

SUPPLEMENTARY DATA SD3

Garnet major and trace element composition

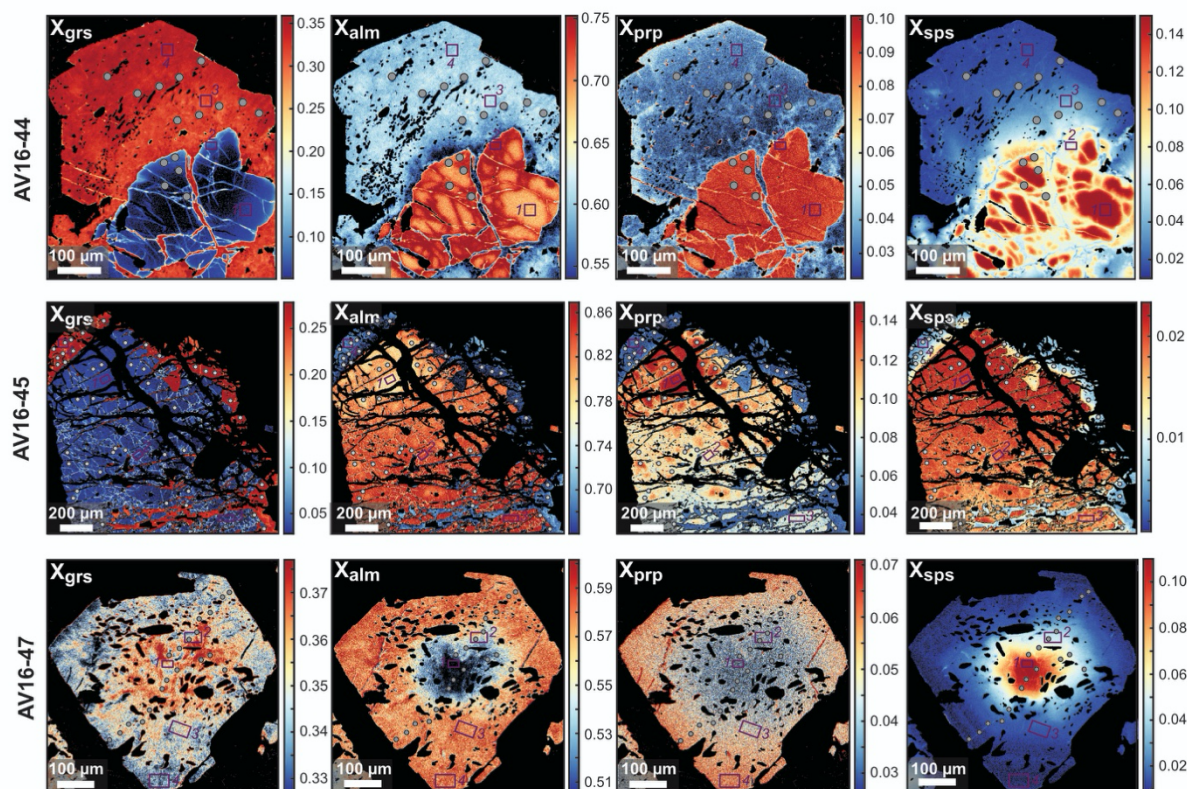


Figure SD3-1. Garnet EPMA compositional maps of the samples from Malone Valley. Grey spots cover the aberration caused during the map acquisition by the presence of SIMS spot analysis. Purple rectangles show the area used to extract representative compositions (see Tab. SD5-1, SD5-2, SD5-3).

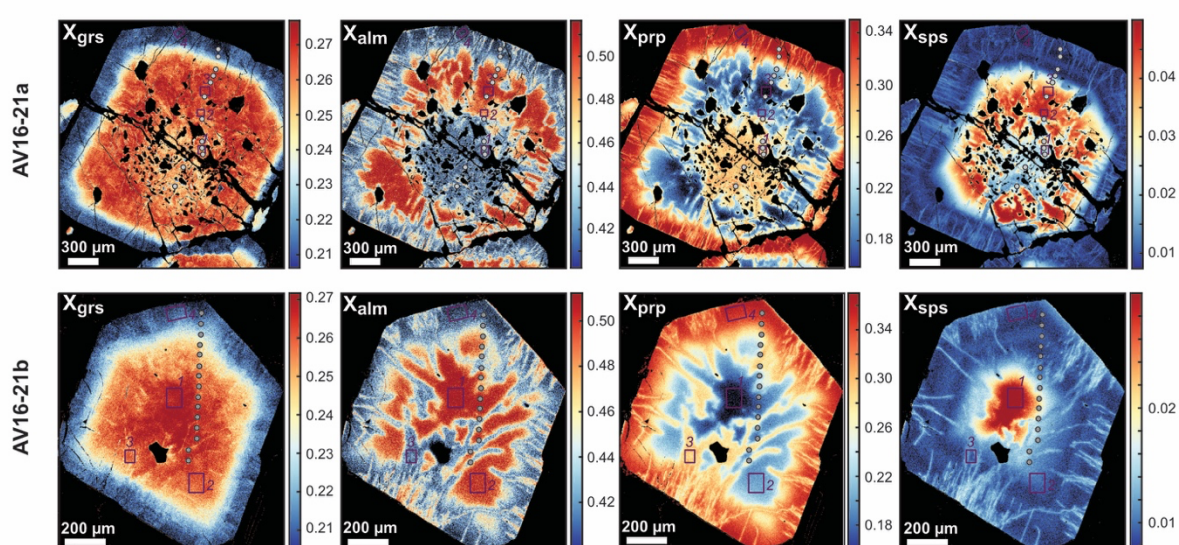


Figure SD3-2. Garnet EPMA compositional maps of the sample from the Ivanzo Complex. Grey spots cover the aberration caused during the map acquisition by the presence of SIMS spot analysis. Purple rectangles show the area used to extract representative compositions (see Tab. SD5-4, SD5-5).

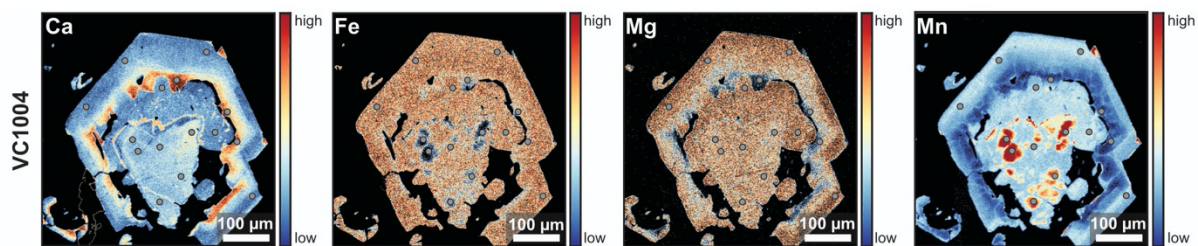


Figure SD3-3. Garnet EPMA compositional maps of the sample from Chiusella Valley.

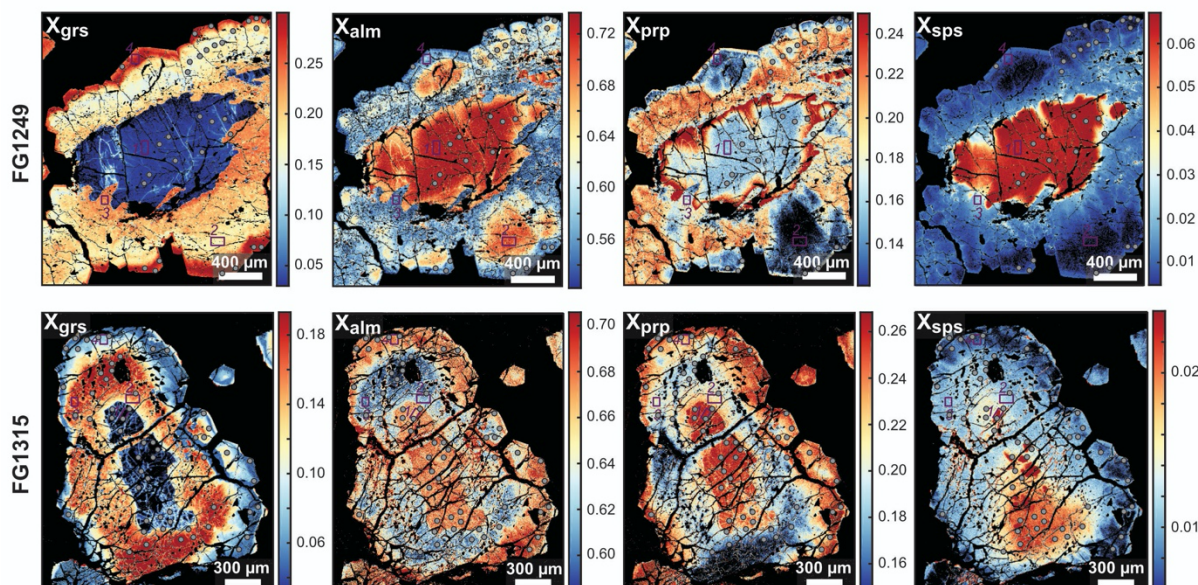


Figure SD3-4. Garnet EPMA compositional maps of the samples from Lys Valley. Purple rectangles show the area used to extract representative compositions (see Tab. SD5-7, SD5-8).

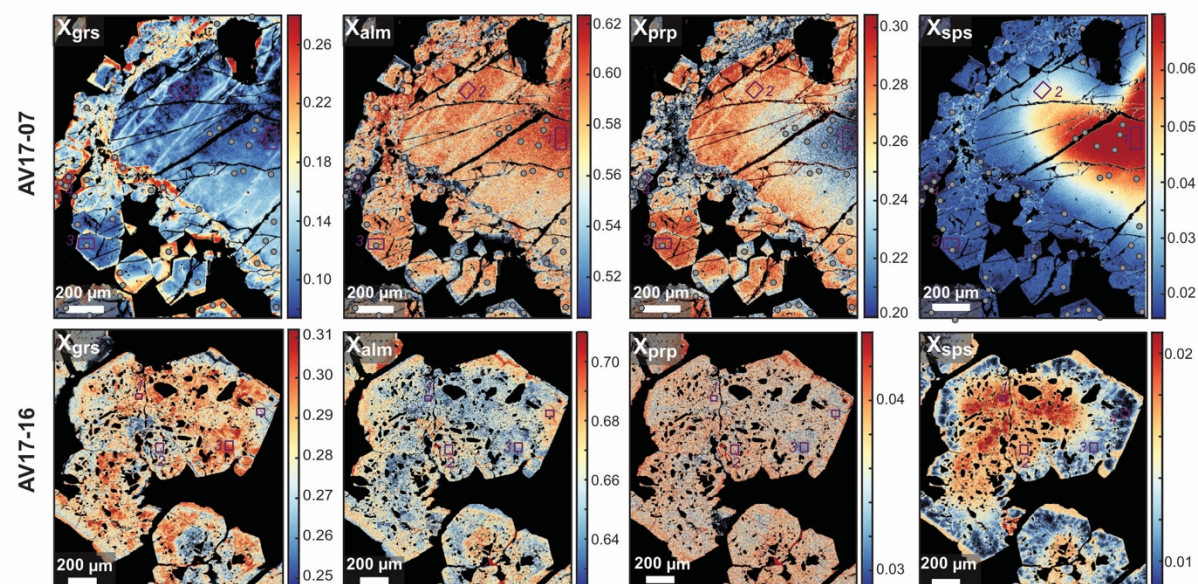
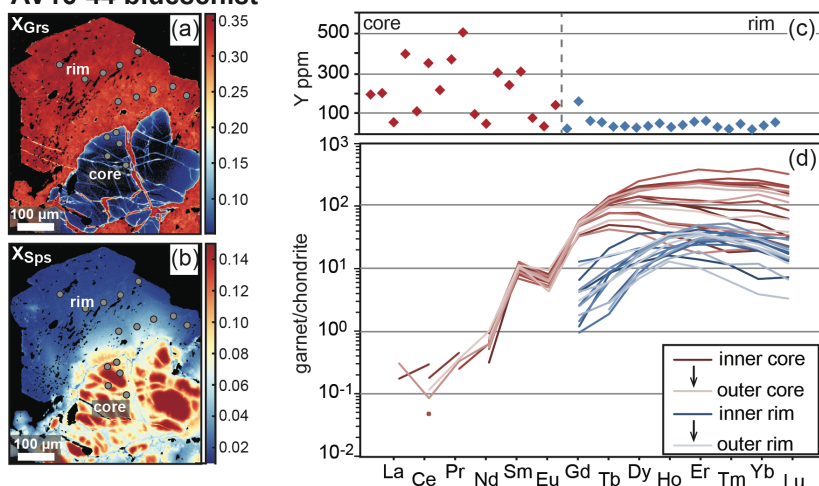


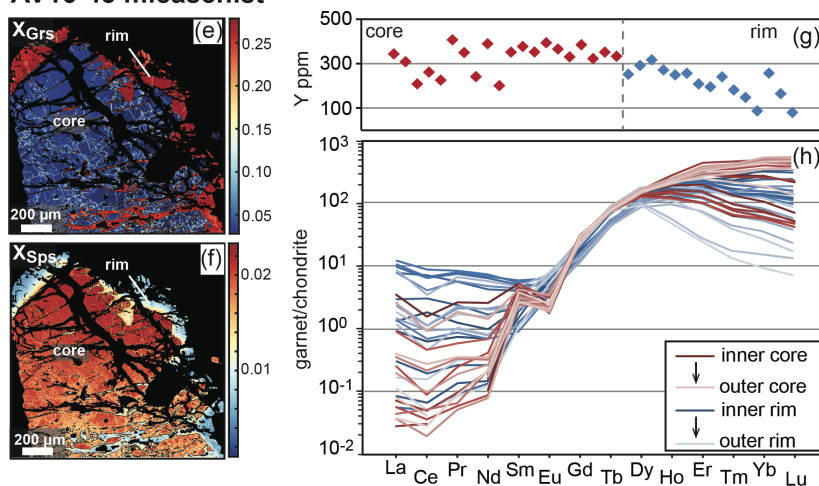
Figure SD3-5. Garnet EPMA compositional maps of the samples from Monte Mucrone. Purple rectangles show the area used to extract representative compositions (see Tab. SD5-9, SD5-10).

MALONE VALLEY

AV16-44 blueschist



AV16-45 micaschist



AV16-47 eclogite

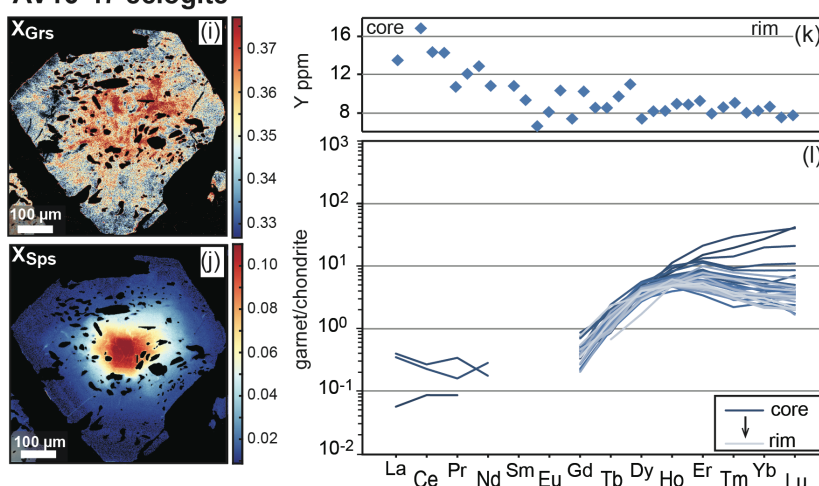


Figure SD3-6. Major and trace element distribution in garnet for samples AV16-44, AV16-45 and AV16-47 (Malone Valley). (a,b) Compositional maps of garnet from sample AV16-44 showing X_{Grs} and X_{Sps} respectively. (c) Y distribution from core to rim (ppm) in the garnet from sample AV16-44. The grey dashed line divides the pre-Alpine core from the Alpine rim. (d) REE distribution in garnet from sample AV16-44. (e,f) Compositional maps of garnet from sample AV16-45 showing X_{Grs} and X_{Sps} respectively. (g) Y distribution from core to rim (ppm) in the garnet from sample AV16-45. The grey dashed line divides the pre-Alpine core from the Alpine rim. (h) REE distribution in garnet from sample AV16-45. (i,j) Compositional maps of garnet from sample AV16-47 showing X_{Grs} and X_{Sps} respectively. (k) Y variations from core to rim (ppm) in garnet from sample AV16-47. (l) REE distribution in garnet from sample AV16-47.

IVOZIO COMPLEX

AV16-21 eclogite

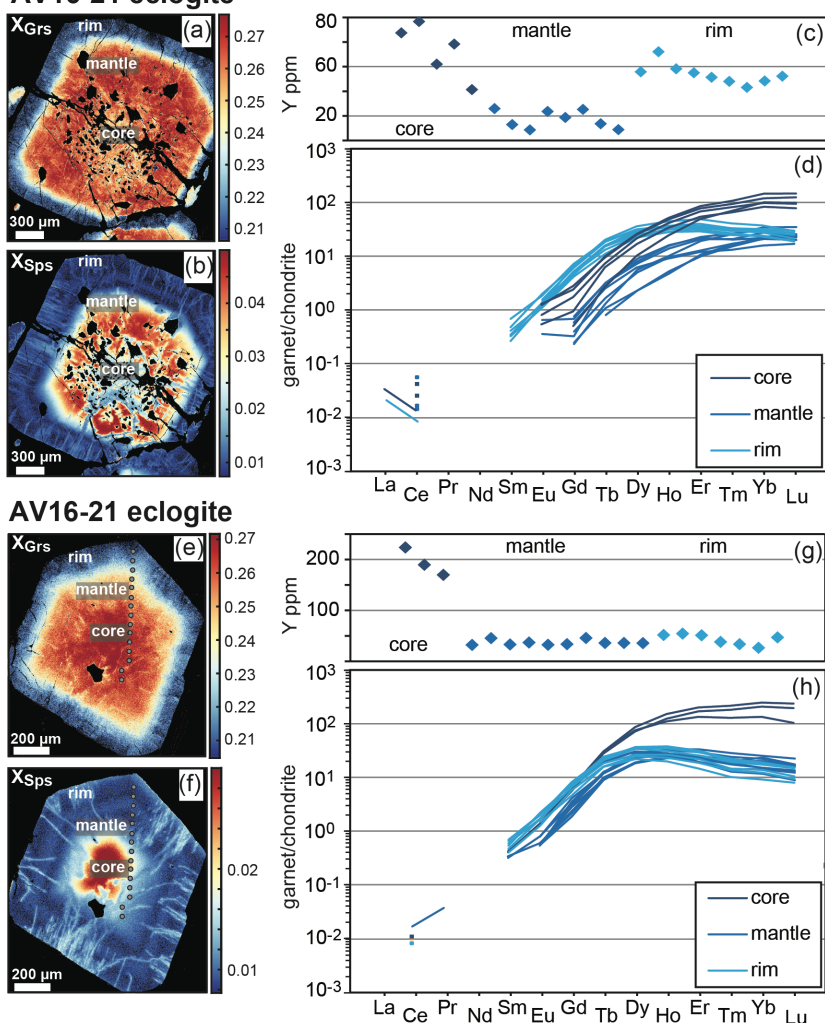


Figure SD3-7. Major and trace element distribution in garnet for sample AV16-21 (Ivozio Complex). (a,b) Compositional maps of the inclusion-rich garnet type showing X_{Grs} and X_{Sps} respectively. (c) Y distribution from core to rim (ppm) in the inclusion-rich garnet type. (d) REE distribution in the inclusion-rich garnet type. (e,f) Compositional maps of the inclusion-poor garnet type showing X_{Grs} and X_{Sps} respectively. (g) Y distribution from core to rim (ppm) in the inclusion-poor garnet type. (h) REE distribution in the inclusion-poor garnet type.

CHIUSELLA VALLEY

VC10-04 metaquartzite

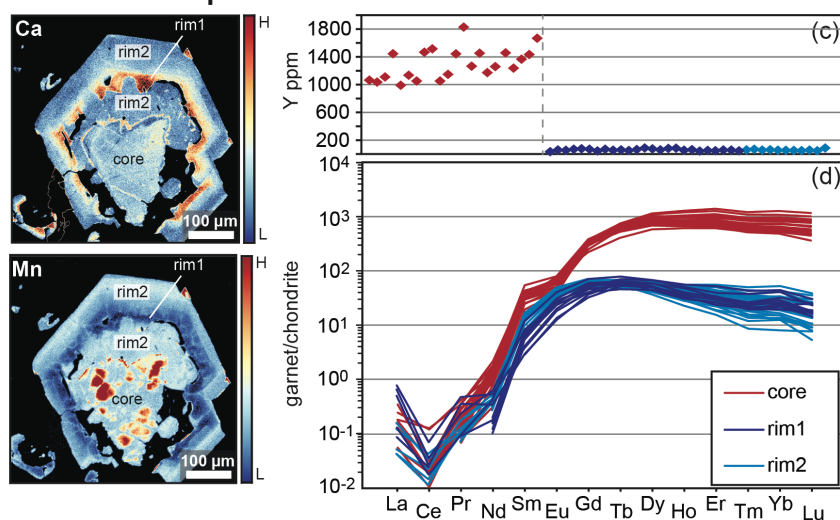


Figure SD3-8. Major and trace element distribution in garnet for metaquartzite VC10-04 (Cima di Bonze). (a,b) X-ray maps of garnet from sample VC10-04 showing the X-ray intensity of Ca and Mn respectively (no scale). (c) Y distribution from core to rim (ppm) in garnet from sample VC10-04. The grey dashed line divides the pre-Alpine core from the Alpine rim. (d) REE distribution in garnet from sample VC10-04.

LYS VALLEY

FG1249 micaschist

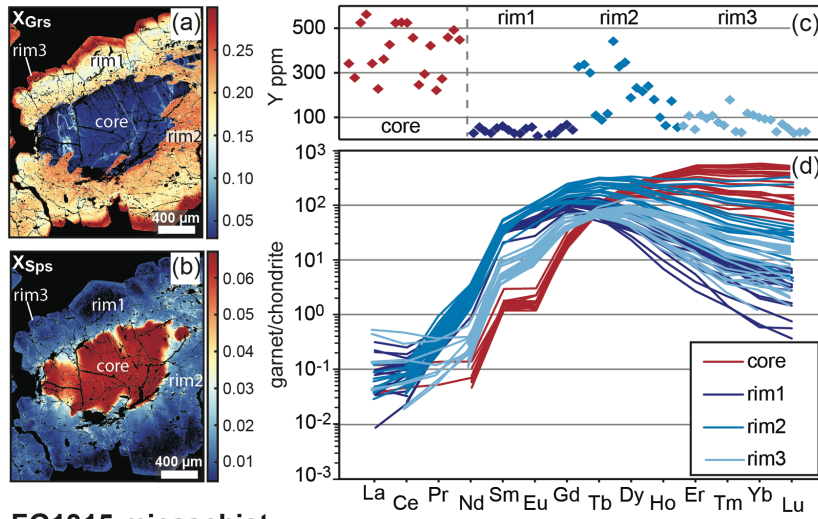
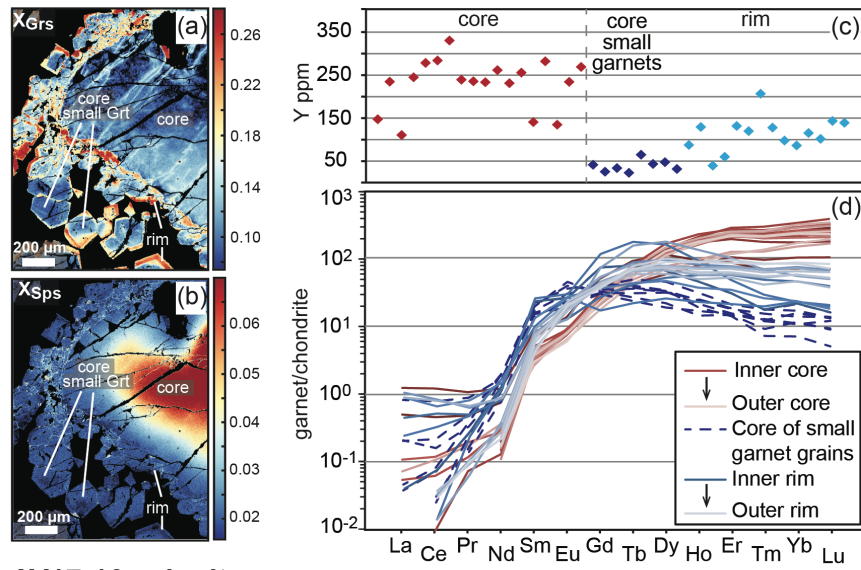


Figure SD3-9. Major and trace element distribution in garnet for micaschists FG1249 and FG1315 (Lys Valley). (a,b) Compositional maps of garnet from sample FG1249 showing X_{Grs} and X_{Sps} respectively. (c) Y variations from core to rim (ppm) in garnet from sample FG1249. The grey dashed line divides the pre-Alpine core from the Alpine rim. (d) REE distribution in garnet from sample FG1249. (e,f) Compositional maps of garnet from sample FG1315 showing X_{Grs} and X_{Sps} respectively. (g) Y distribution (ppm) from core to rim in garnet from sample FG1315. The grey dashed line divides the pre-Alpine core from the Alpine rim. (h) REE distribution in garnet from sample FG1315.

MONTE MUCRONE

AV17-07 micaschist



AV17-16 eclogite

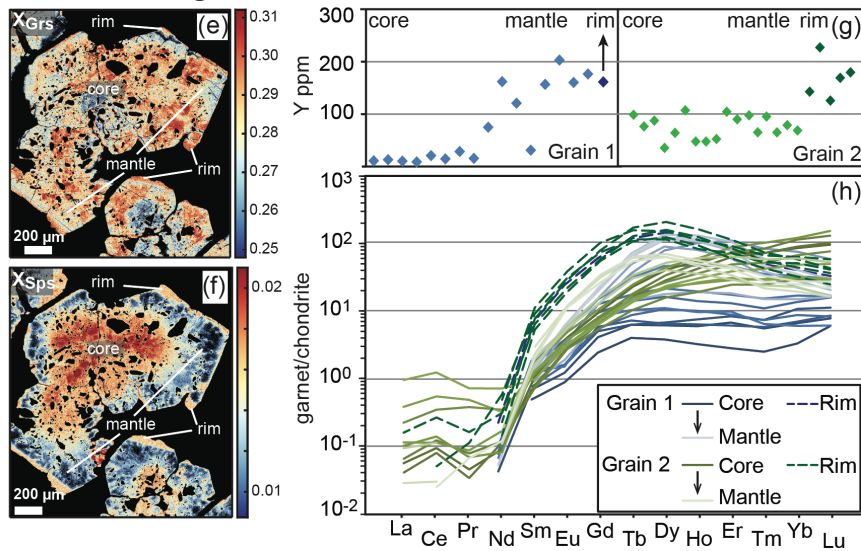


Figure SD3-10. Major and trace element distribution in garnet for samples AV17-07 and AV17-16 (Monte Mucrone). (a,b) Compositional maps of garnet from micaschist AV17-07 showing X_{Grs} and X_{Sps} respectively. (c) Y variations from core to rim (ppm) in garnet from sample AV17-07. The grey dashed line divides the pre-Alpine core from the Alpine rim. (d) REE distribution in garnet from sample AV17-07. (e,f) Compositional maps of garnet in garnet from sample AV17-16 showing X_{Grs} and X_{Sps} respectively. (g) Y distribution from core to rim (ppm) in garnet from sample AV17-16. (h) REE distribution in garnet from sample AV17-16.