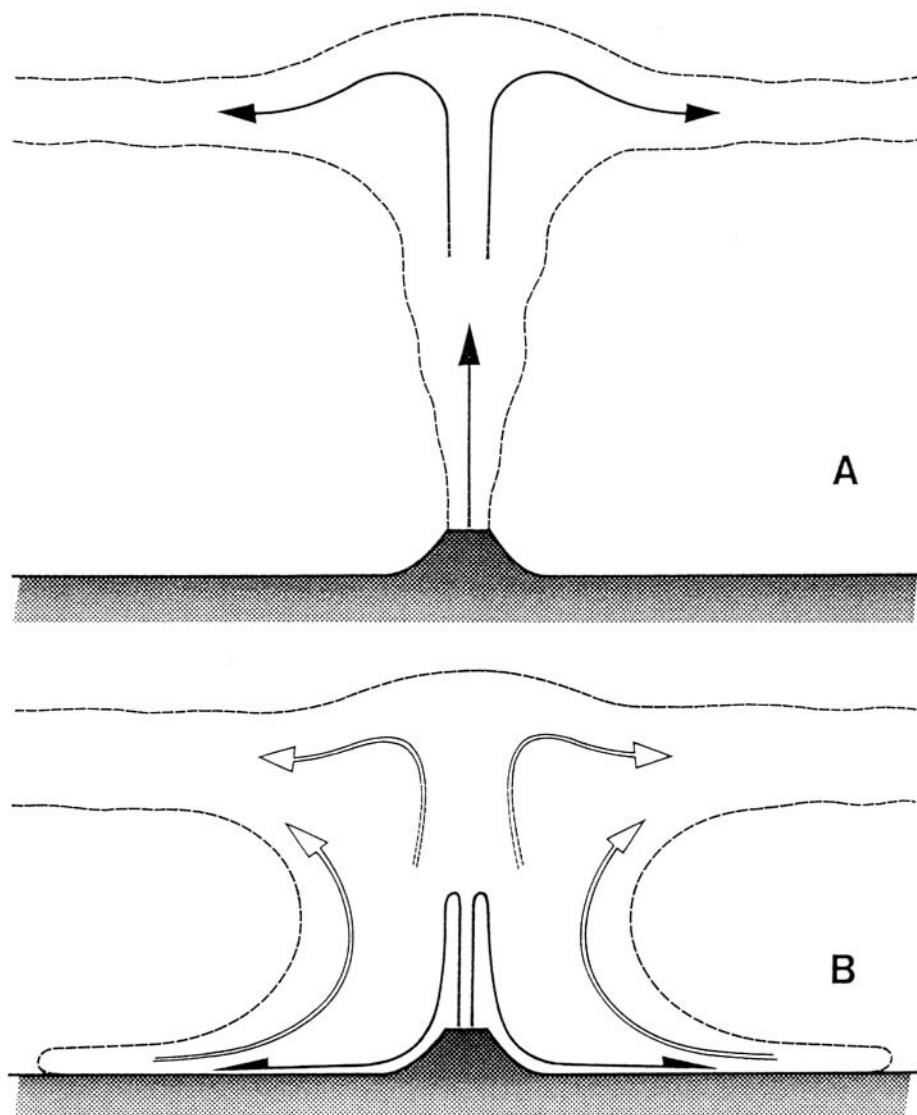
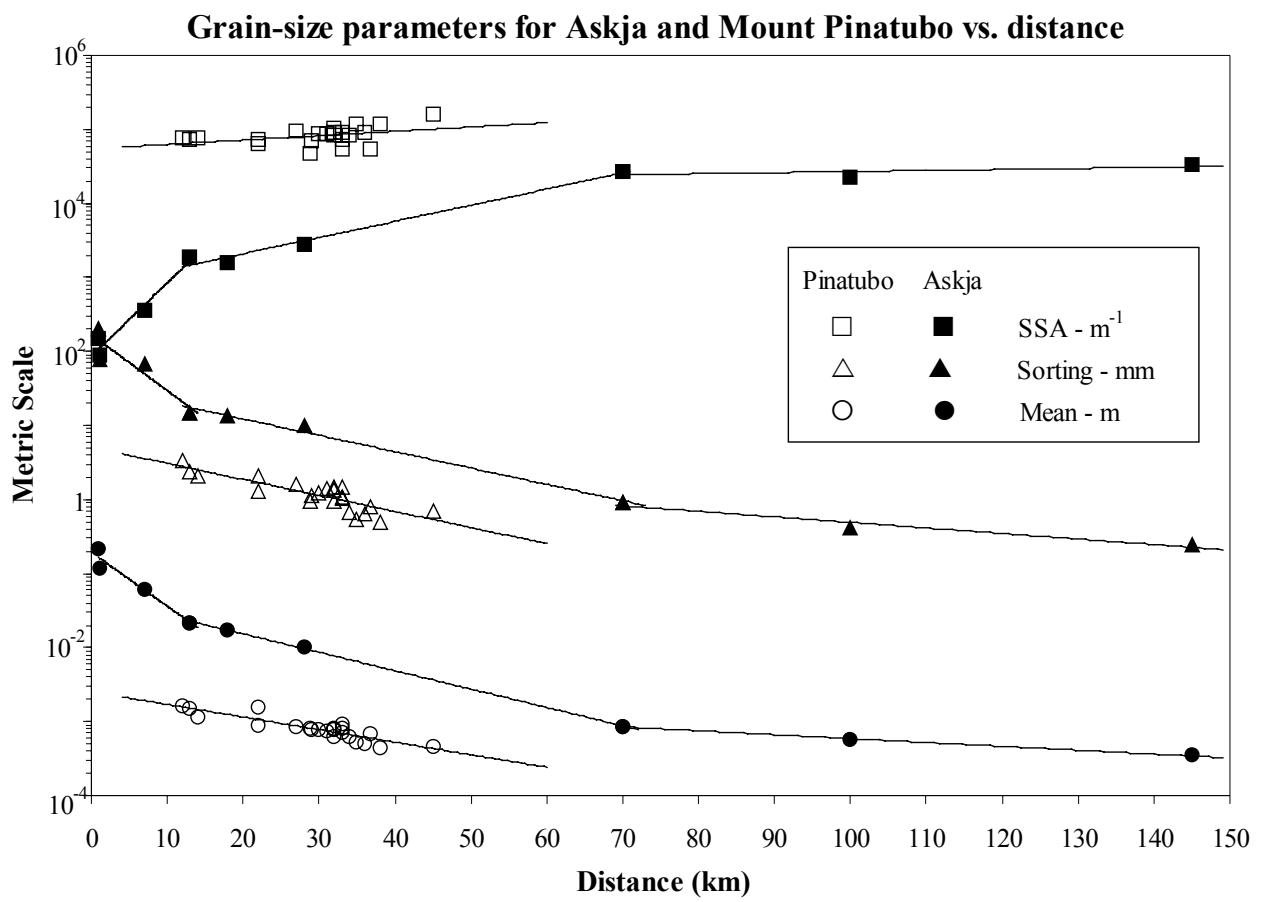


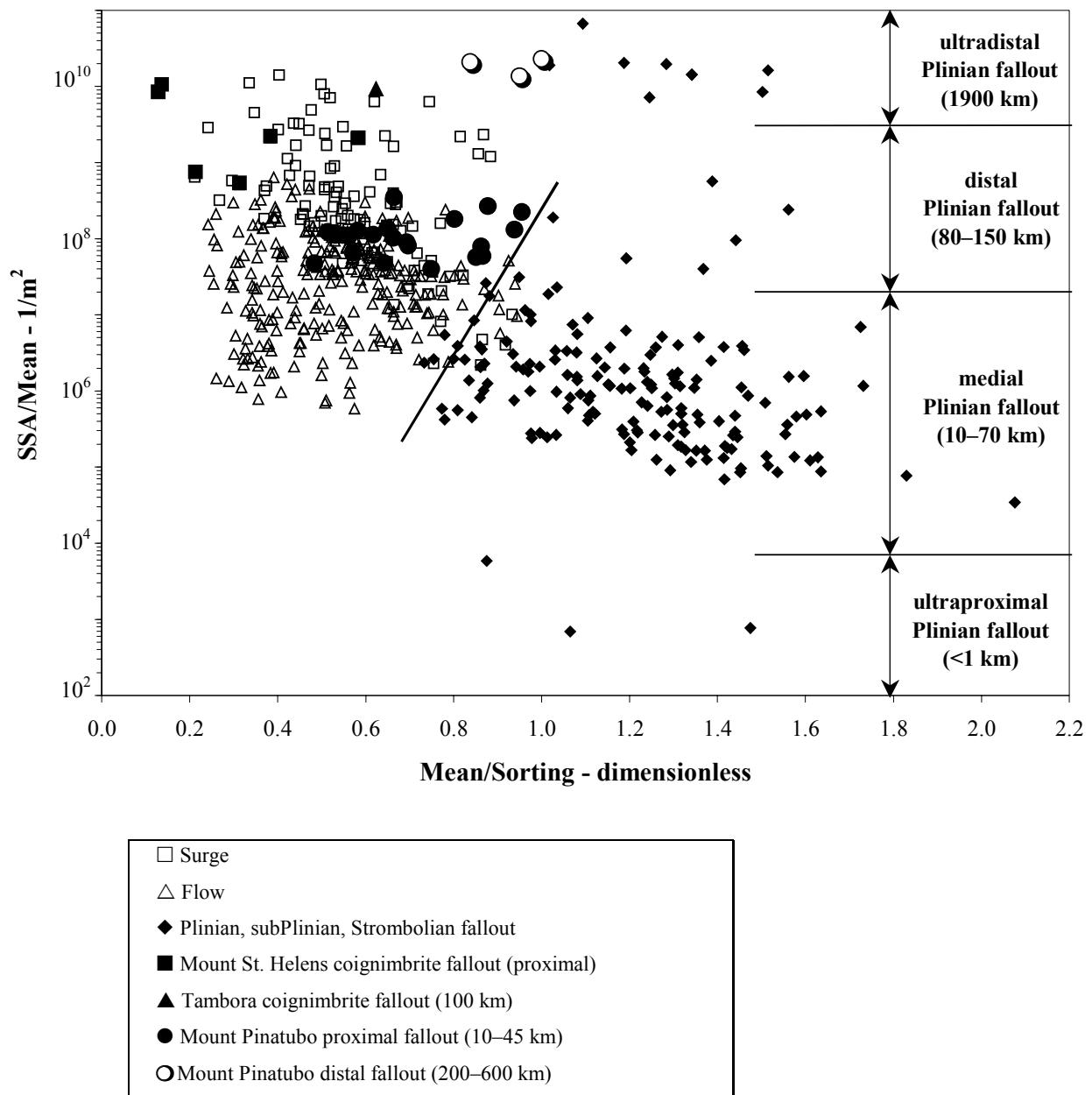
Chapter 1 - Figure 1



Chapter 1 - Figure 2



Chapter 1 - Figure 3



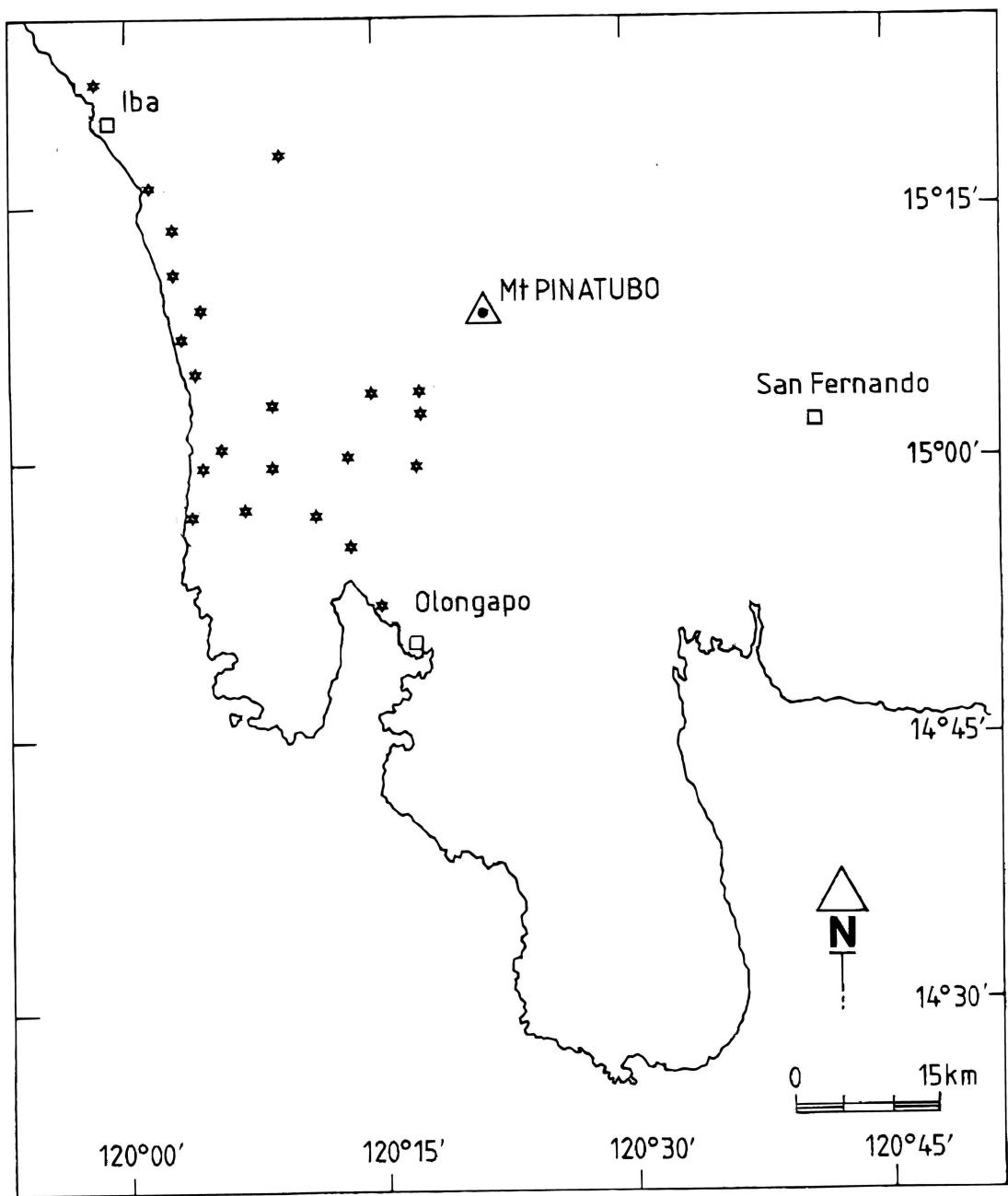
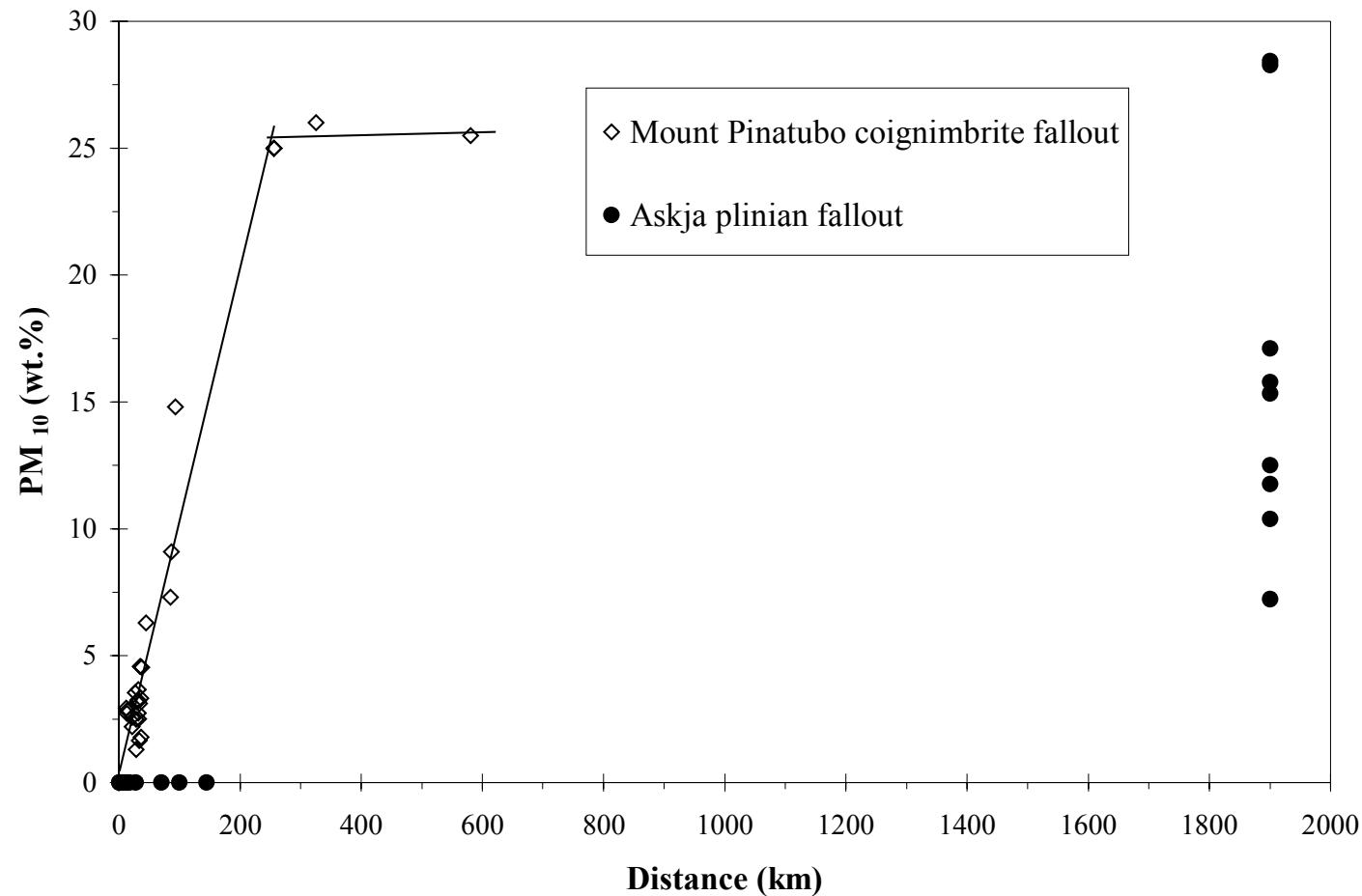
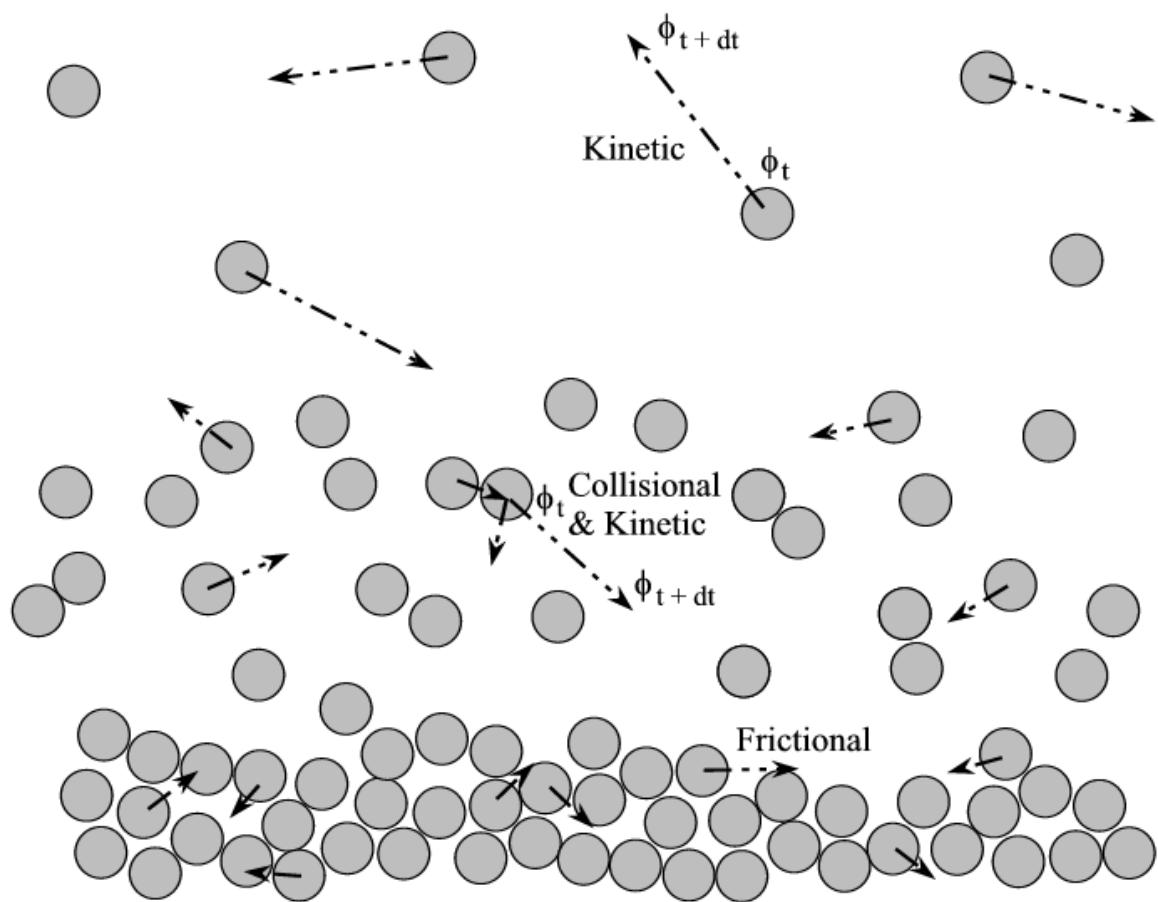


Figure DR1. Location (represented by a star) of all our samples collected around Mount Pinatubo volcano and used in this manuscript.

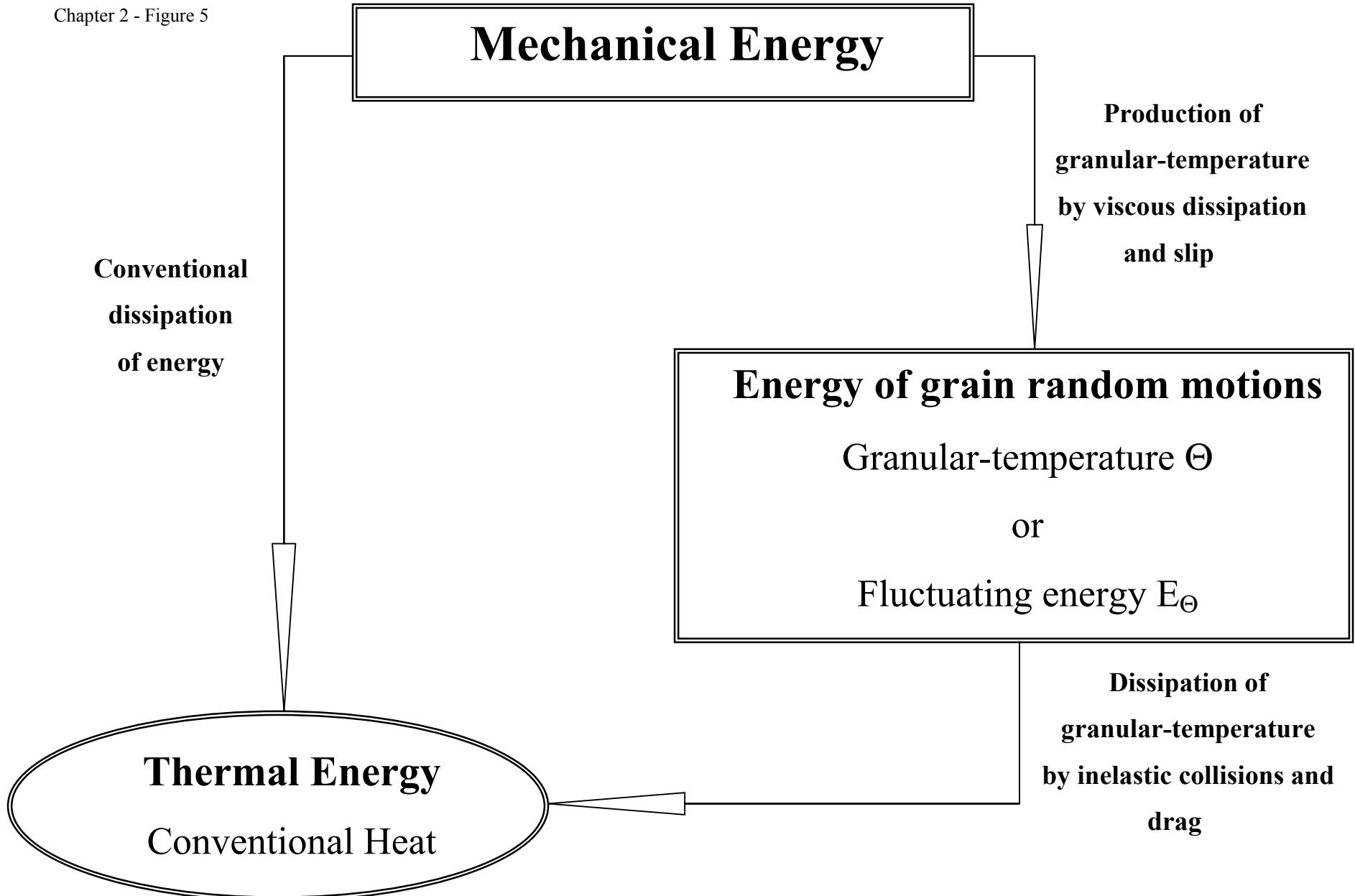
Chapter 1 - Annex 3: PM₁₀ variation vs. distance from source



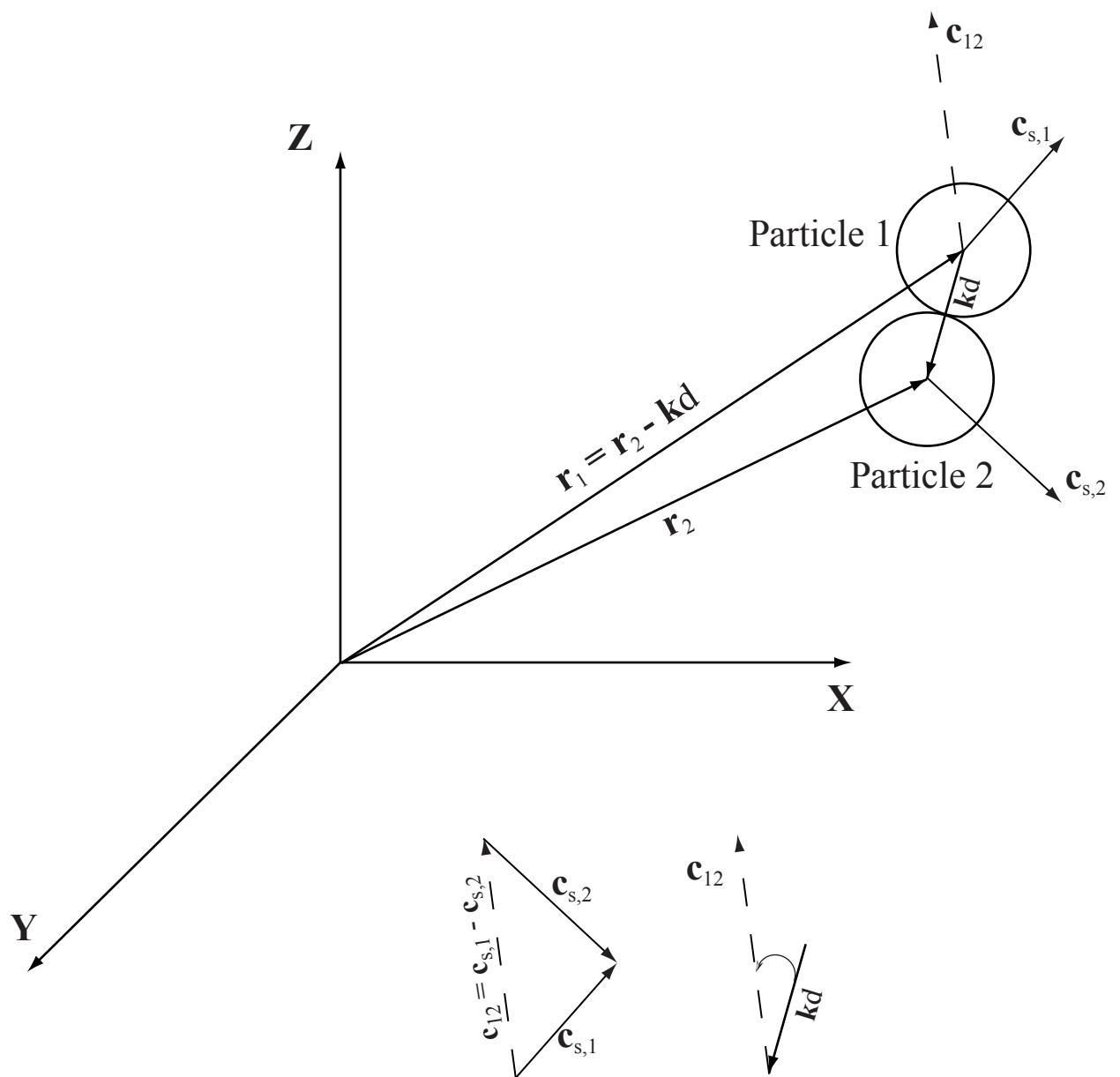
Chapter 2 - Figure 4



Chapter 2 - Figure 5



Chapter 2 - Figure 6

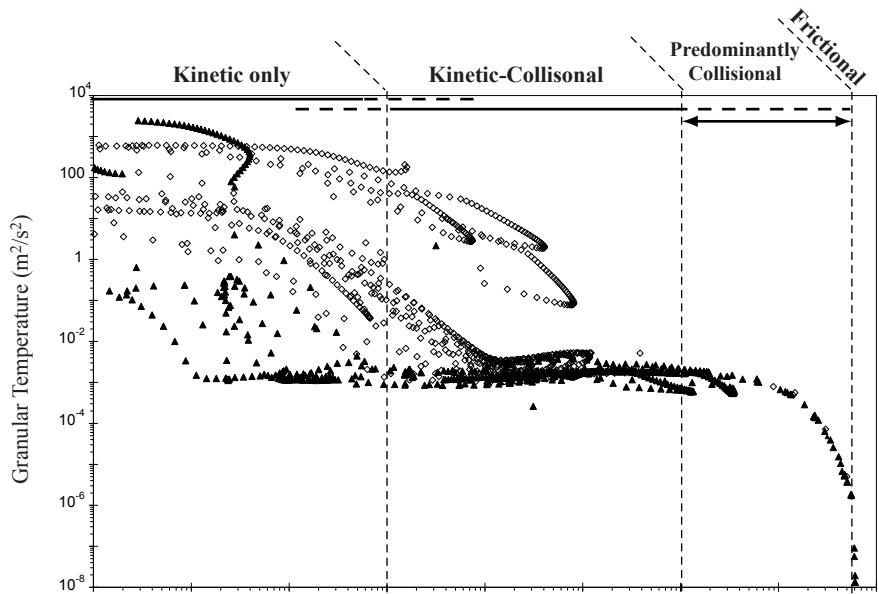


Chapter 2 - Figure 7

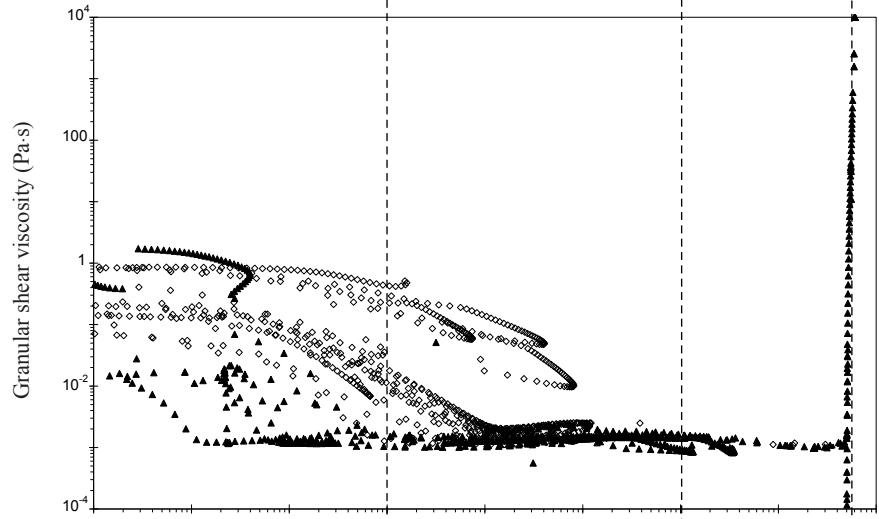
\blacktriangle = within the body of the flow (10s - 480s)

\diamond = head of the flow (10s - 100s)

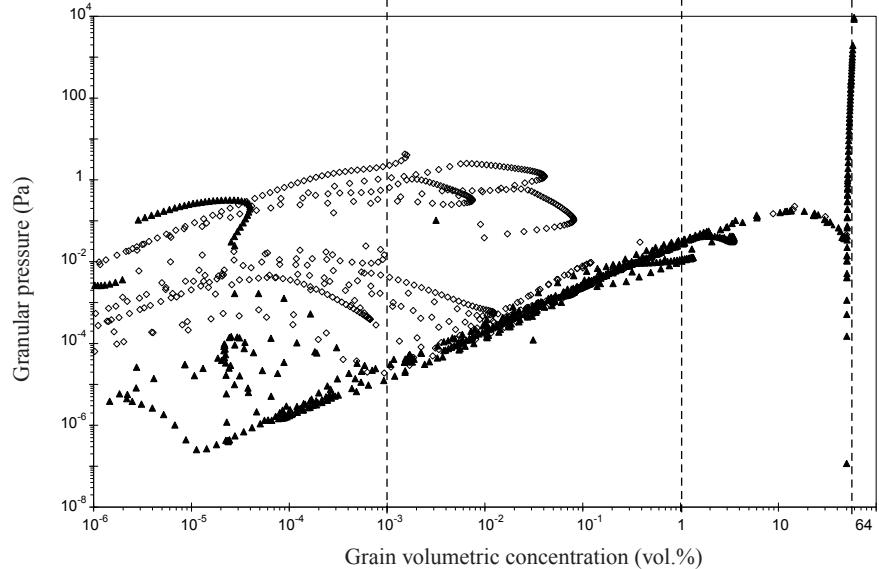
A.



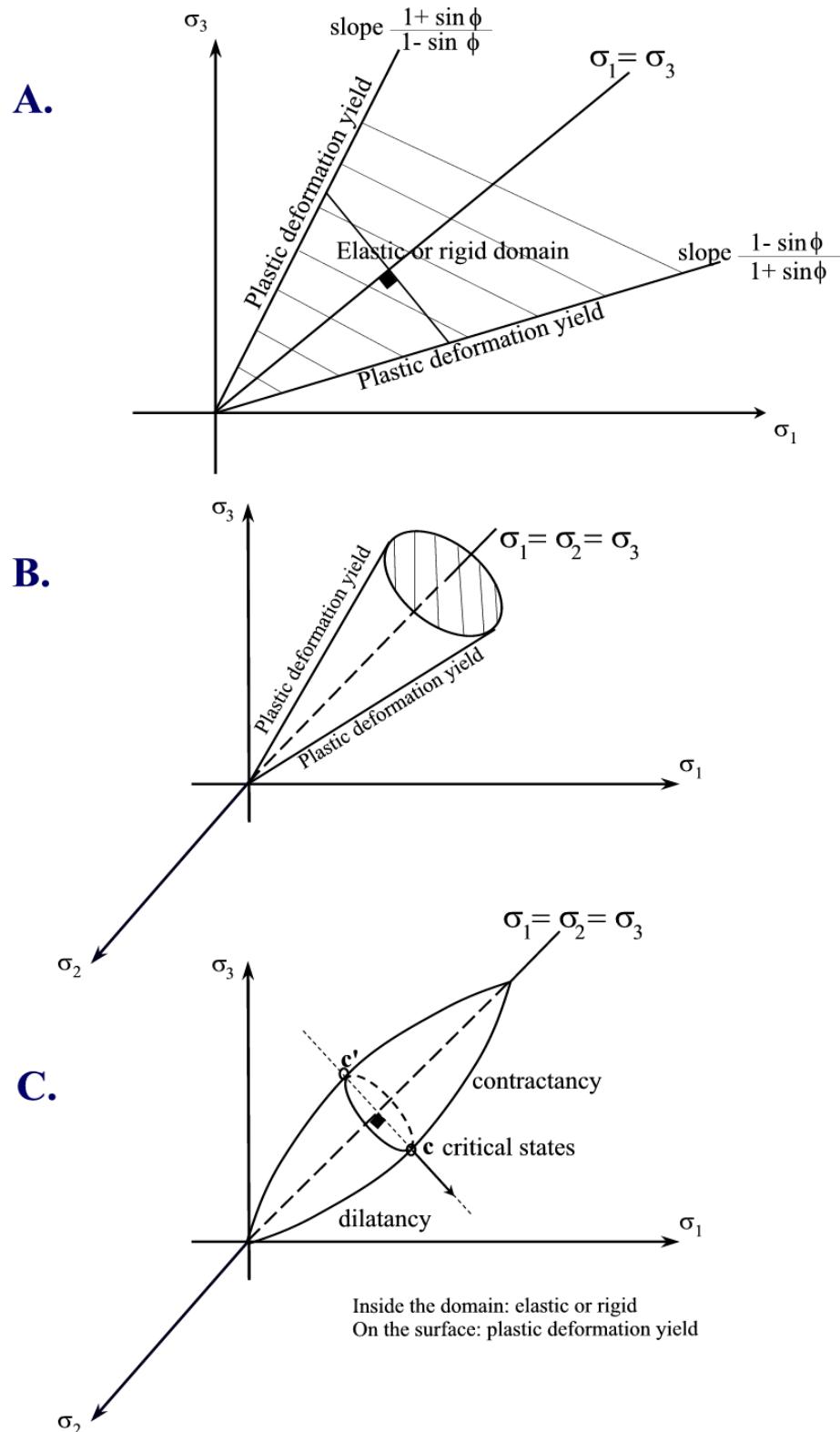
B.



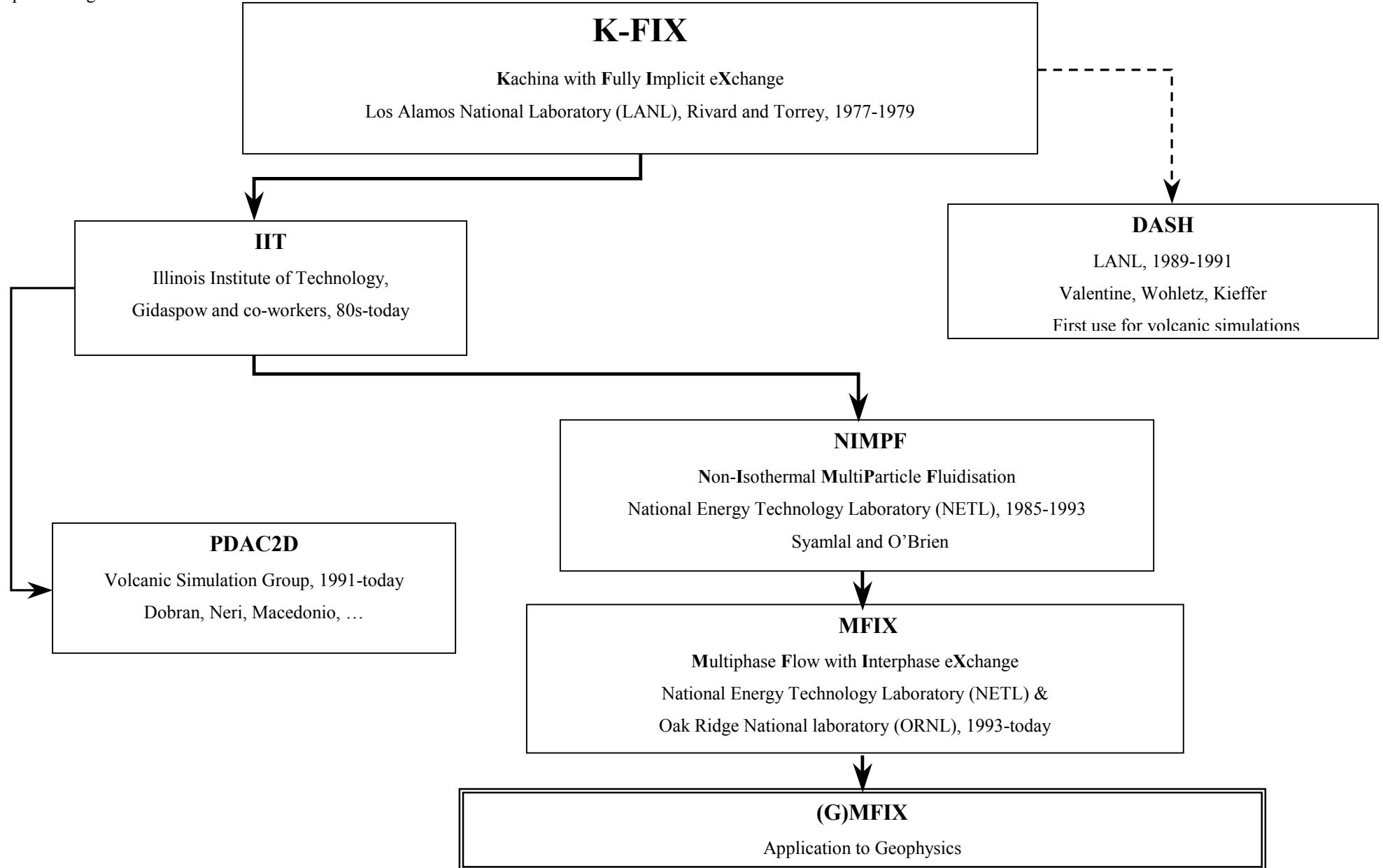
C.



Chapter 2 - Figure 8

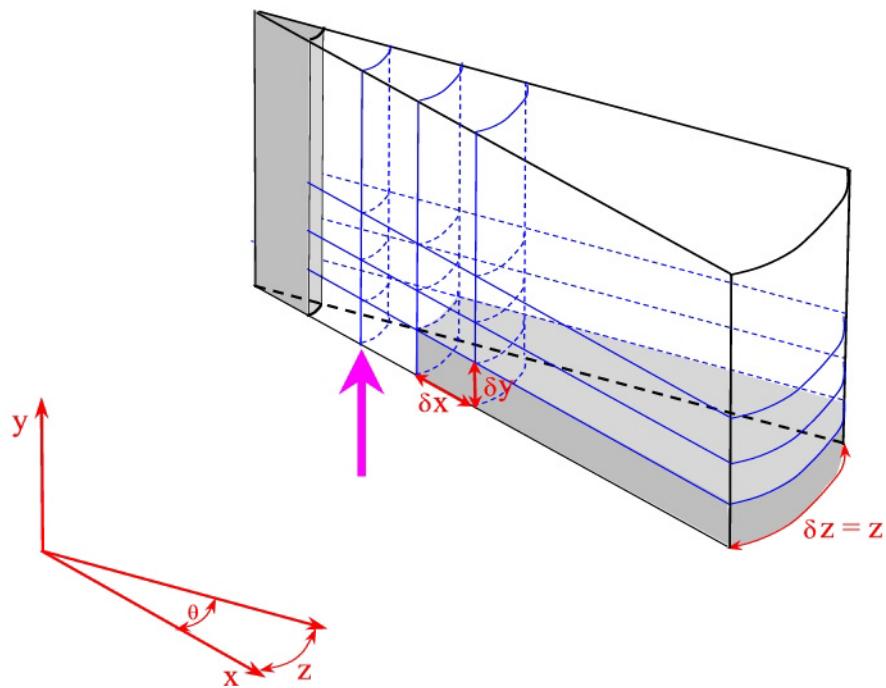


Chapter 3 - Figure 9

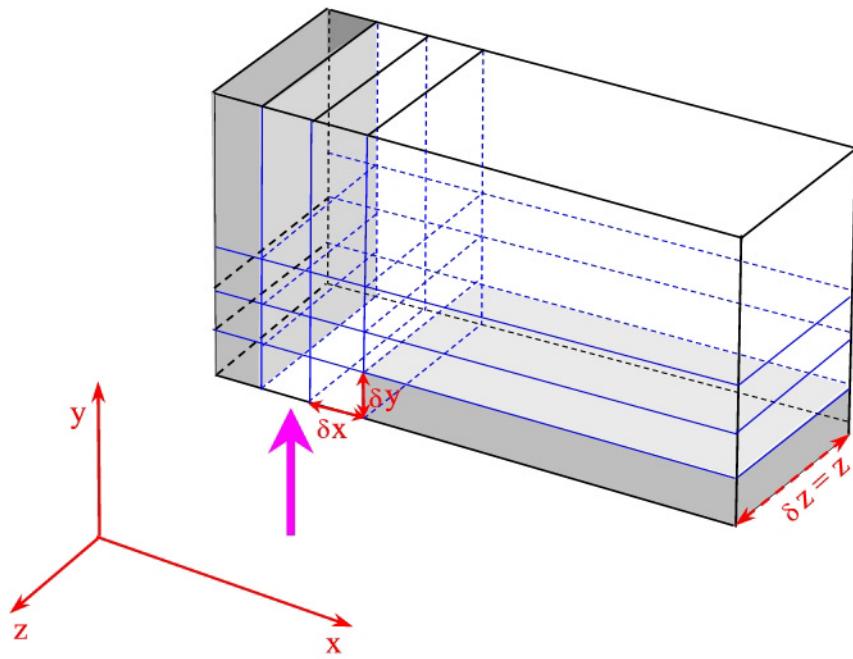


Chapter 3 - Figure 10

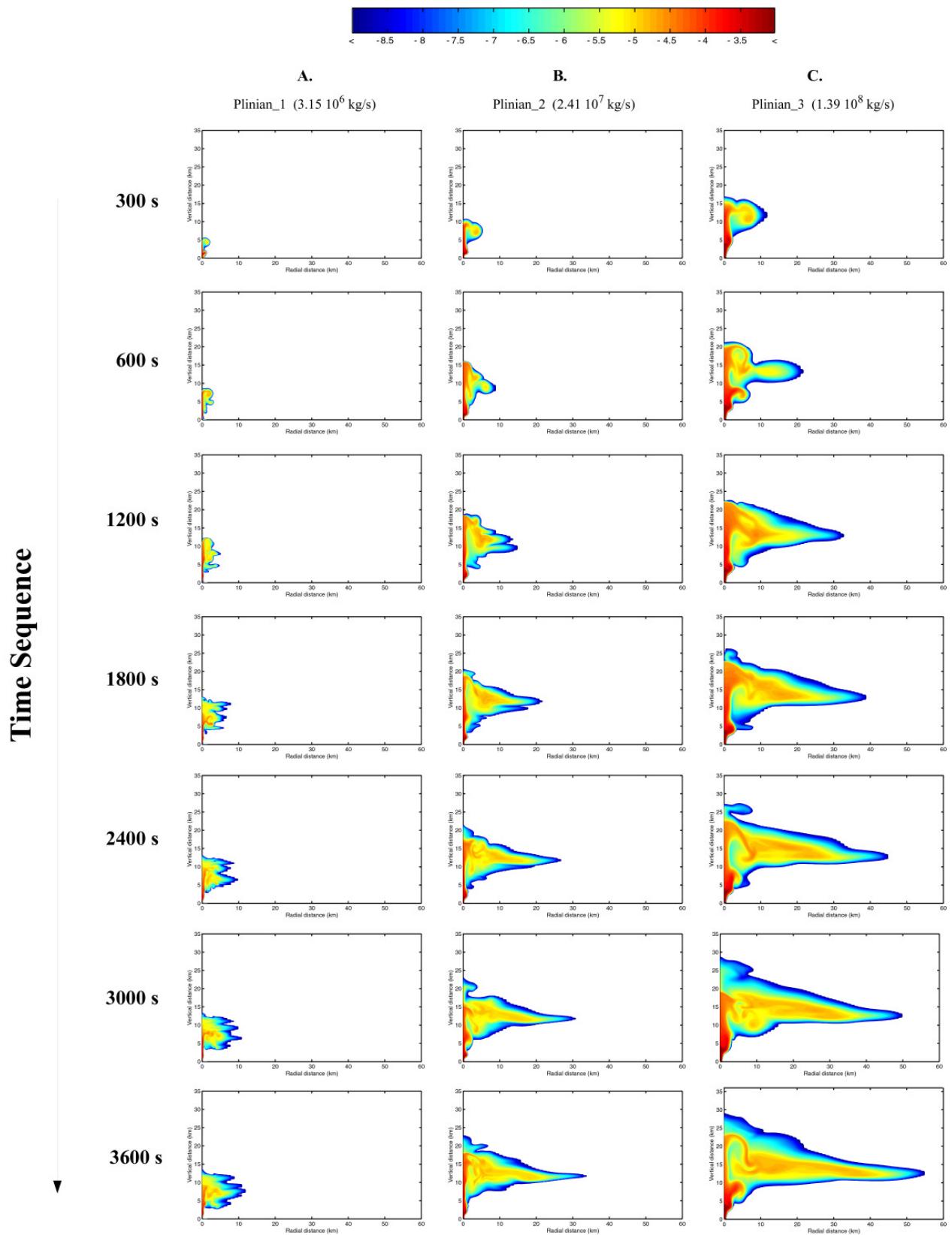
A.



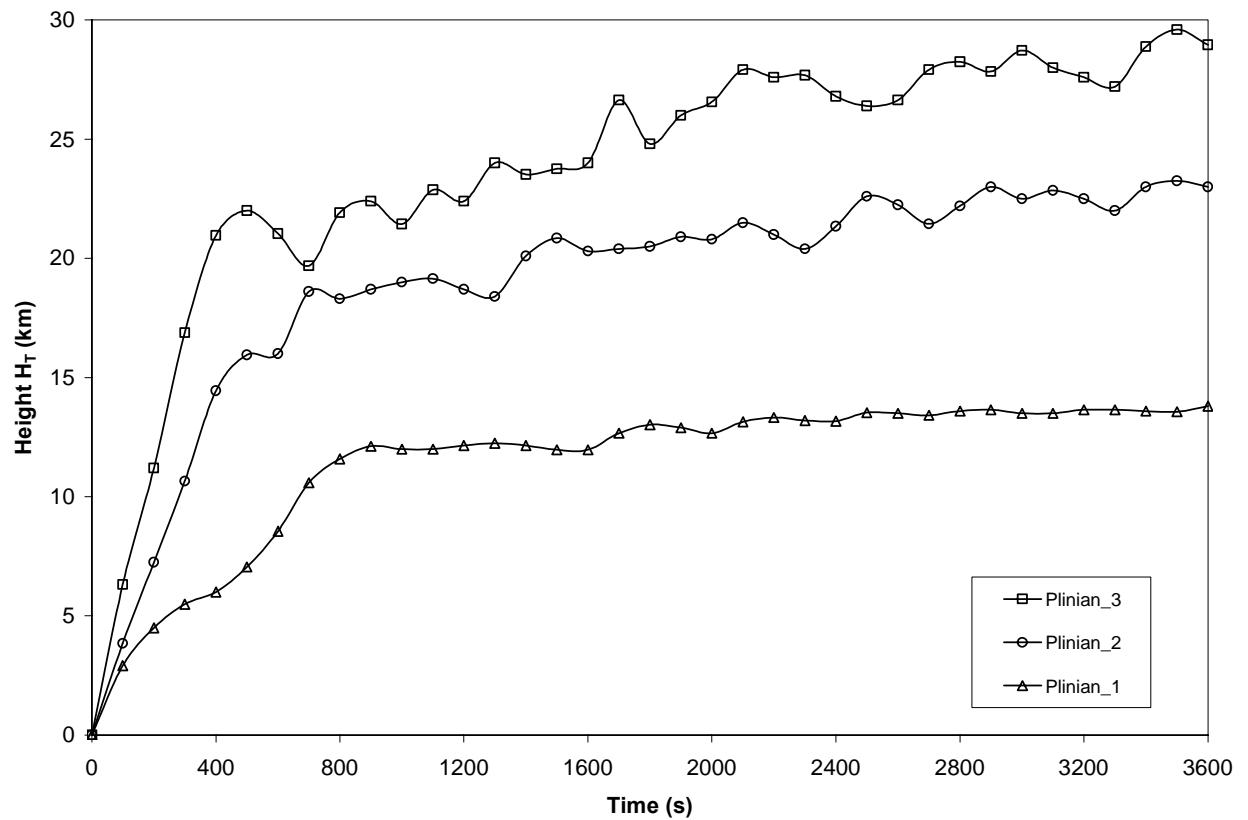
B.



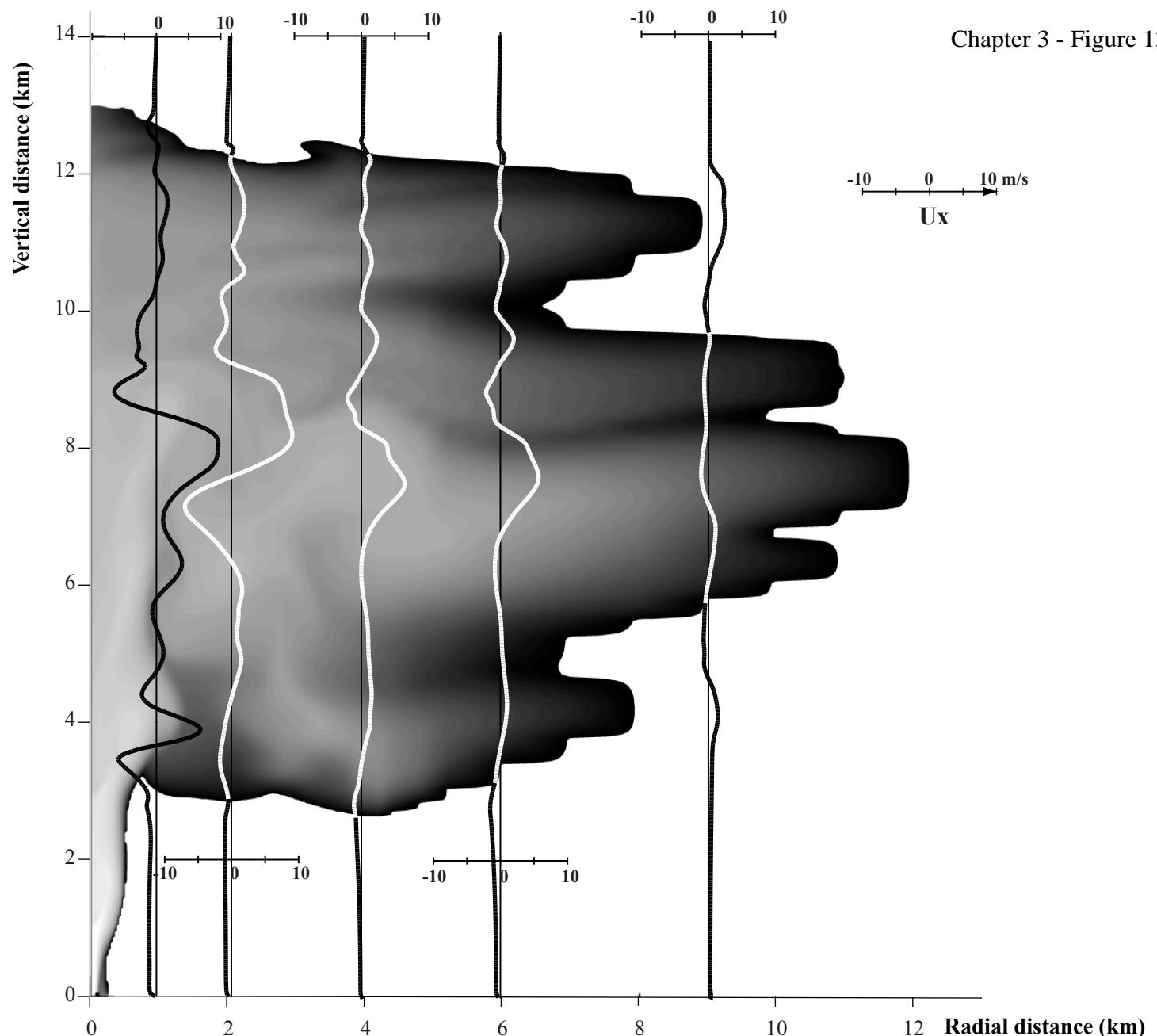
Chapter 3 - Figure 11



Chapter 3 - Figure 12

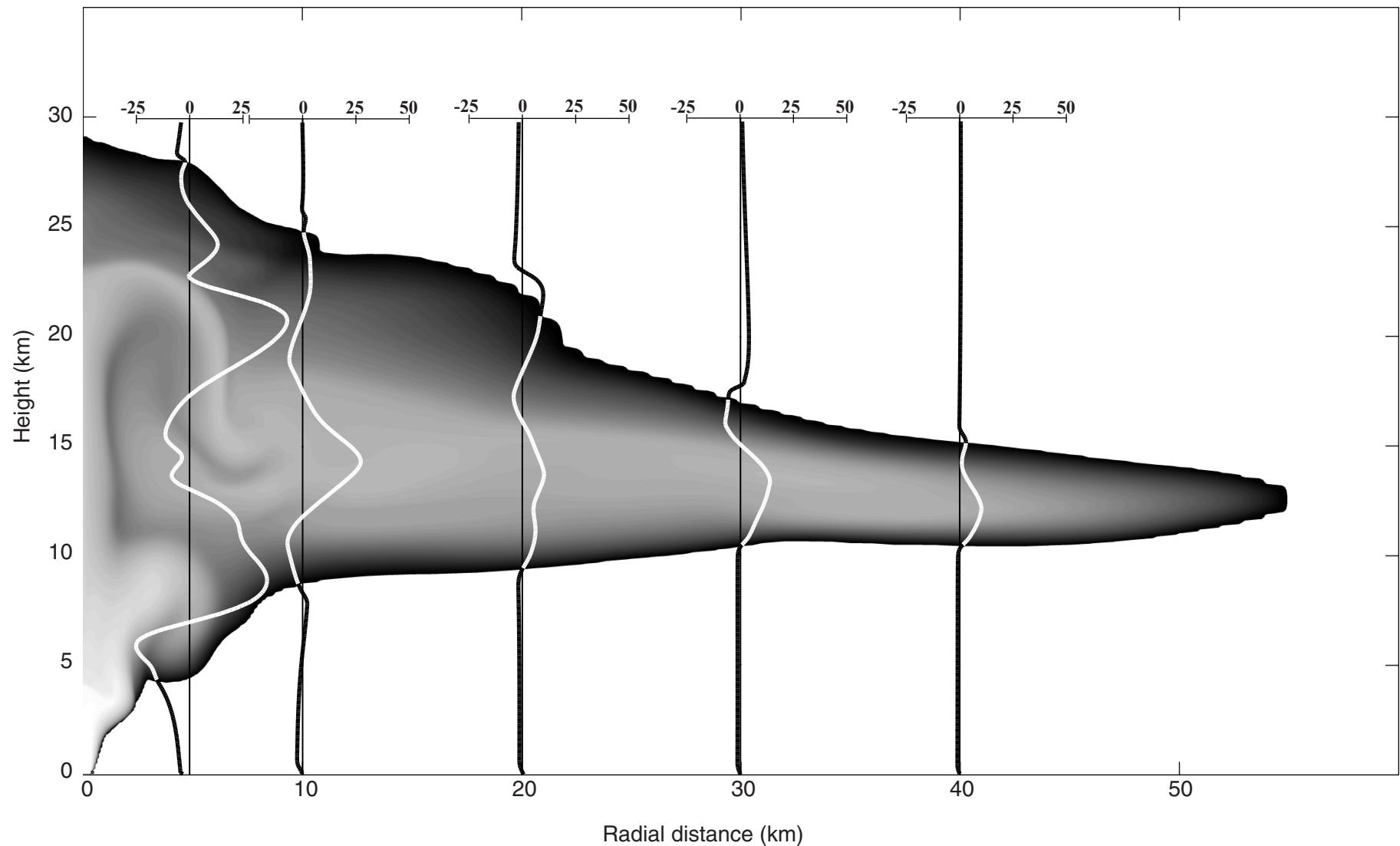


Chapter 3 - Figure 13

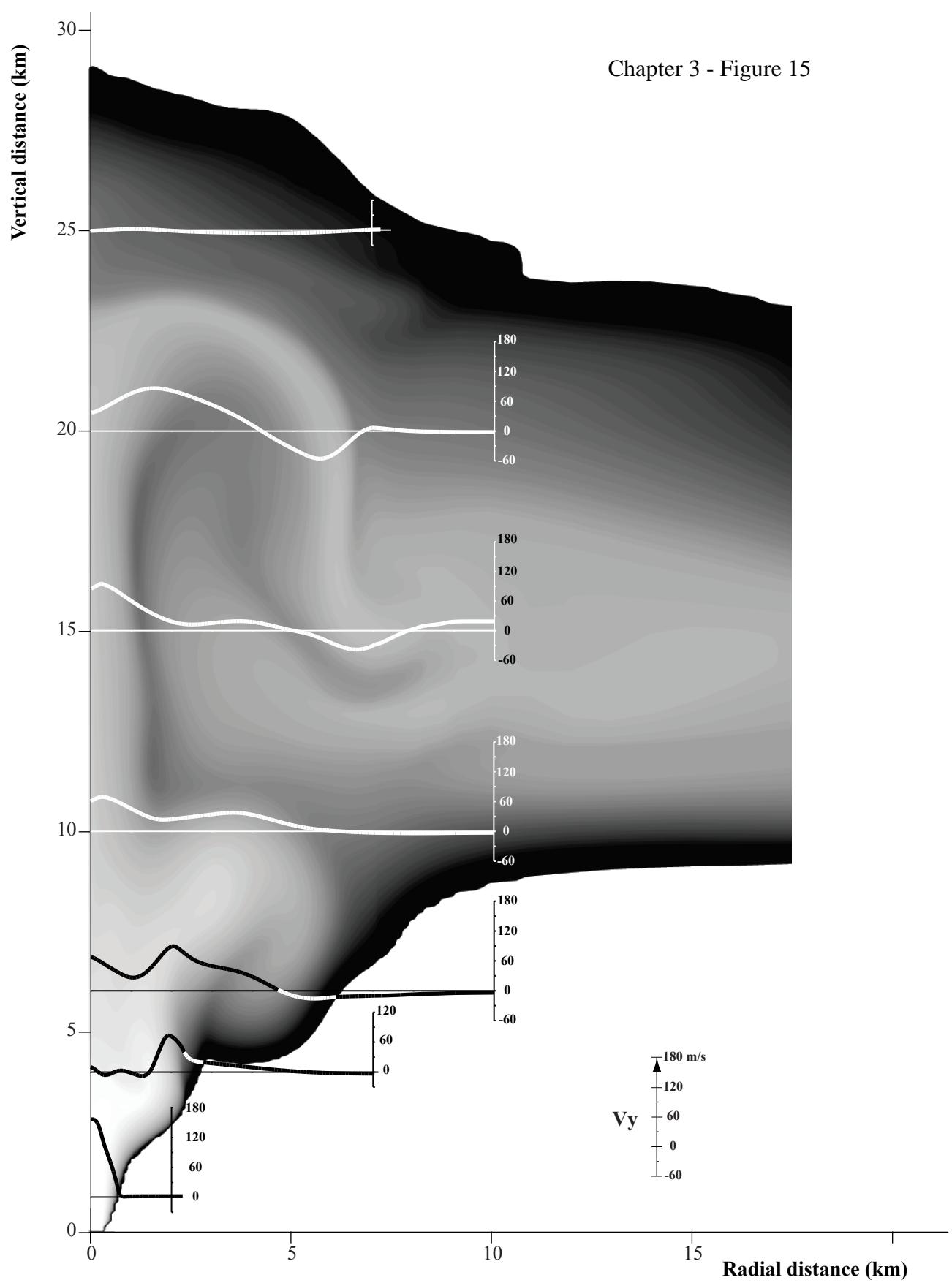


Chapter 3 - Figure 14

-25 0 25 50 m/s
 U_x

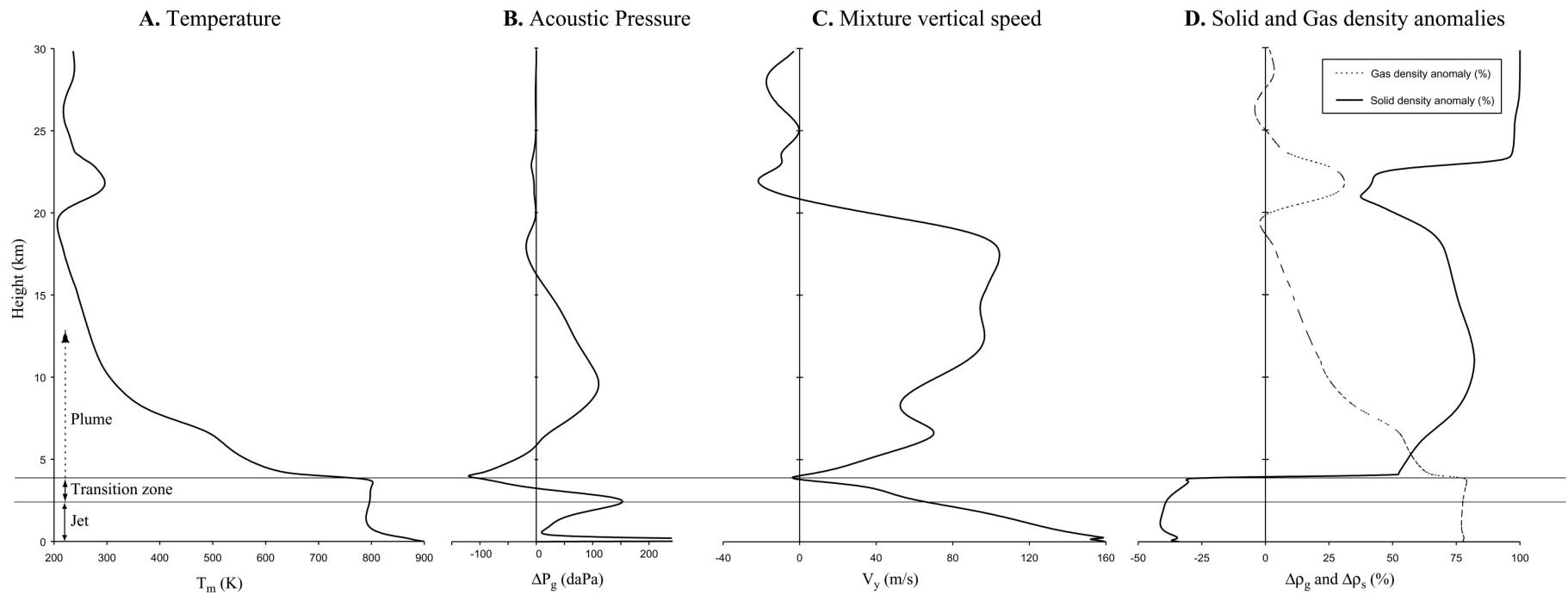


Chapter 3 - Figure 15

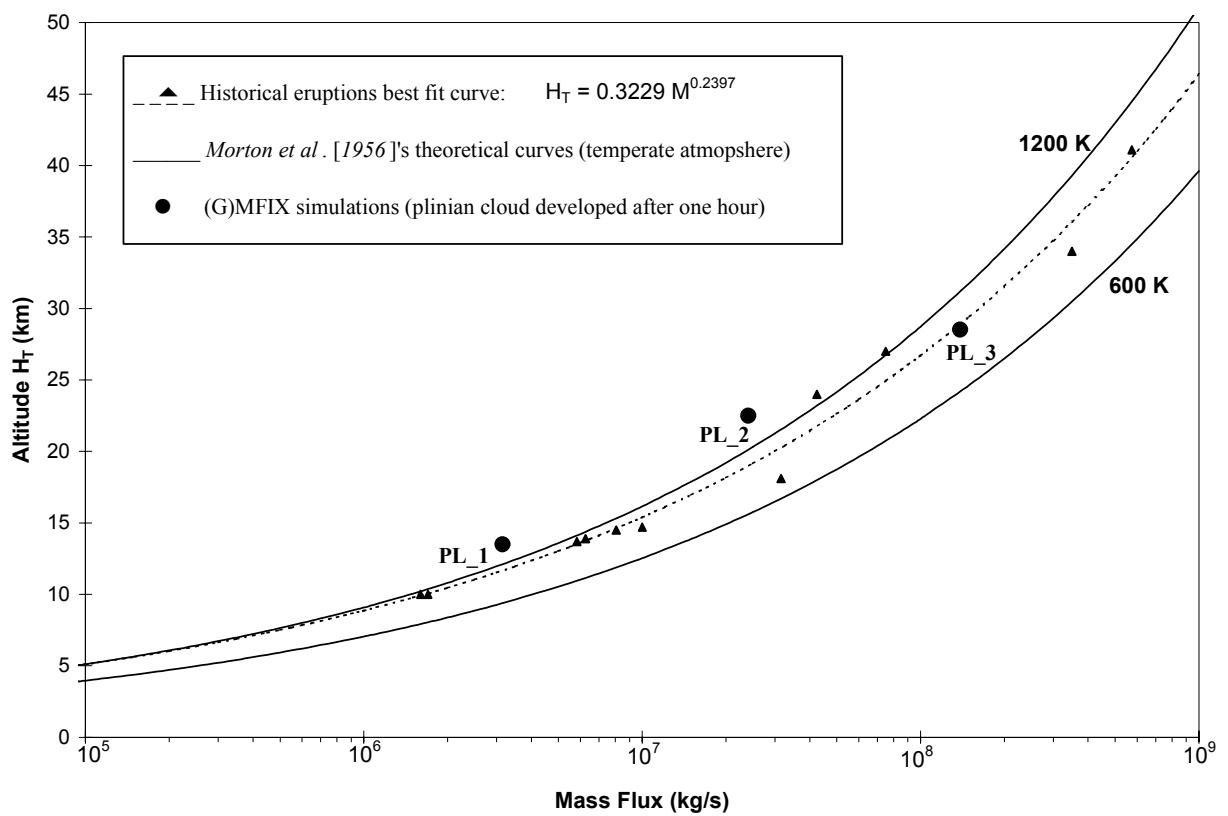


Chapter 3 - Figure 16

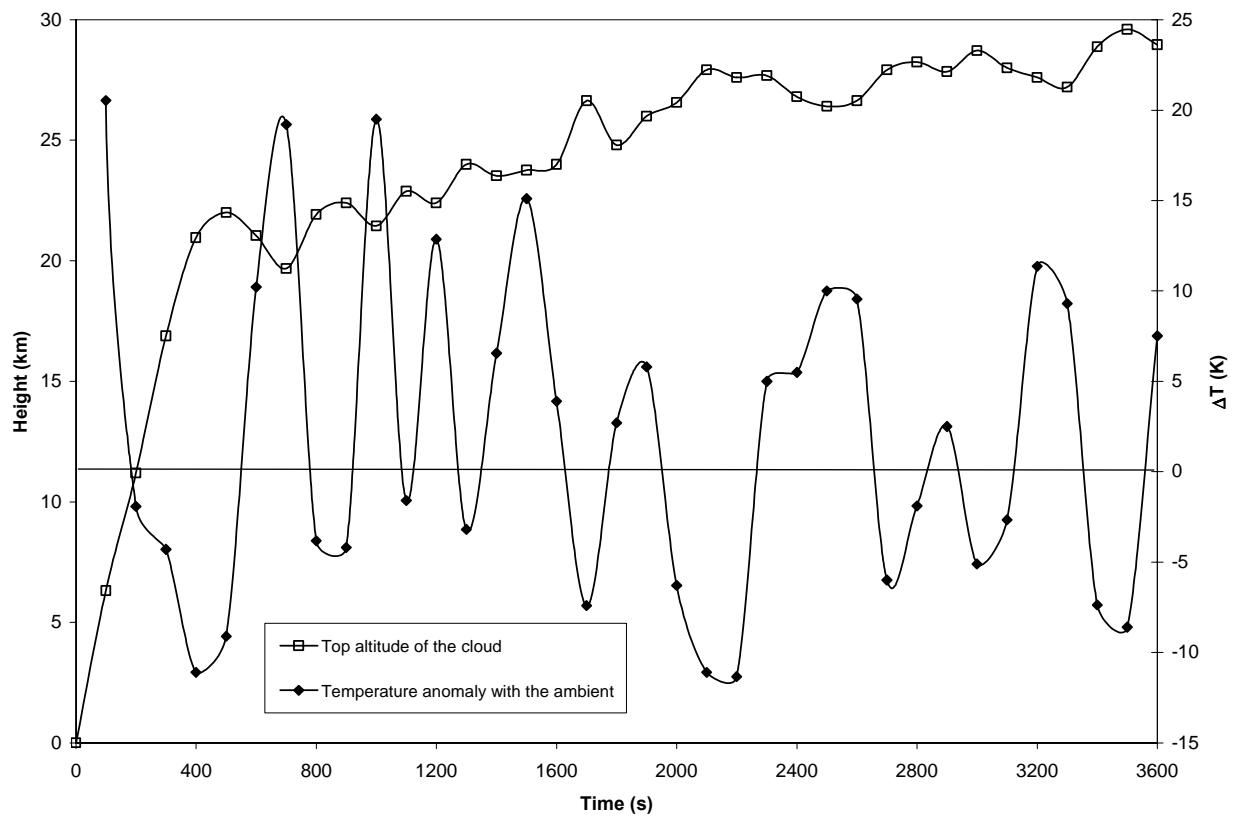
Profiles in the plinian column PL_3 at 3600 s



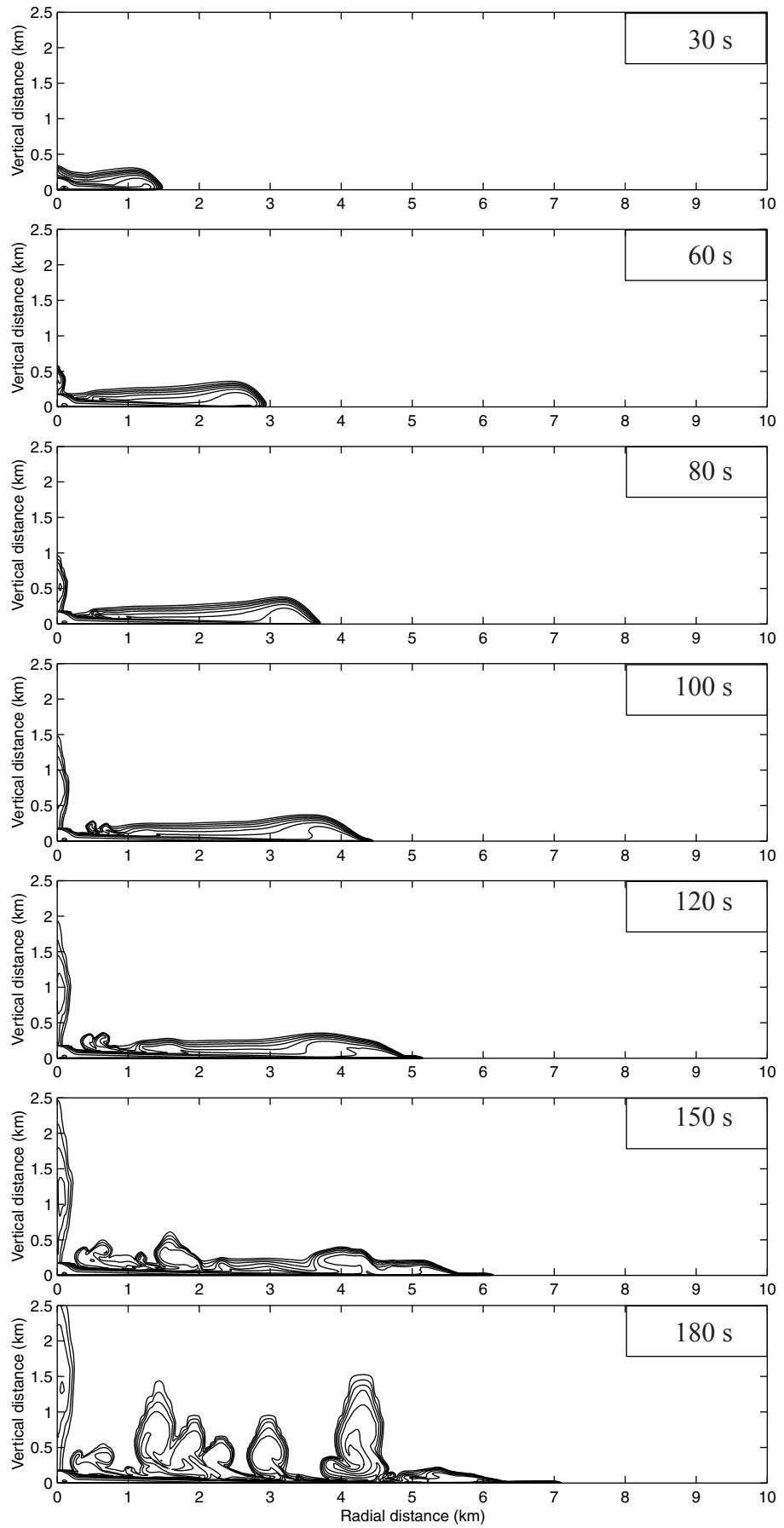
Chapter 3 - Figure 17



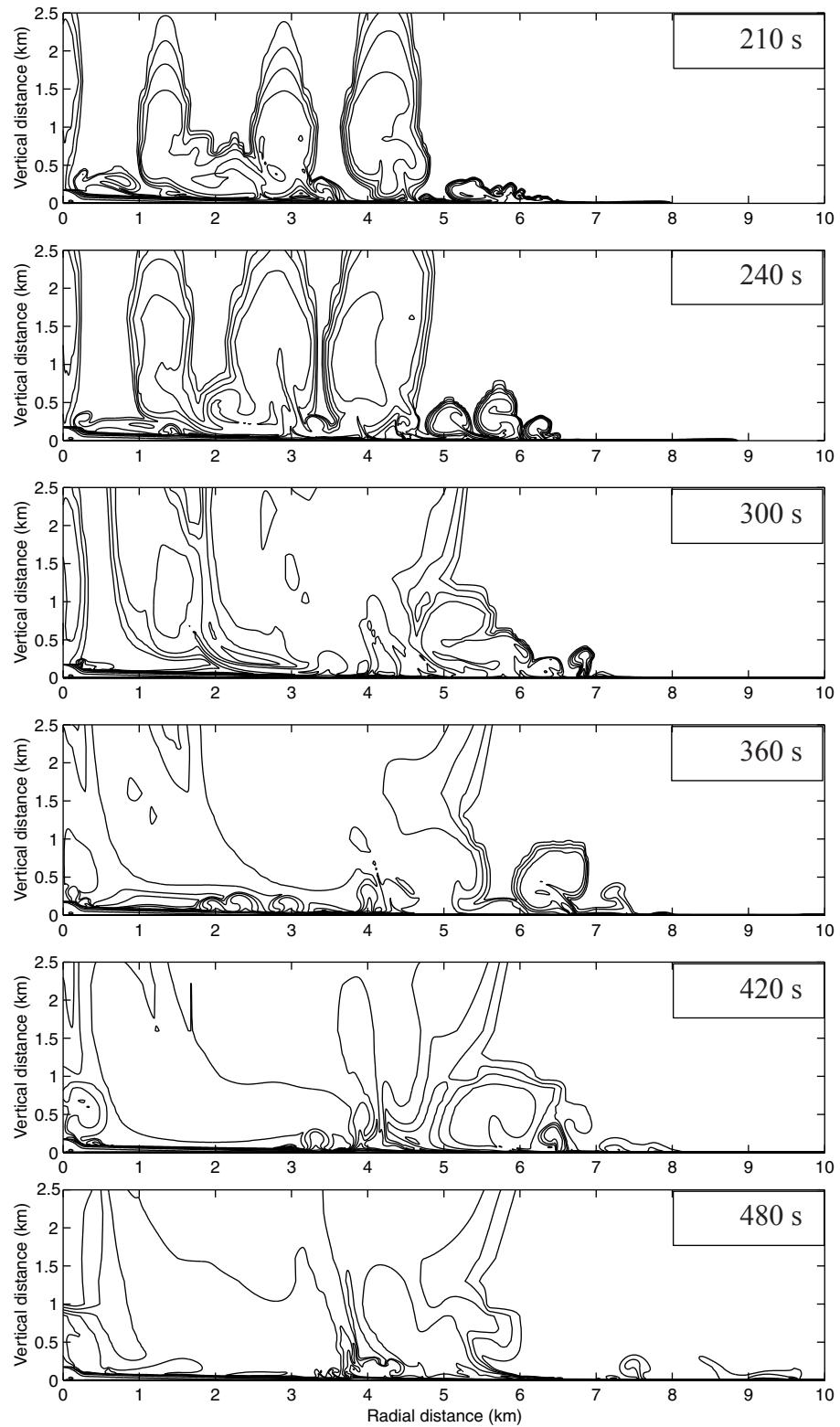
Chapter 3 - Figure 18



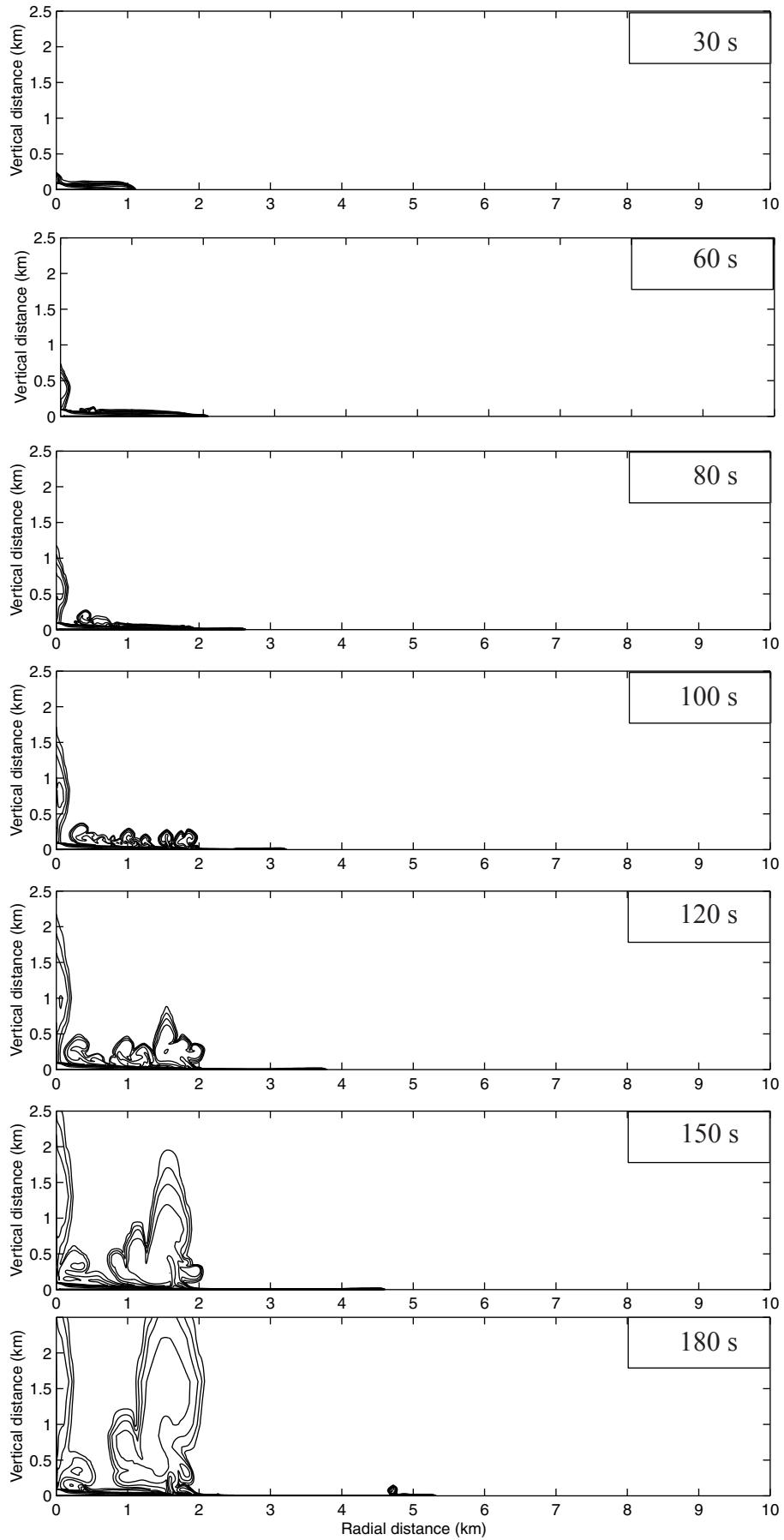
Chapter 3 - Figure 19A



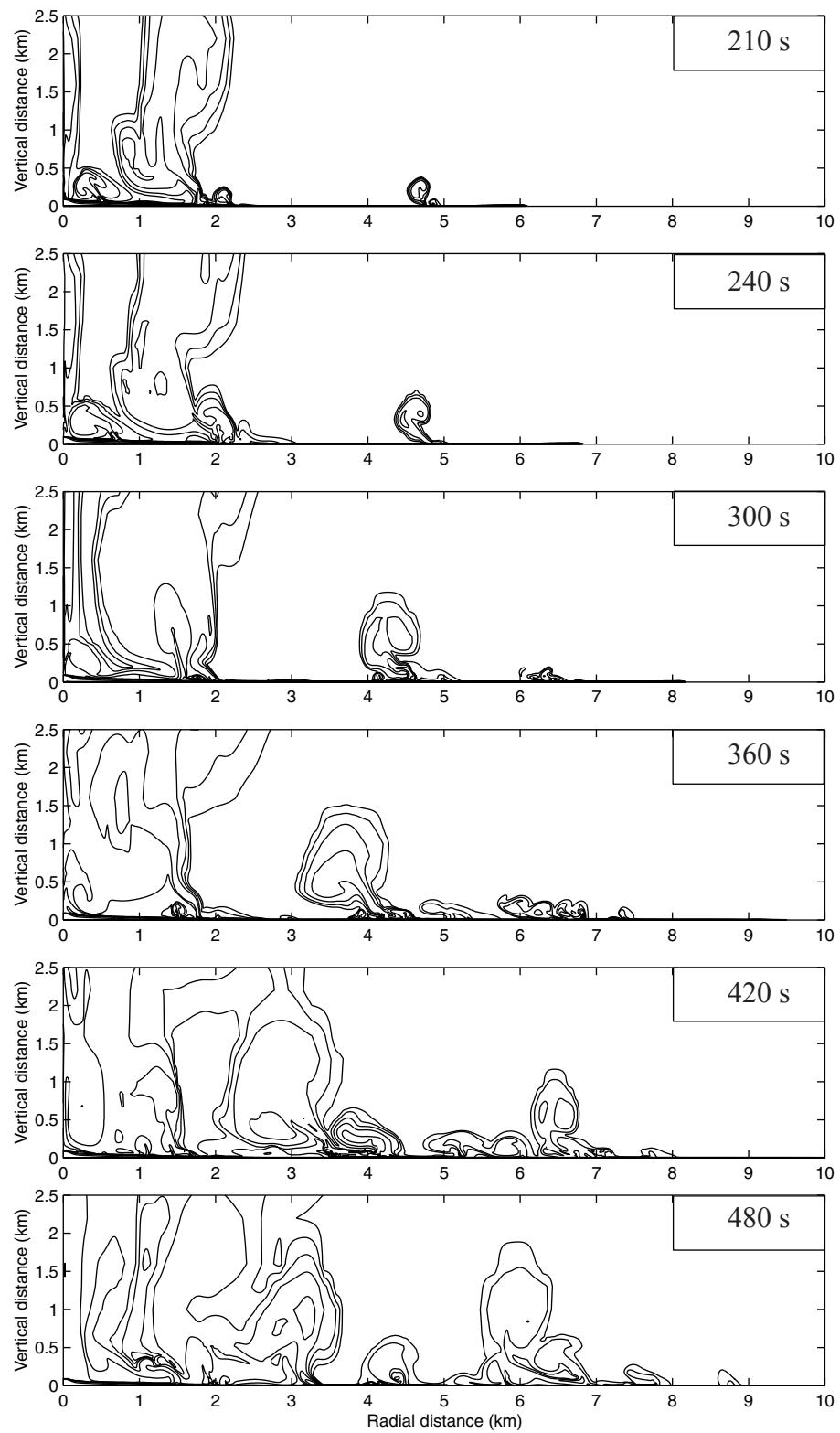
Chapter 3 - Figure 19B



Chapter 3 - Figure 20A



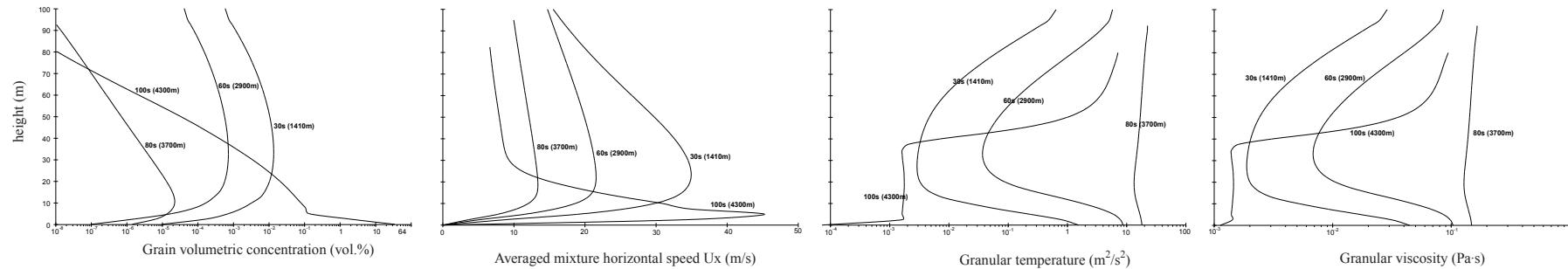
Chapter 3 - Figure 20B



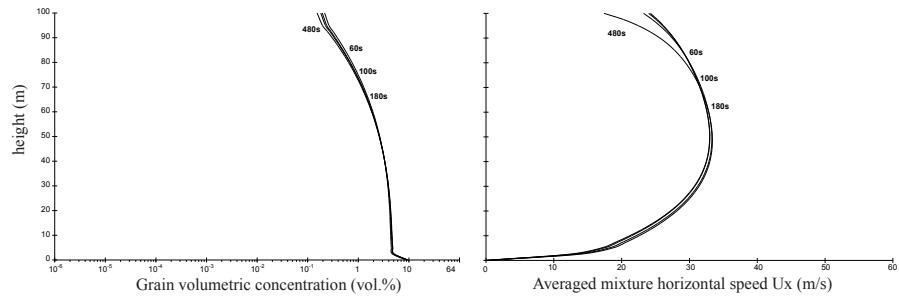
Chapter 3 - Figure 21

A.

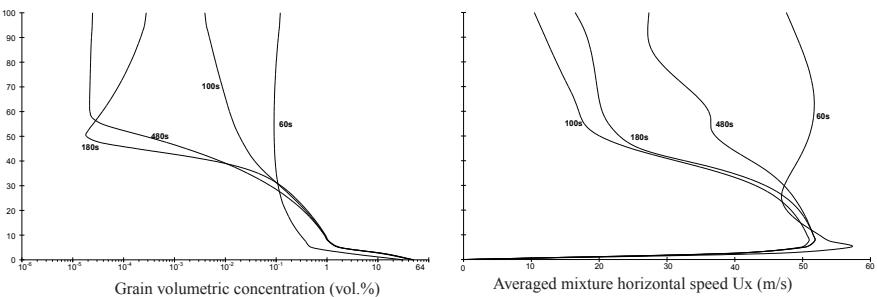
Variable position and time sampling within the head of the flow:



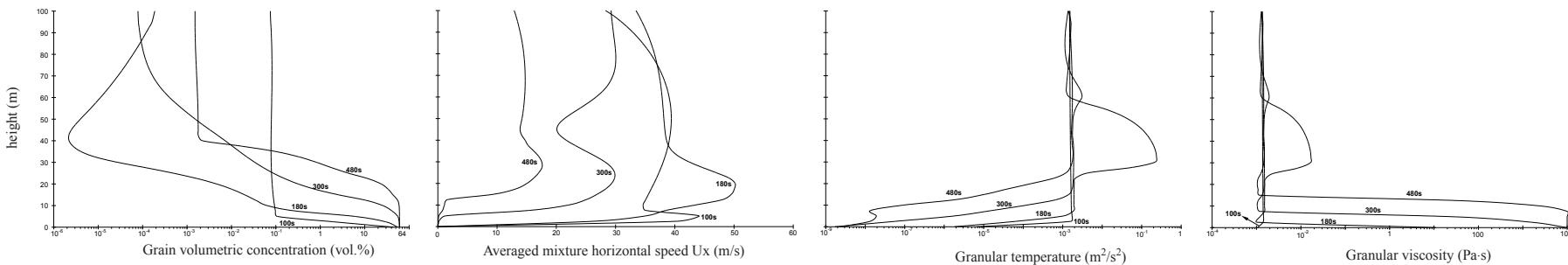
B. Fixed position sampling at 0.25 km from source:



C. Fixed position sampling at 2.5 km from source:

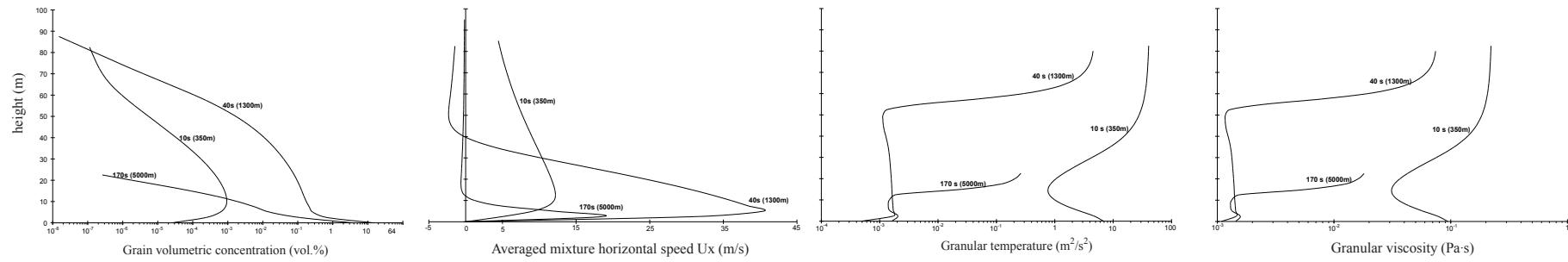


D. Fixed position sampling at 4 km from source:

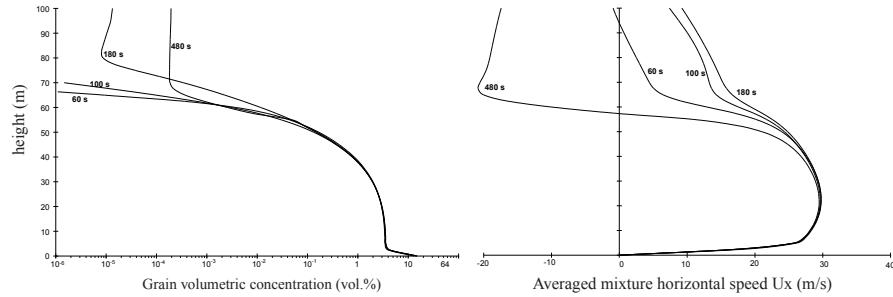


Chapter 3 - Figure 22

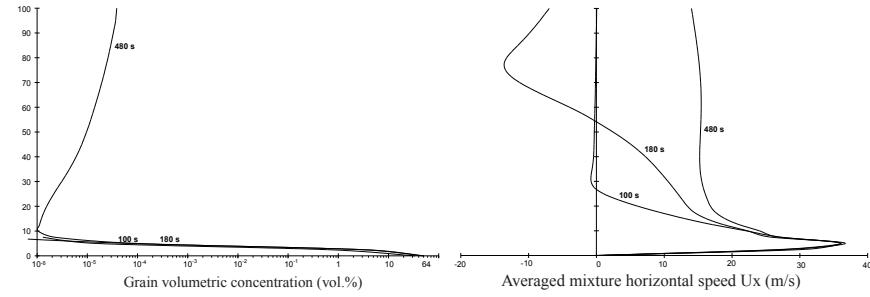
A. Variable position and time sampling within the head of the flow:



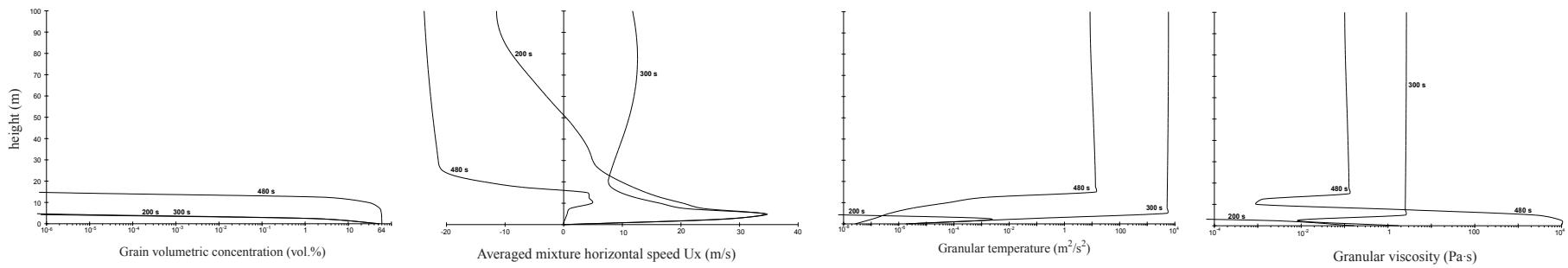
B. Fixed position sampling at 0.25 km from source:



C. Fixed position sampling at 2.5 km from source:



D. Fixed position sampling at 3.7 km from source:

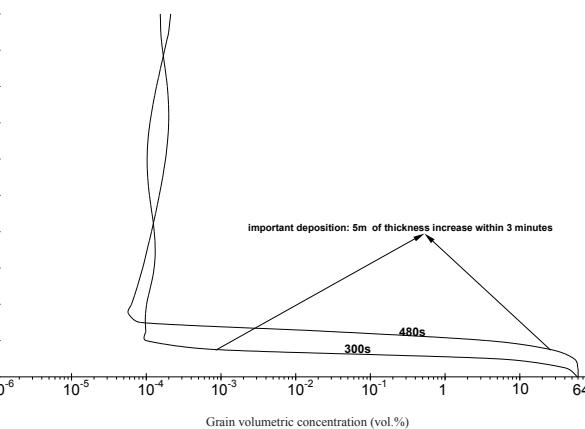
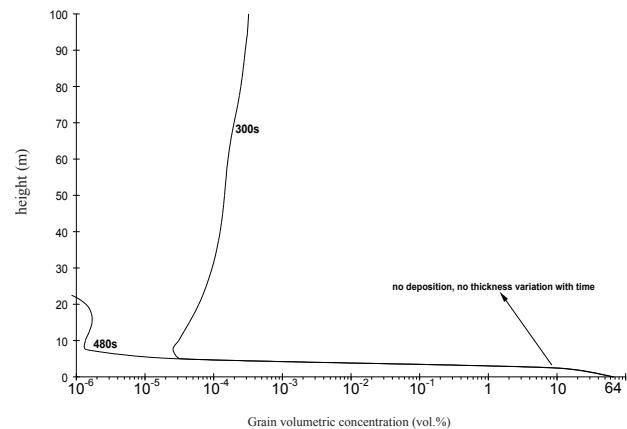


Chapter 3 - Figure 23

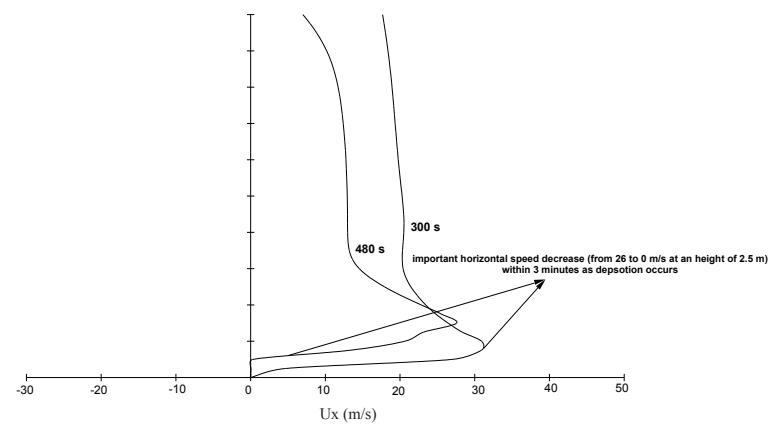
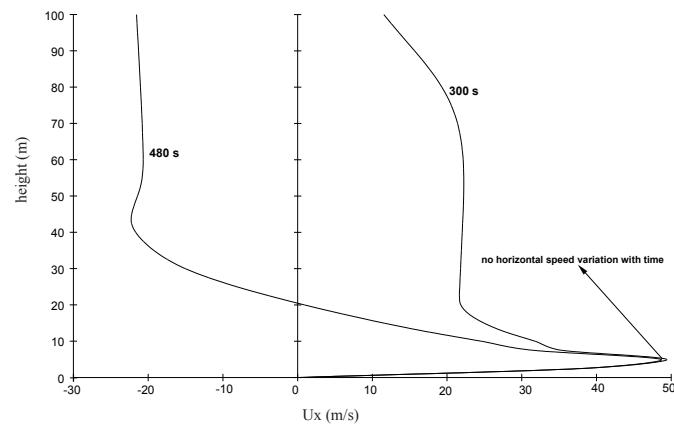
Inviscid Flow Model
PF_3

Kinetic-Collisional-Frictional Flow Model
PF_1

A. Volumetric grain concentration sampled at 5.2 km from source



B. Averaged mixture horizontal speed sampled at 5.2 km from source



Chapter 3 – Annex 1, Figure “Grid independence”

