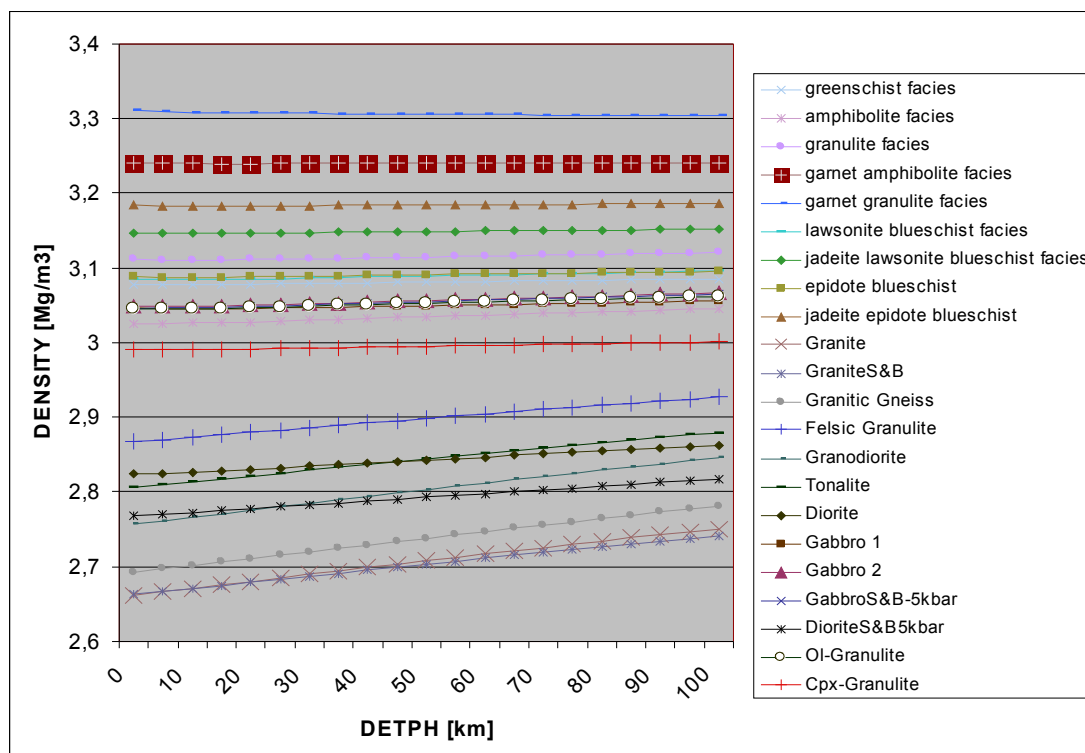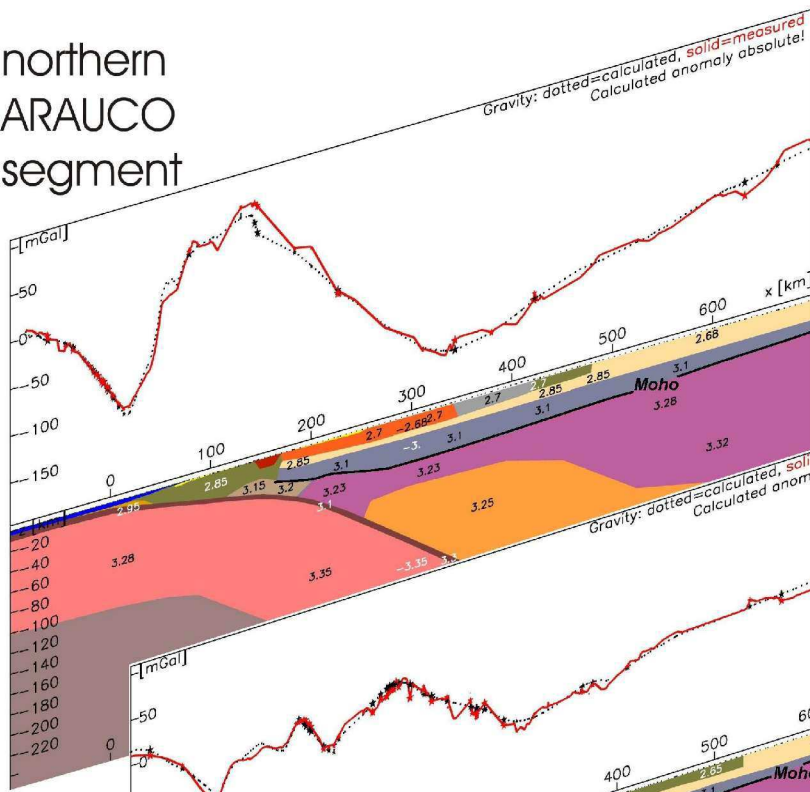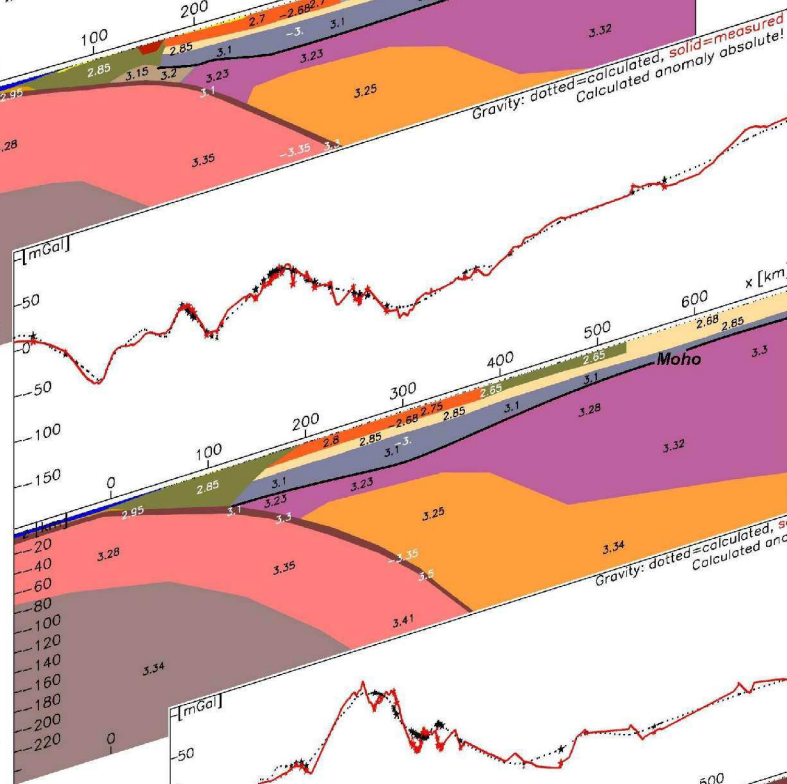# *A. ADDITIONAL FIGURES*

Figure A.1
Densities of rocks of felsic to ultramafic compositions estimated along the geotherm for the colder forearc situation (surface heat flow 55mW/m^2 and mantle heat flow of 30 mW/m^2) using the approach of Hacker et al. (2004).
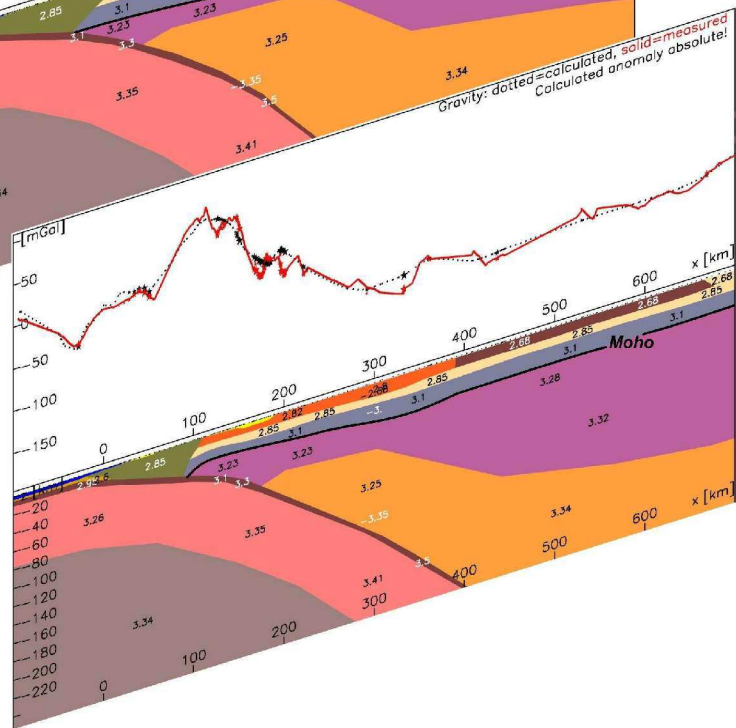
Figure A.2
Three cross-sections of the final density model representing the segments identified within the gravity field and geology. The upper part of each cross-section shows measured gravity curve (red) and calculated (black). The lower part of each cross-section shows the modelled structures (Figure 5.15).
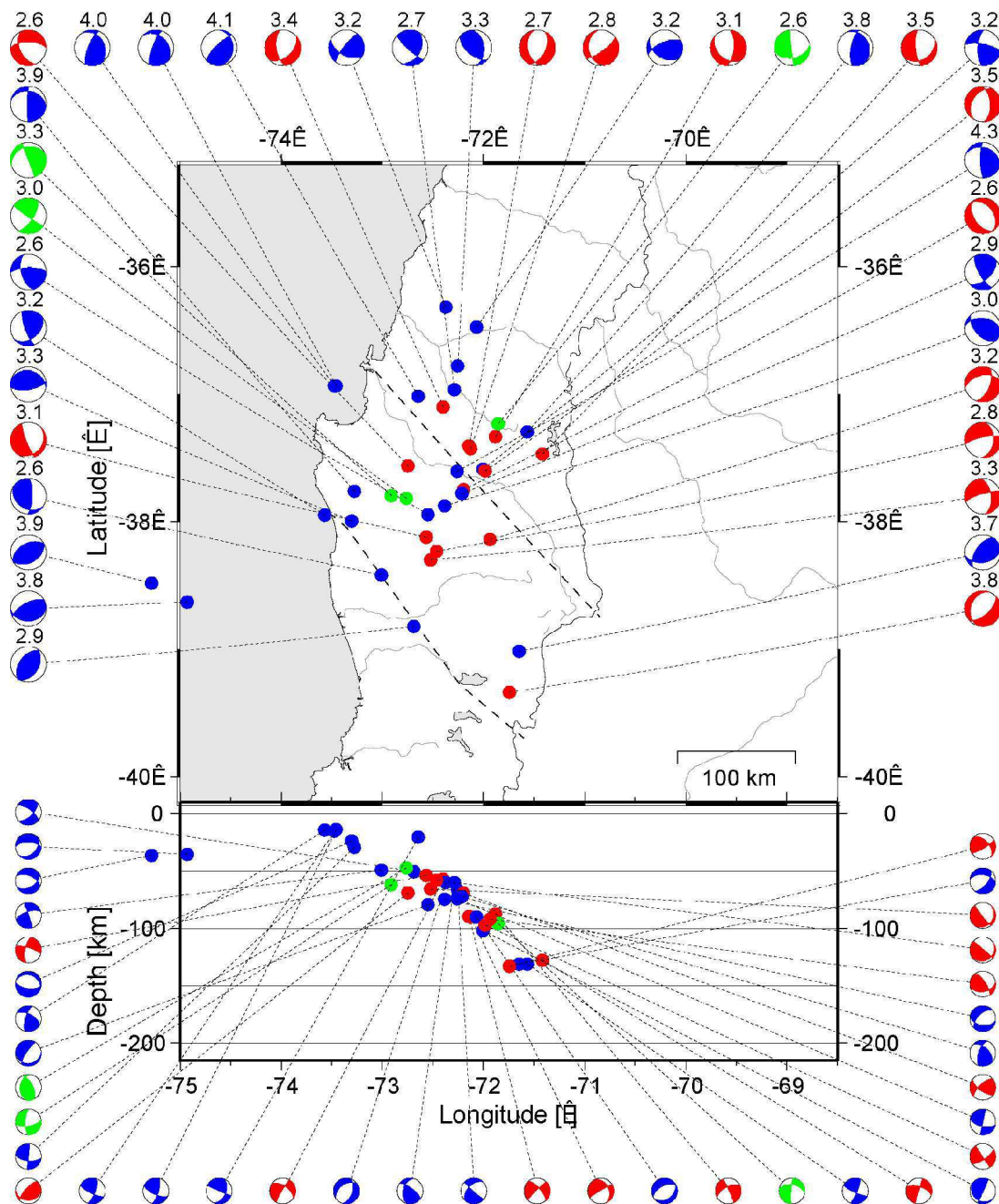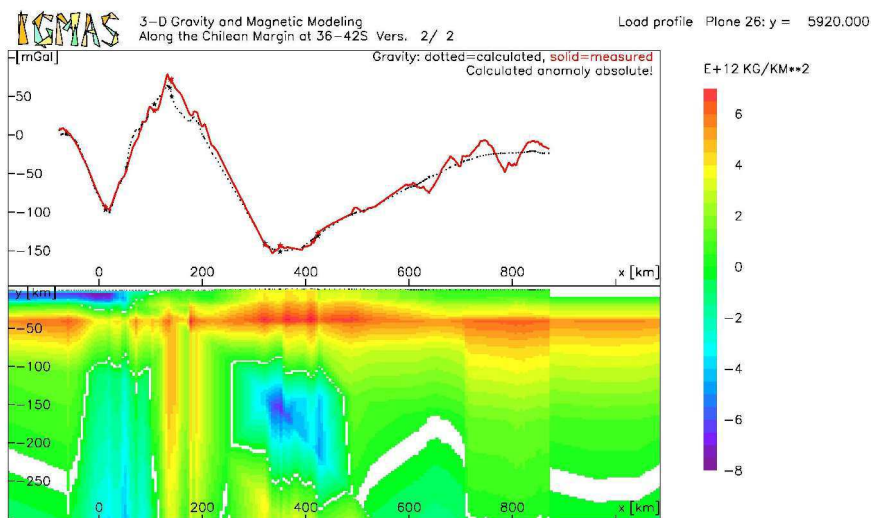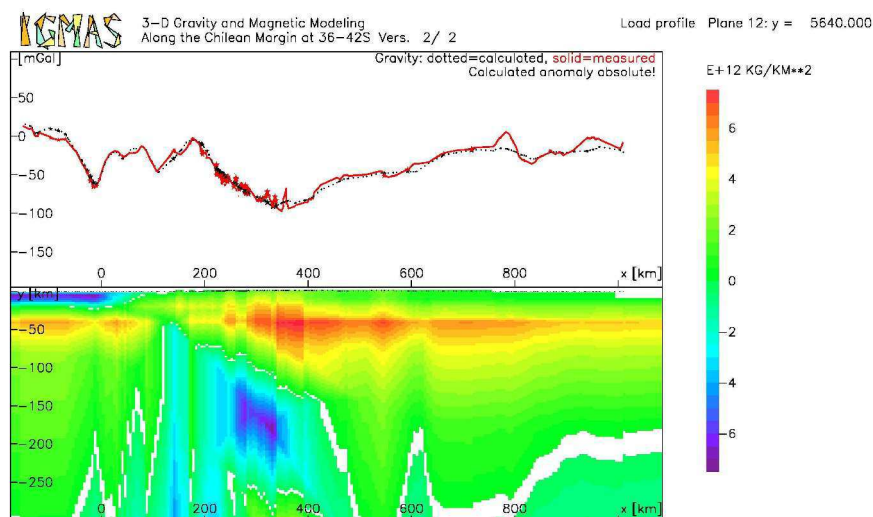
Figure A.3
The earthquakes of the ISSA 2003 catalogue with their focal mechanisms (Bruhn, 2003). The coupling zone is interpreted till the depth of 50 km. Similarly, Harvard catalogue shows mainly thrust earthquakes till the same depth.
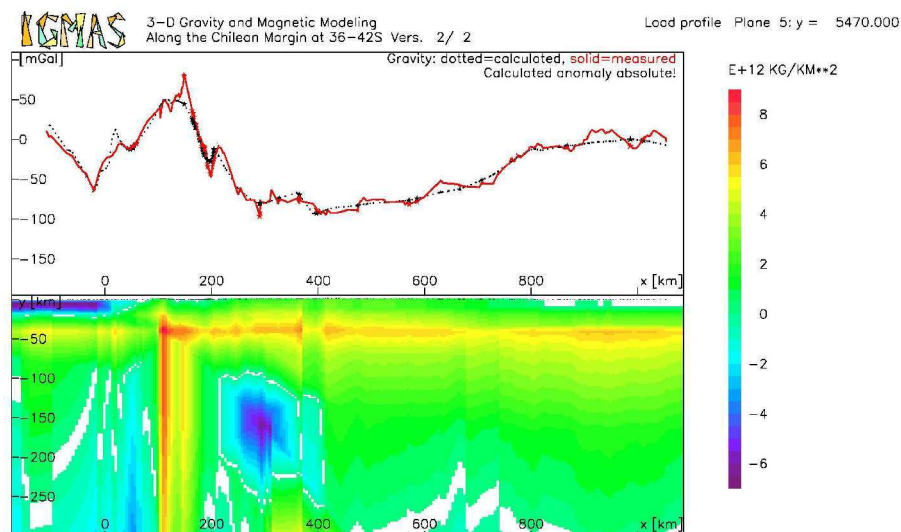
A.

B.

C.

Figure A.4

Internal loads computed by IGMAS along three profiles representing the segments of the study area. Northern segment (A) seems to have positive loads within the crust below the volcanic arc and backarc. The same is true for the middle segment (B). The loads in the forearc are obvious only in the northern segment, whereas in the middle segment the forearc loads are missing. The southern segment (C) has more loads associated with the forearc.