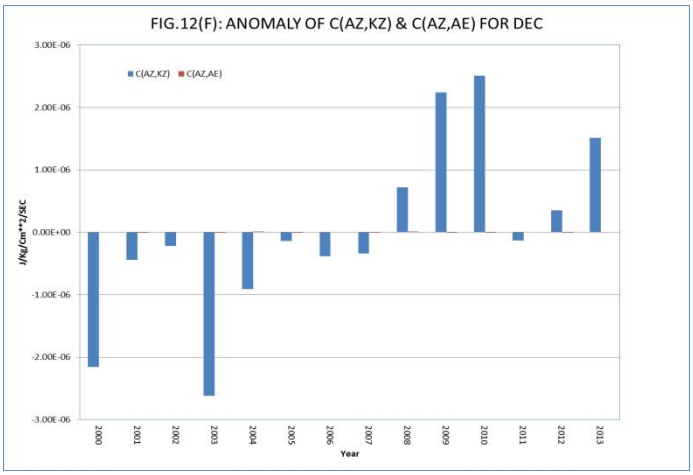


FIG.12(F): ANOMALY OF C(AZ,KZ) & C(AZ,AE) FOR DEC
C(AZ,KZ)
C(AZ,AE)
J/Kg/Cm**2/SEC
Year

Figure 9 (a-f): Anomaly of K_E & K_Z for Mar-May and Oct-Dec

Figure 10 (a-f): Anomaly of G_Z & G_E for Mar-May and Oct-Dec

Figure 11 (a-f): Anomaly of $C(A_E,K_E)$ & $C(K_Z,K_E)$ for Mar-May and Oct-Dec

Figure 12 (a-f): Anomaly of $C(A_Z,K_Z)$ & $C(A_Z,A_E)$ for Mar-May and Oct-Dec

Table 1. Annual Frequency of Cyclonic Disturbances (Maximum Wind Speed > 17KT) & Cyclonic Storms (> 34KT) during 2000-2013.

Year	Cyclonic Disturbance	Cyclonic Storm	Year	Cyclonic Disturbance	Cyclonic Storm
2000	7	4	2007	12	4
2001	6	4	2008	10	4
2002	6	4	2009	8	4
2003	7	3	2010	8	5
2004	10	4	2011	10	2
2005	12	4	2012	5	2
2006	12	3	2013	10	5

Table-2

Mathematical expression of different terms	
A_Z	$\int_{100}^{P_s} \frac{\overline{T^{*2}}}{2\sigma} dp$
A_E	$\int_{100}^{P_s} \frac{\overline{T'^2}}{2\sigma} dp$
K_Z	$\frac{1}{2g}\int_{100}^{P_s} \overline{([u]^2 + [v]^2)} dp$
K_E	$\frac{1}{2g}\int_{100}^{P_s} \overline{(u'^2 + v'^2)} dp$
$G(A_Z)$	$\frac{R_d}{C_p}\oint \frac{[\theta]^*[\dot{Q}]^*}{p\left(-\frac{\partial\overline{\theta}}{\partial p}\right)} dm$
$G(A_E)$	$\frac{R_d}{C_p}\oint \frac{\theta'\dot{Q}'}{p\left(-\frac{\partial\overline{\theta}}{\partial p}\right)} dm$
$C(A_E,K_E)$	$-\frac{1}{g}\int_{100}^{P_s} \frac{R}{p}\overline{\omega'T'} dp$
$C(A_Z,K_Z)$	$-\frac{1}{g}\int_{100}^{P_s} \frac{R}{p}\overline{\omega^*T^*} dp$
$C(K_Z,K_E)$	$\frac{1}{g}$

	$\left\{\begin{array}{c} \int_{100}^{P_s}\left[\cos\varphi u'v'\frac{\partial}{a\partial\varphi}\left[\frac{[u]}{\cos\varphi}\right]\right]dp \\ +\ \int_{100}^{P_s}\overline{\left[v'^2\frac{\partial[v]}{a\partial\varphi}\right]}dp+\int_{100}^{P_s}\overline{\left[\frac{\tan\varphi}{a}u'^2[v]\right]}dp \\ +\ \int_{100}^{P_s}\overline{\left[\omega'u'\frac{\partial[u]}{\partial p}\right]}dp+\int_{100}^{P_s}\overline{\left[\omega'v'\frac{\partial[v]}{\partial p}\right]}dp \end{array}\right\}$
$C(A_Z,A_E)$	$-\int_{100}^{P_s}\left[\overline{\frac{1}{\sigma}v'T'\frac{\partial T^*}{a\partial\emptyset}}+\overline{\frac{1}{\sigma}\omega'T'\frac{\partial T^*}{\partial p}}\right]dp$