Minas de Almadén y Arrayanes, S. A.). This case is given in GAF, MAYASA, IMSOR, & DLR (1993) also. In Figure 1.5 there are 21×21 1×1 km^2 pixels and in Figure 1.6 there are 81×81 250×250 m^2 pixels. Therefore the degree of detail revealed is different in the two images. The order is (row-wise from top-left) Pb, Zn, Cd, Hg, Cu, Ba, Mn, Ni, Co, Cr, Sn, W, Mo, V, Sb and Ag. Figures 1.7 and 1.8 show the same data as Figure 1.5 as contour plots and as perspective plots, respectively. These 2-D semivariograms clearly indicate anisotropies and differences herein. For example, for Mn we see a clear short range anisotropy in the NNE-SSW direction and a long range anisotropy in the NW-SE direction; for Ag we see a long range anisotropy in the E-W direction. In the words of Chief Geologist Dr. Enrique Ortega, MAYASA: "This result is very interesting because it indicates the spatial behaviour of each element as characterized by its migration capability. The elements with the highest mobility or with a uniform distribution over the entire test area, are logically represented as isotropic. Contrary to this, the fixed and low mobility elements are clearly anisotropic. The directions of anisotropy are closely related to the directions of the geological features (mainly faults) revealing their presence, position and orientation. This is valuable in future explorations campaigns because it provides information on the orientation of the mineralized structures which could facilitate location of drill holes. For these reasons MAYASA recommends continued application of this technique, e.g. on soils geochemistry data."

Figures 1.9 and 1.10 show 2-D semivariograms for 2,097 stream sediments samples analyzed by INAA or EDX for the contents of 41 geochemical elements from South Greenland (the Syduran Project, data from the Geological Survey of Greenland, GGU). In Figure 1.9 there are 21×21 5×5 km^2 pixels, and in Figure 1.10 there are 31×31 2×2 km^2 pixels. Again, the degree of detail revealed is different in the two images. The order is (row-wise from top-left) Au, Ag, As, Ba, Br, Ca, Co, Cr, Cs, Cu, Fe, Ga, Hf, K, Mn, Mo, Na, Ni, Pb, Rb, Sb, Sc, Se, Sr, Nb, Ta, Th, Ti, U, W, Y, Zn, Zr, La, Ce, Nd, Sm, Eu, Tb, Yb and Lu. Figures 1.11 and 1.12 show the same data as Figure 1.9 as contour plots and as perspective plots, respectively. In this case there are no formal comments from geologists but differences in anisotropy structure similar to those of the above case from central Spain are seen. For example, according to Chief

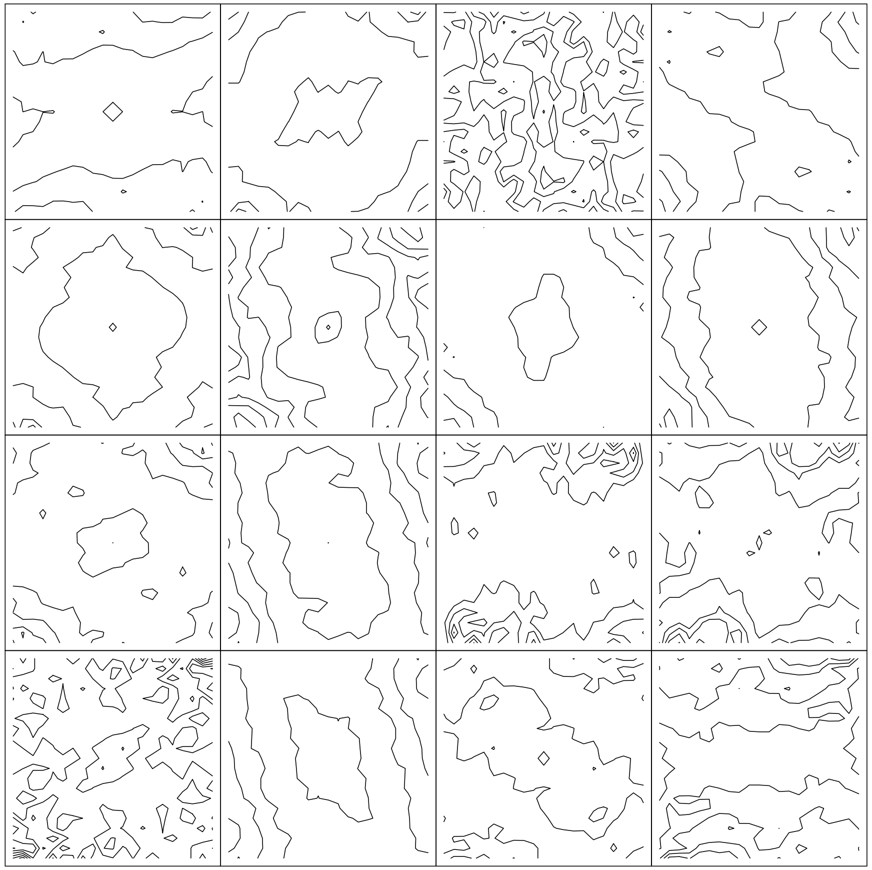

Figure 1.7: 2-D semivariograms for 16 geochemical elements in central Spain, 21×21 1 km pixels as contour plots