List of Exhibits

Exhibits 2.1 Windroses of Alipur meteorological station during Monsoon season

Exhibit 4.1 Wind profile at Kharagpur during (a) onset (b) mid and (c) end phases of monsoon

Exhibit 4.2 Wind shear between different heights during MONTBLEX (Kharagpur)

Exhibit 4.3 Frictional velocity at 8 m and 15 m level at Kharagpur during MONTBLEX

Exhibit 4.4 Normalised frictional velocity with mean wind and observation height

Exhibit 4.5 Correlation between $U^*$ (8m) and windshear (a) during daytime (b) during night time

Exhibit 4.6 Correlation between $U^*$ (15m) and windshear (a) during daytime (b) during night time

Exhibit 4.7 a. Variation of non-dimensional wind shear during MONTBLEX, Kharagpur (8 m level)

Exhibit 4.7 b. Correlation between non-dimensional wind shear computed and similarity function (8 m level)

Exhibit 4.8 a. Variation of non dimensional wind shear during MONTBLEX, Kharagpur (15 m level)

Exhibit 4.8 b. Correlation between non-dimensional wind shear computed and similarity function (15 m level)

Exhibit 4.9. Diurnal variation of frictional velocity during (a) onset (b) mid (c) end phases of monsoon

Exhibit 4.10 Variation of Roughness length ($Z_0$) during different phases of monsoon

Exhibit 4.11 Diurnal variation of roughness length at 8m and 15 m heights during onset phase of monsoon

Exhibit 4.12 Variation of drag coefficient at 8m and 15 m levels during various phases of monsoon at Kharagpur
Exhibit 4.13 Variation of Turbulent kinetic energy during different phases of monsoon at Kharagpur
Exhibit 4.14 Diurnal variation of TKE during (a) onset, (b) mid (c) end phases of monsoon
Exhibit 4.15 Velocity spectra during stable condition (u, v, and w)
Exhibit 4.15 d. Temperature spectra during stable condition (θ)
Exhibit 4.15 TKE dissipation rate at different phases of monsoon, Kharagpur
Exhibit 4.16 Computed mixing layer height (Rossby number similarity function) during different phases of monsoon at Kharagpur
Exhibit 4.17 Computed mixing heights (Rossby similarity function) during different phases of Monsson
Exhibit 4.18 Diurnal variation of mixing heights during (a) onset, (b) mid, and (c ) end phases of monsoon
Exhibit 4.19 Momentum flux computed at 8 m and 15 m levels during different phases of monsoon.
Exhibit 4.20 Day time variation of momentum flux during (a) onset, (b) mid, and (c) end monsoon phases
Exhibit 4.21 Sensible heat flux at 8 m and 15 m levels at Kharagpur during MONTBLEX
Exhibit 4.22 Diurnal variation of sensible heat fluxes during onset monsoon phase
Exhibit 4.23 Vertical profile of standard deviation of wind during onset phase of monsoon
Exhibit 4.24 Variation of Richardson Number at 2m,4m,8m, and 15 m above ground level
Exhibit 4.25 Temperature profile near ground during MONTBLEX at Kharagpur
Exhibit 4.26 Diurnal variation of Richardson Number at 2m,4m,8m, and 15m above ground level during (a) onset and (b) mid phases of monsoon
Exhibit 4.27 Plot of M - O similarity function against non-dimensional wind shear at (a) 8m and (b) 15 m levels
Exhibit 2.28 Variation of stability parameters under various run conditions during MONTBLEX, Kharagpur

Exhibit 4.29 Correlation between -z/L at 8 m and 15 m levels during MONTBLEX, Kharagpur

Exhibit 2.30 Diurnal variation of z/L during (a) onset phase (b) mid phases of monsoon

Exhibit 4.31 Variation of frictional velocity with z/L (a) at 8 m level and (b) 15 m levels

Exhibit 4.32 Non dimensional wind shear as function of -z/L at (a) 8 m and (b) 15 m levels

Exhibit 4.33 Plot between z/L and turbulent kinetic energy at (a) 8 m and (b) 15 m levels

Exhibit 4.34 Diurnal variation of convective velocity scale during onset and mid phases of monsoon.

Exhibit 4.35 Downwind concentration distribution of pollutant from an elevated (60 m) stack under various stabilities

Exhibit 4.36 Downwind concentration distribution of pollutant from an elevated (275) stack under various stabilities

Exhibit 4.37 Eddy exchange coefficient at Kharagpur during MONTBLEX (a) momentum flux (b) heat flux

Exhibit 4.38 Vertical eddy diffusivity (Kv) profile under neutral atmospheric condition

Exhibit 4.39 Diurnal variation of simulated potential temperature profile on 12th June 1990

Exhibit 4.40 Comparison of observed and simulated temperature at 30 m level

Exhibit 4.41 Diurnal variation of simulated u-wind profile on 18th August 1990

Exhibit 4.42 Scatter plot between observed and simulated u-wind on 18th August, Kharagpur

Exhibit 4.43 Diurnal variation of simulated v-wind profile on 18th August 1990
Exhibit 4.44 Scatter plot between observed and simulated v-wind on 18th August, Kharagpur

Exhibit 4.45 Diurnal variation of simulated mean wind profile on 18th August 1990