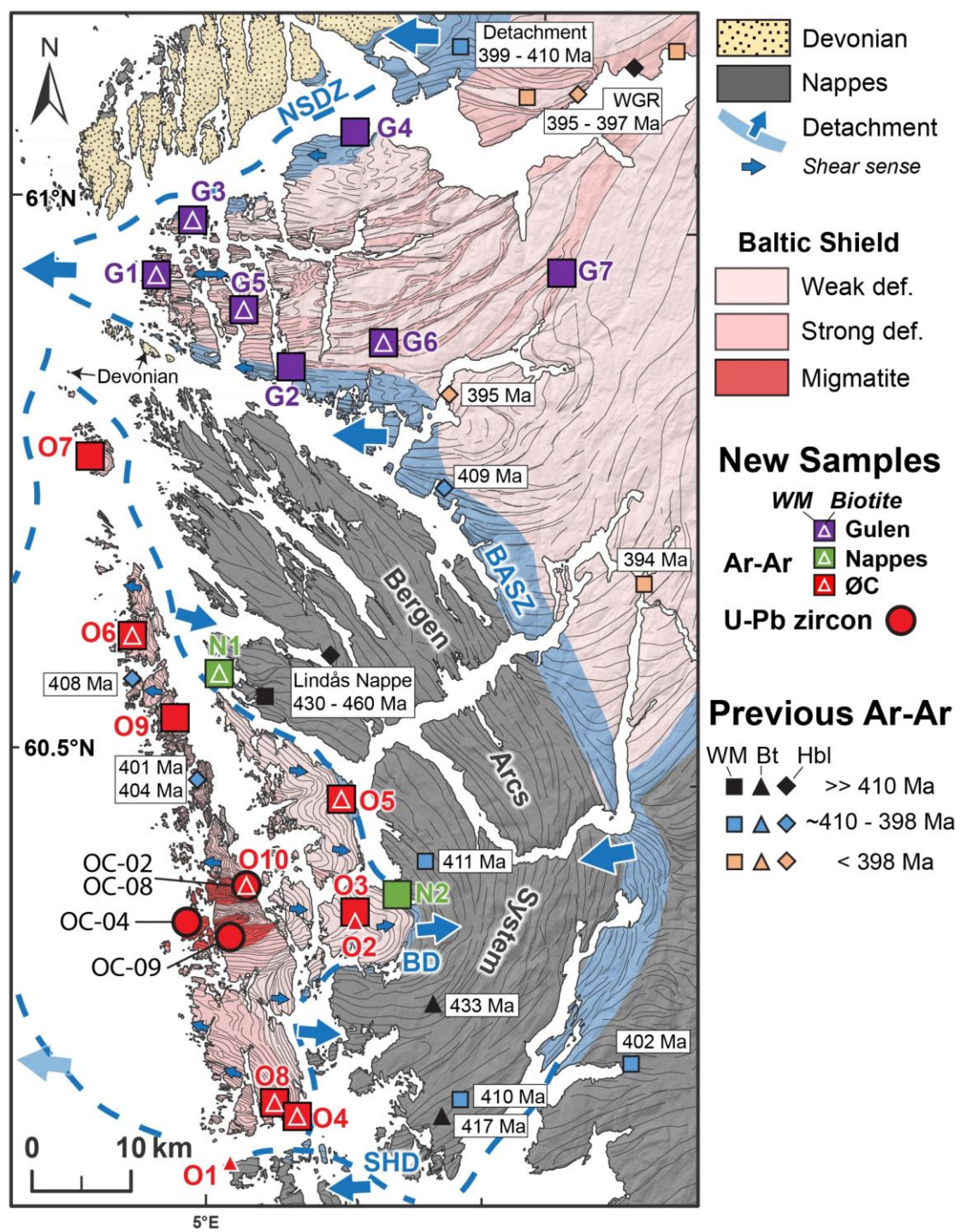


ES4 - Geochronology Sample Documentation



Ar-Ar									
Sample	WM age	±2σ	Bt age	±2σ	Lithology	Unit	Kinematics	Lat.	Long.
Gulen									
G1	424.4	6.9	418.0	3.5	Mylonitic gneiss	Detachment	Top-W	60.9339	4.8024
G2	410.4	1.1			Garnet-mica schist	Detachment	Top-W	60.8621	5.0697
G3	404.9	4.0	400.4	3.0	Micaceous gneiss	Transition	Sinistral	60.9861	4.8635
G4	402.0	1.2			Mylonitic quartzite	Detachment	Top-W	61.0789	5.1622
G5	401.9	2.3	405.8	2.2	Garnet-mica schist	Core	Coaxial	60.9101	4.9629
G6	400.5	3.0	418.4	2.1	Garnetiferous mylonitite	Transition	Top-W	60.8865	5.2321
G7	393.4	1.7			Micaceous gneiss	Outside MCC	Coaxial	60.9608	5.5559
Nappes									
N1	431.6	2.0	457.3	2.1	Phyllonitic amphibolite	Detachment	Top-E	60.5791	4.9689
N2	408.4	2.5			Garnet-mica schist	Detachment	Top-E	60.3876	5.3173
Øygarden Complex									
O1			410.3	3.2	Mylonitic gneiss	Detachment	Top-W	60.1355	5.0411
O2			412.2	2.2	Chl-bt phyllonite	Upper	Top-E	60.3619	5.2388
O3	404.7	1.8			Ms-qz phyllonite	Upper	Top-E	60.3720	5.2409
O4	399.8	2.1	402.8	3.2	Phyllonitic gneiss	Upper	Top-E	60.1847	5.1524
O5	397.5	2.8	399.4	4.5	Garnet-mica schist	Detachment	Top-E	60.4714	5.2006
O6	403.1	1.5	410.5	2.4	Mylonitic quartzite	Middle	Top-W	60.6088	4.8009
O7	400.6	4.8			Garnet-mica schist	Middle	Top-NW	60.7693	4.6990
O8	400.5	2.4	401.9	2.5	Phyllonitic gneiss	Middle	Top-W	60.1914	5.1117
O9	399.5	2.2			Garnet-mica schist	Middle	Top-W	60.5349	4.8904
O10			403.8	1.6	Metatextite melanosome	Lower	Top-W	60.3876	5.0397
U-Pb zircon									
Sample	Caled. Age	±2σ	Svec. Age	±2σ	Lithology	Unit	Comment	Lat.	Long.
OC-02	404.7	3.4	1001	13	Granitic metatextite	Lower	Hbl leucos.	60.3876	5.0397
OC-04			1001	17	Granodioritic metatextite	Lower	Undated rims	60.3550	4.9250
OC-08	404.8	5.2	1001	6	Granitic metatextite	Lower	High U	60.3933	5.0175
OC-09	401	14	1230	8	Migmatitic paragneiss	Lower	Rec. Pb loss	60.3338	5.0062

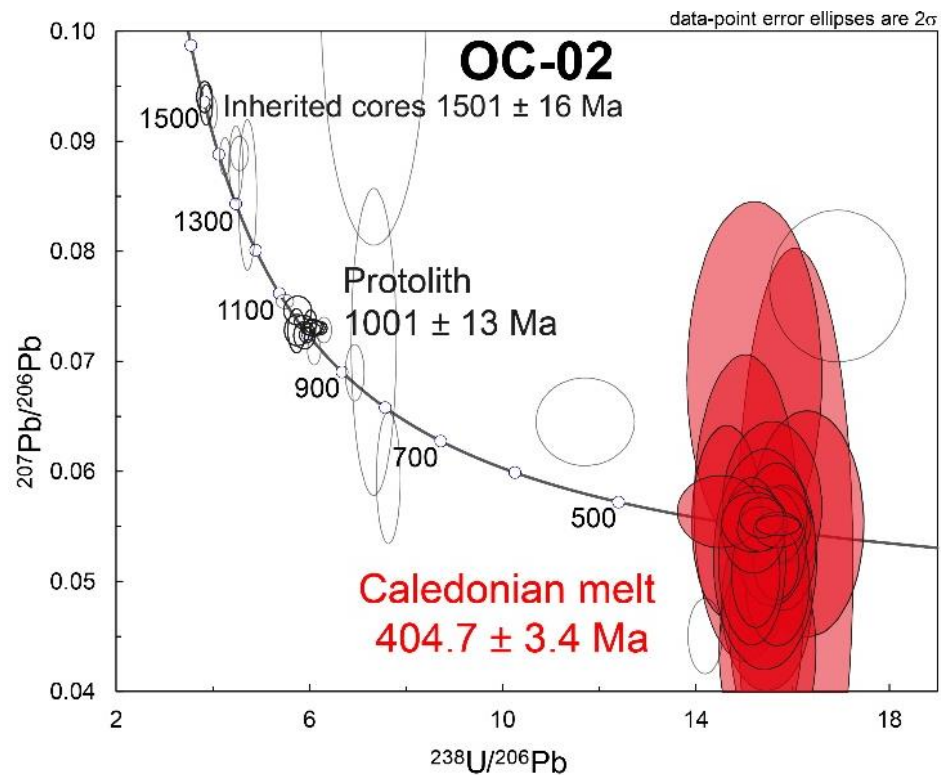
U-Pb Zircon Migmatite Samples (Øygarden Complex)

OC-02

Hbl

1 cm

10 cm



Sample ID

$^{206}\text{Pb}/^{238}\text{U}$ ages [Ma]

Spot size ~10 μm diameter

n5833

n6038

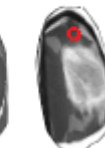
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1243 1304

19 25
1490 1500

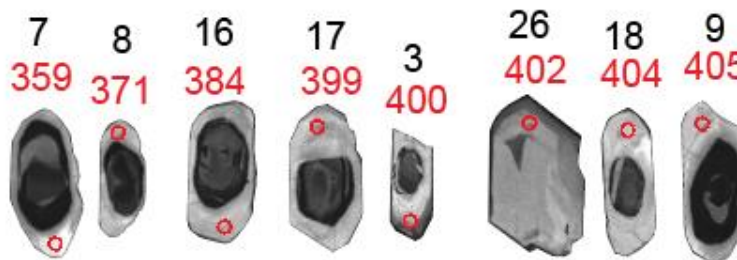


2
1006

8 7 22
990 1013 1036

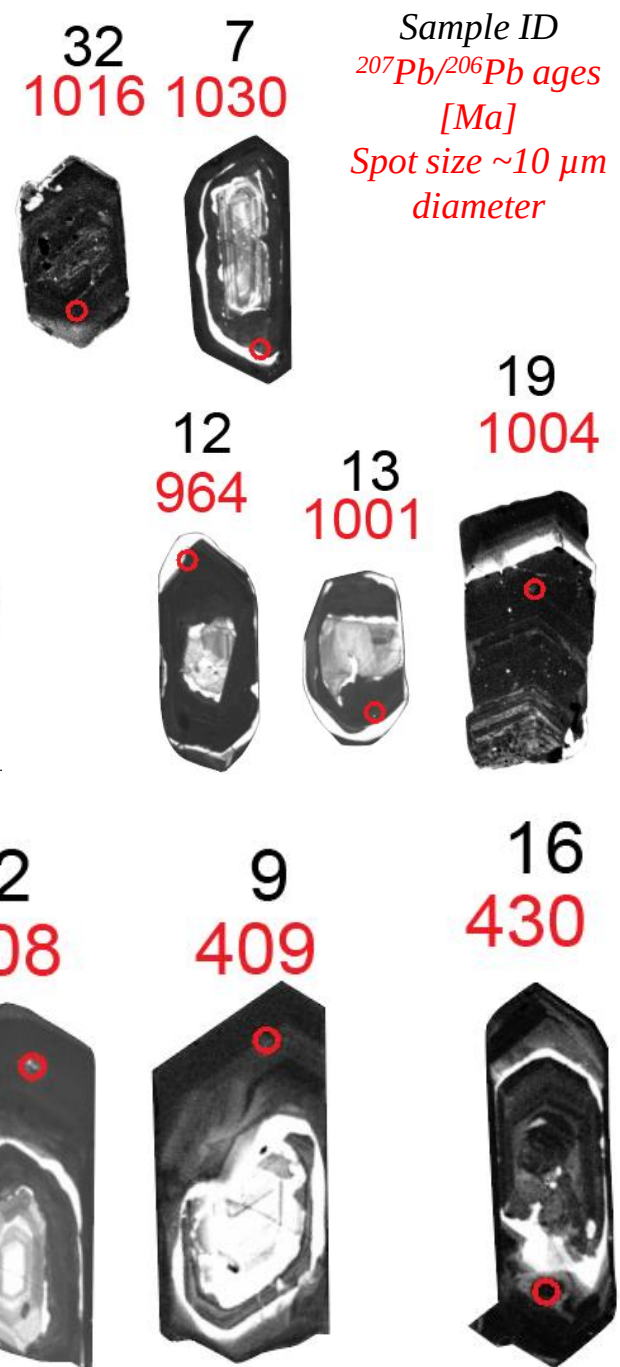
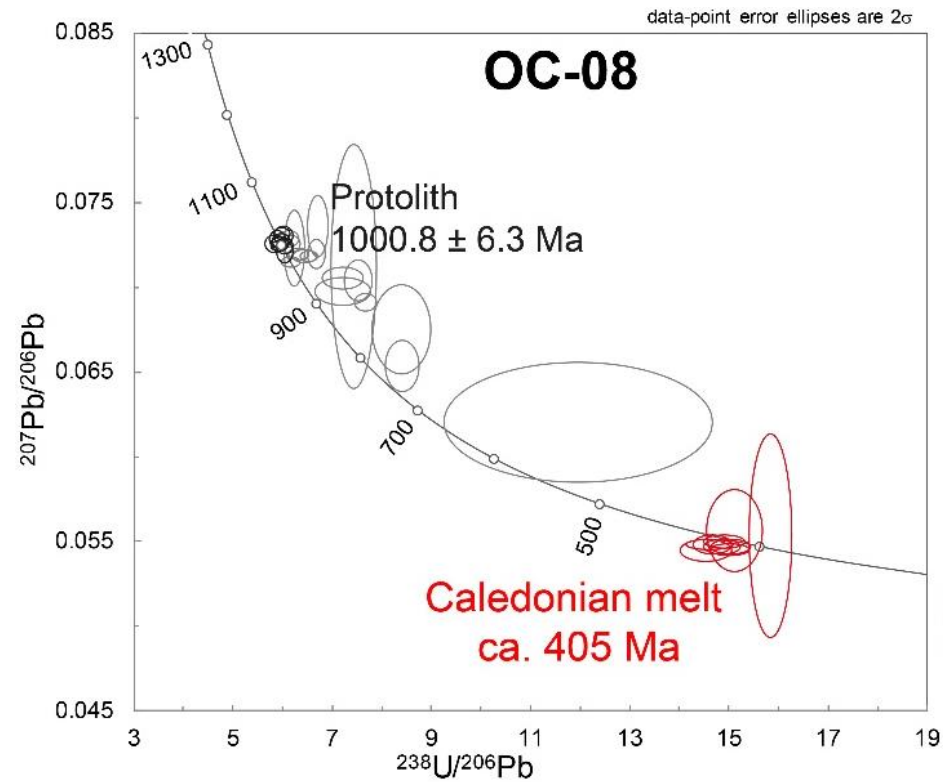


n5833

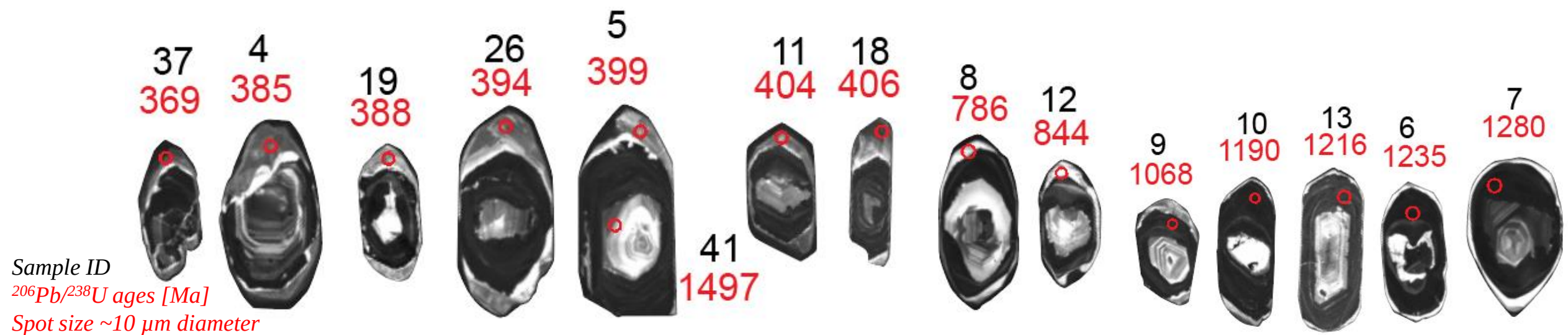
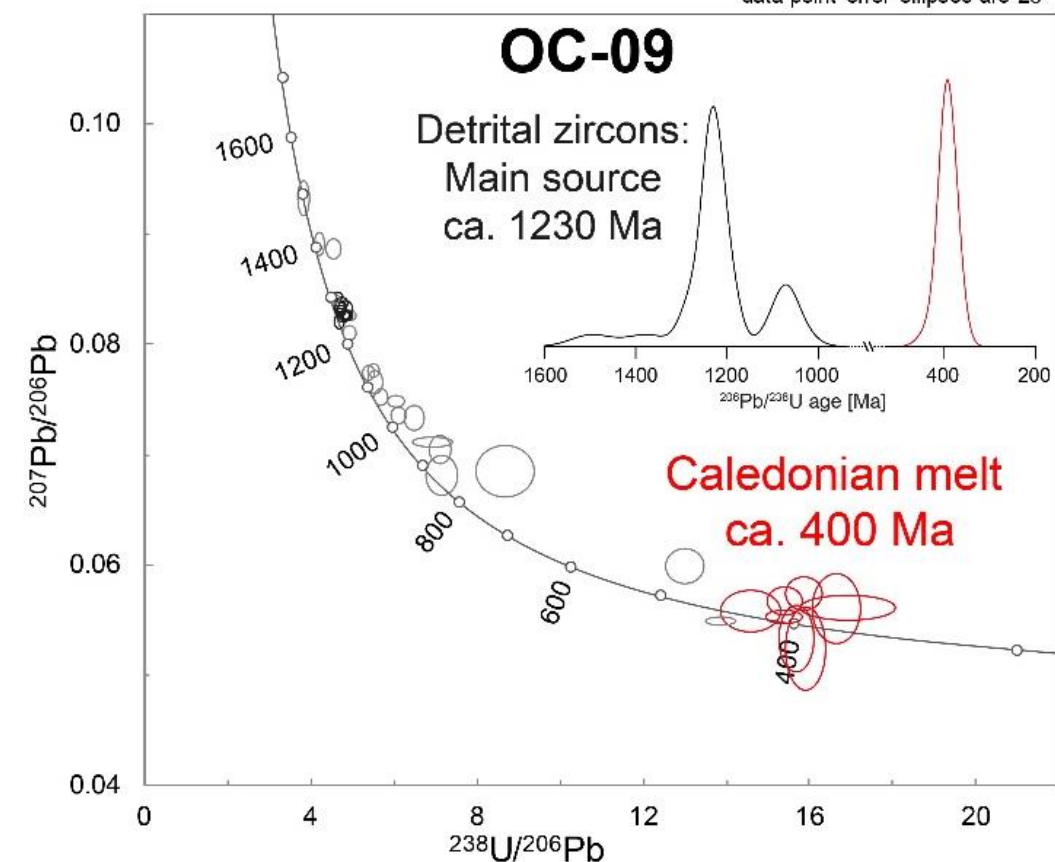


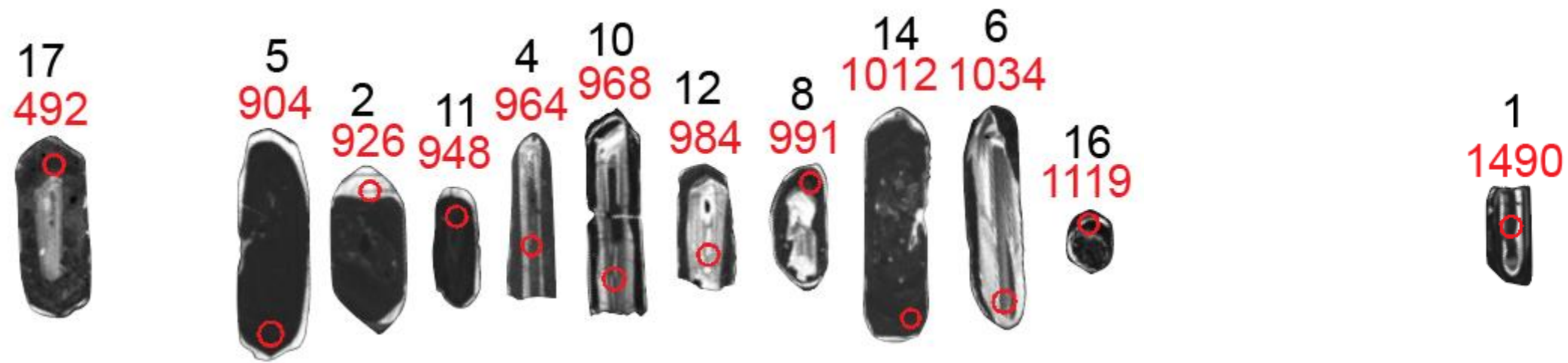
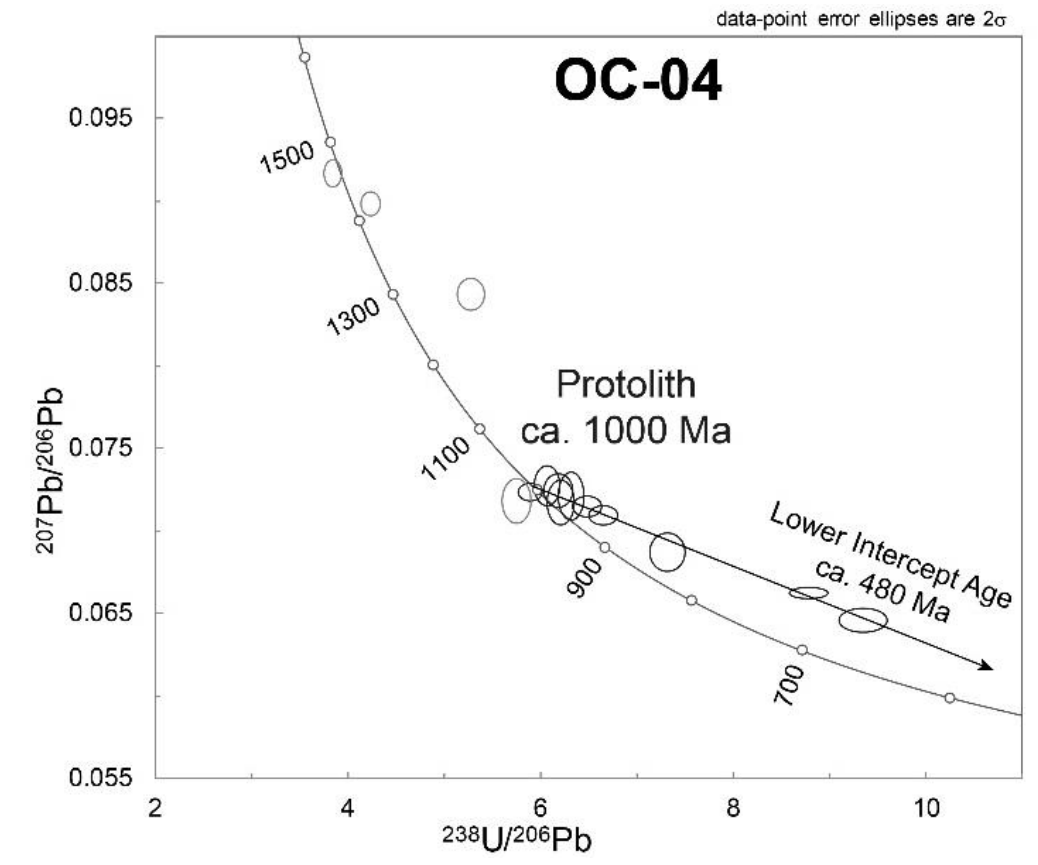
n6038





OC-09

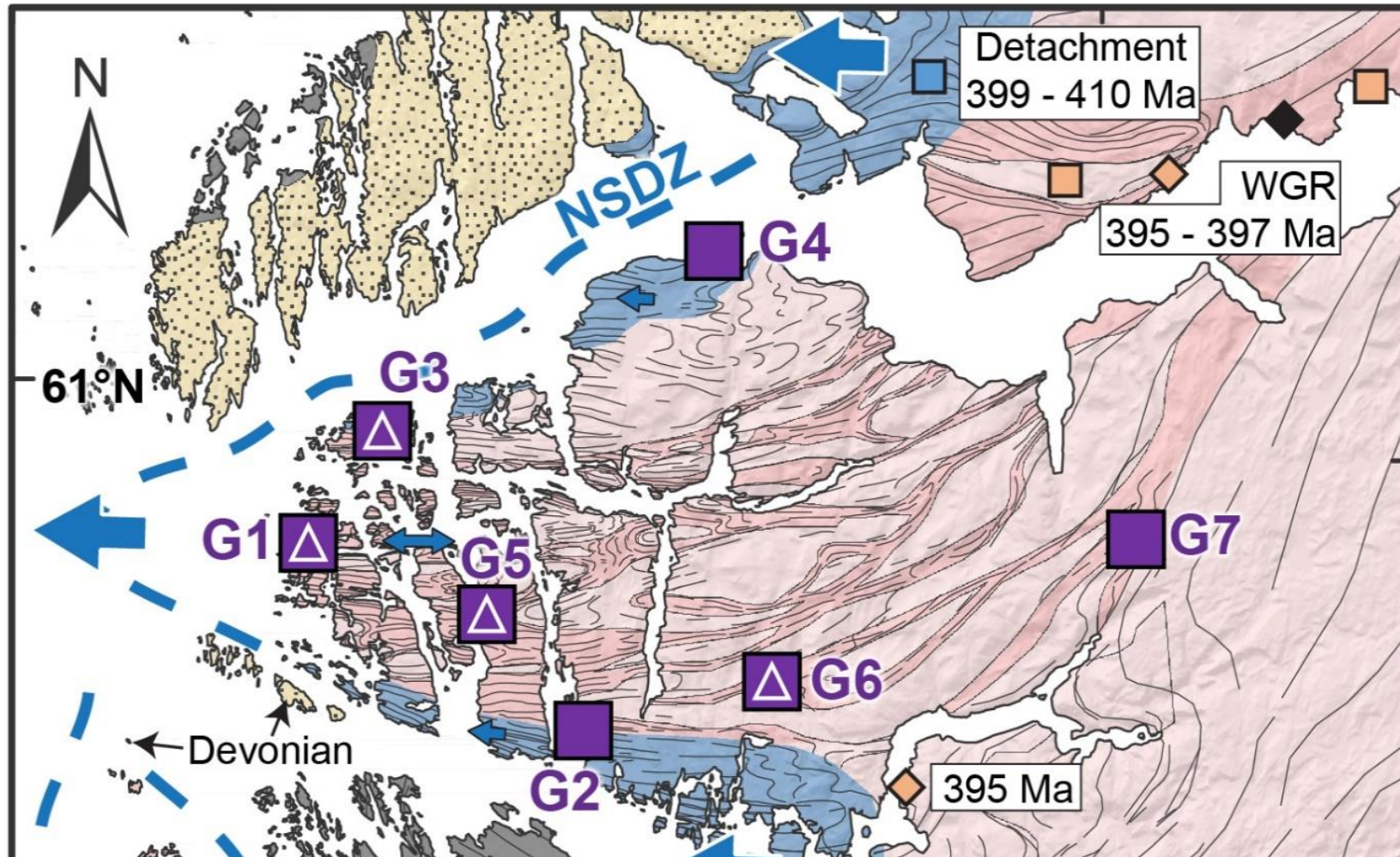




Sample ID
 $^{206}\text{Pb}/^{238}\text{U}$ ages [Ma]
 Spot size $\sim 10\ \mu\text{m}$ diameter

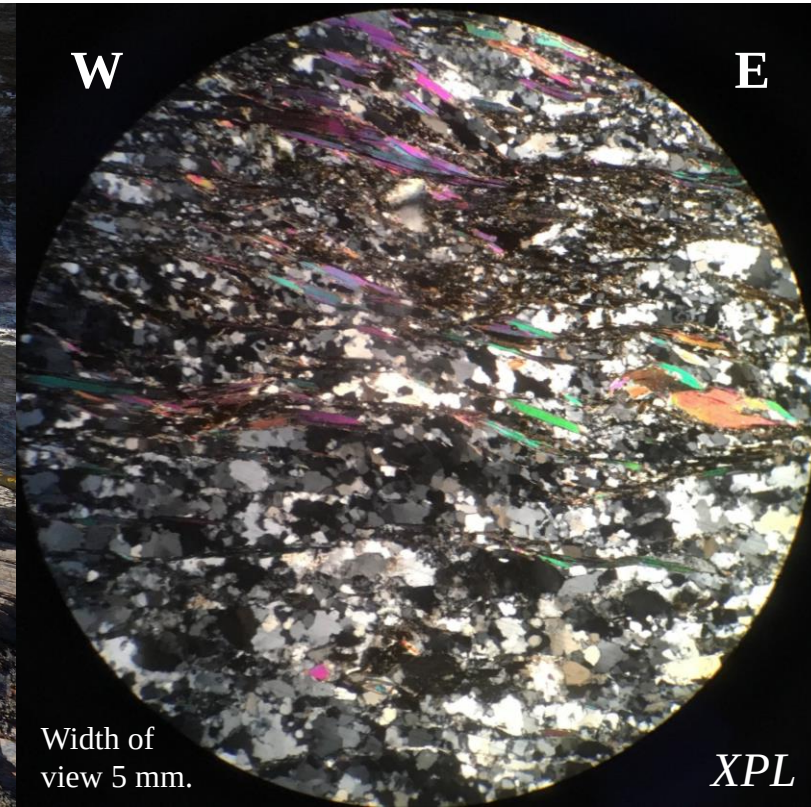
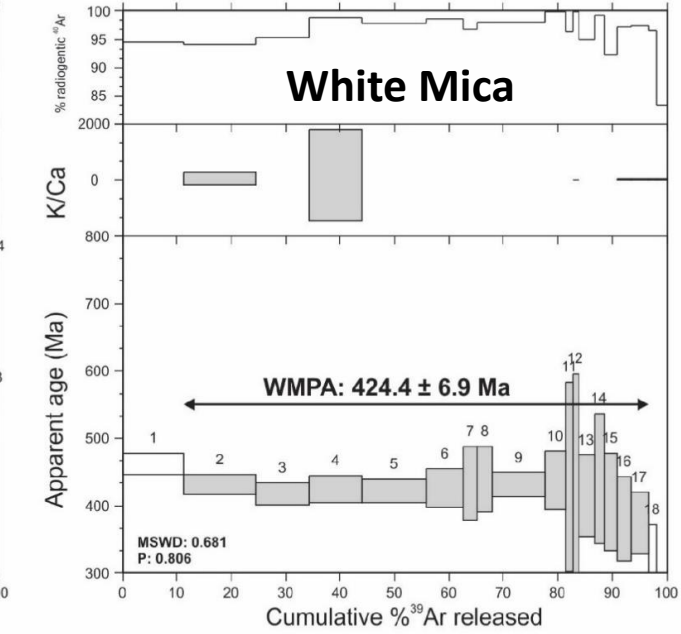
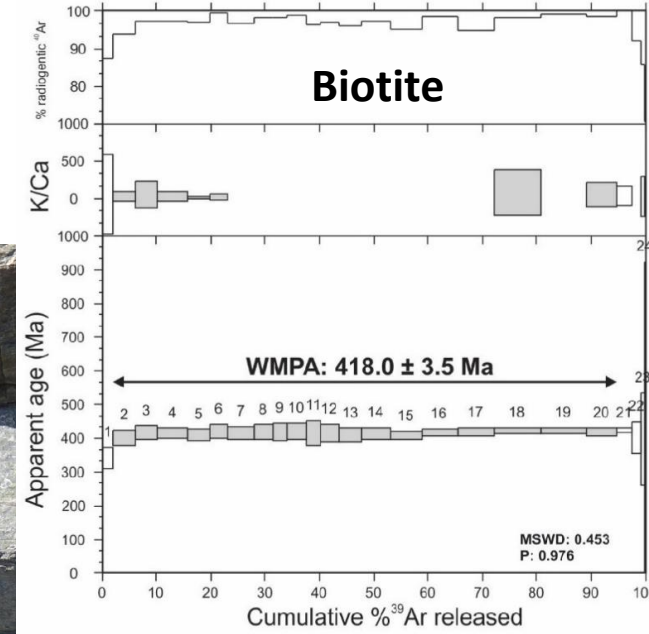
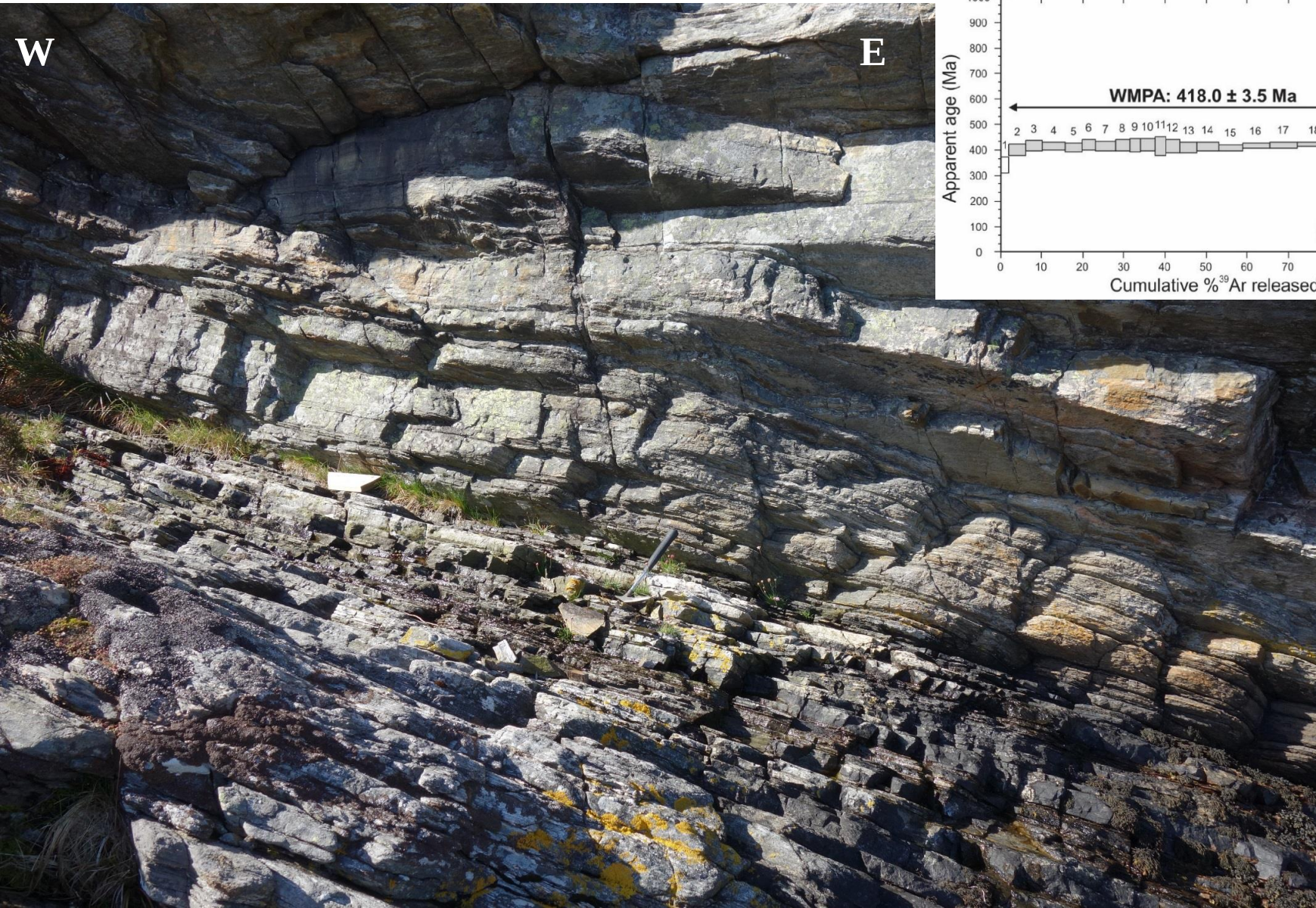
Ar-Ar Mica Samples

Gulen MCC



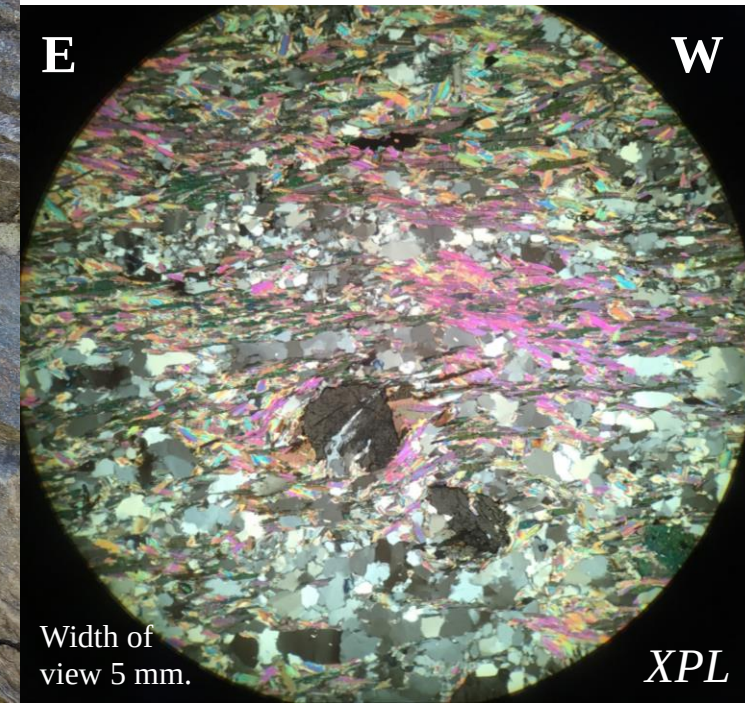
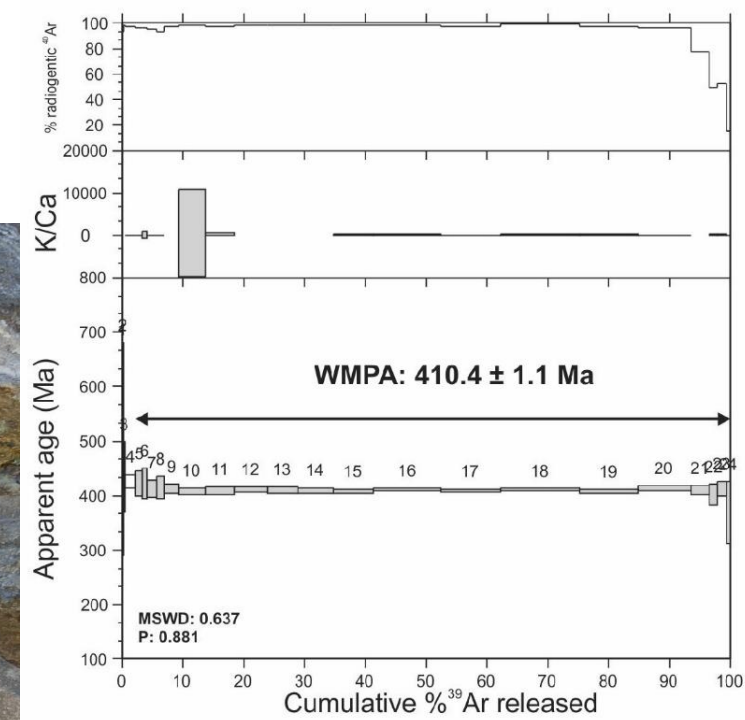
G1

Detachment domain



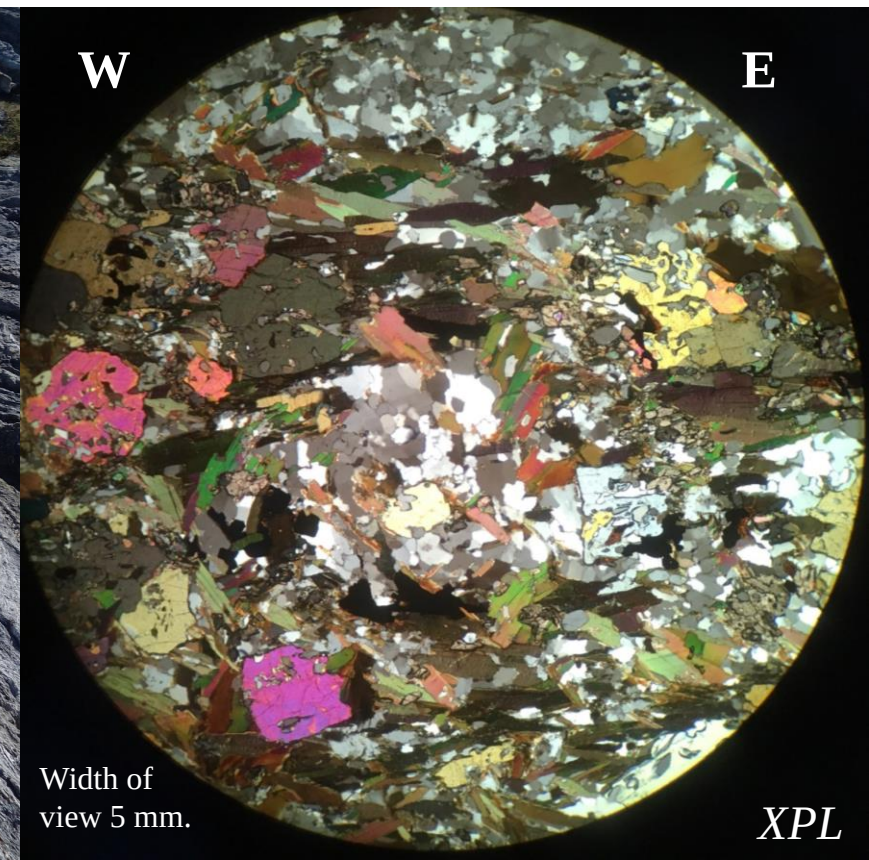
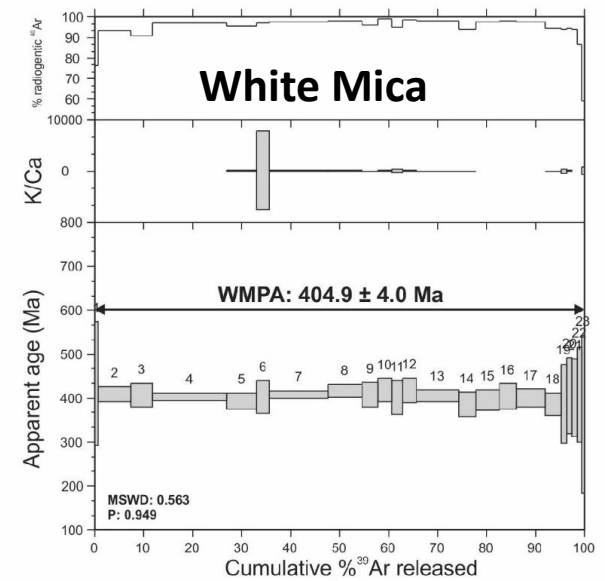
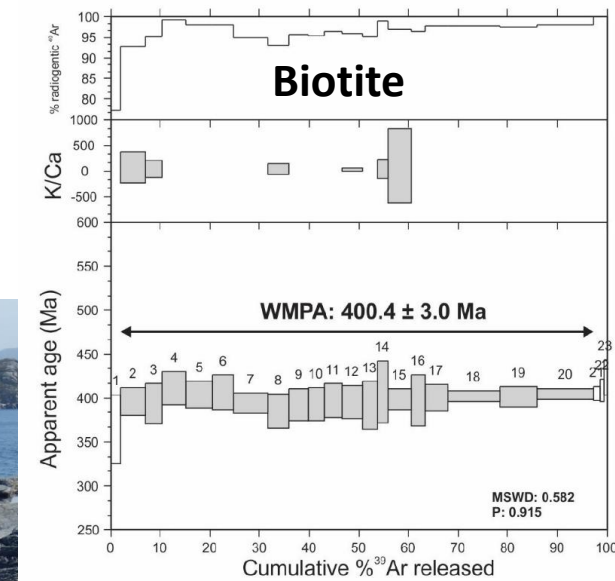
G2

Detachment domain



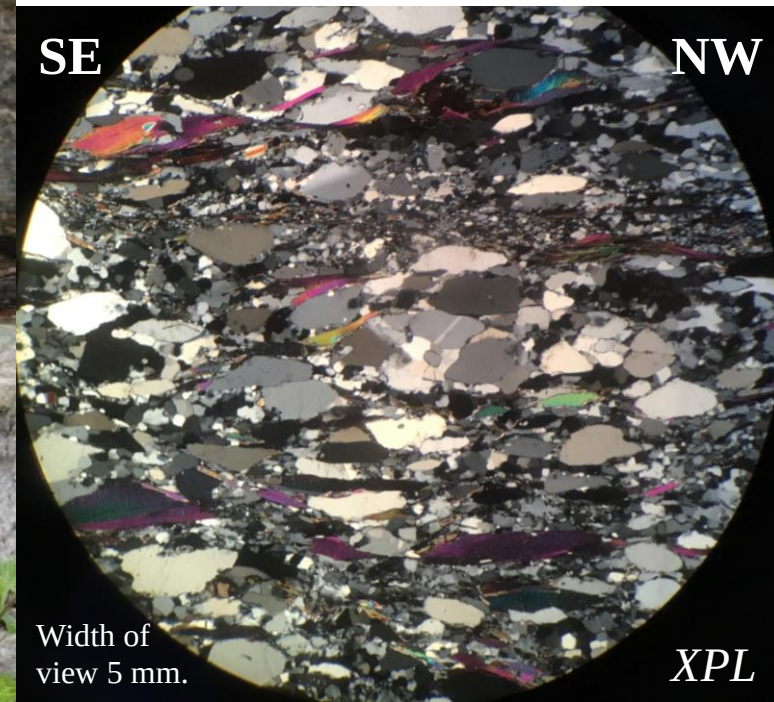
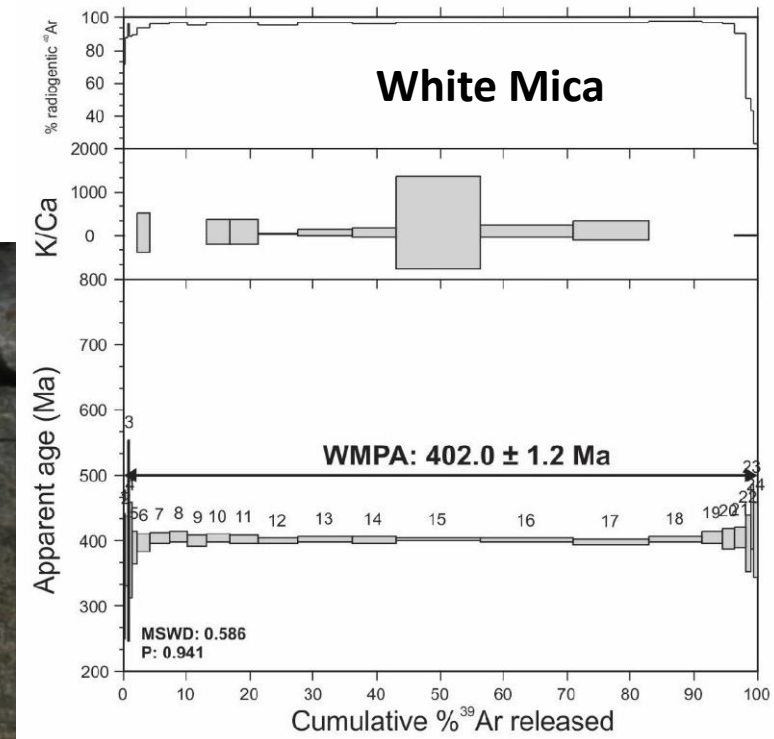
G3

Transition domain



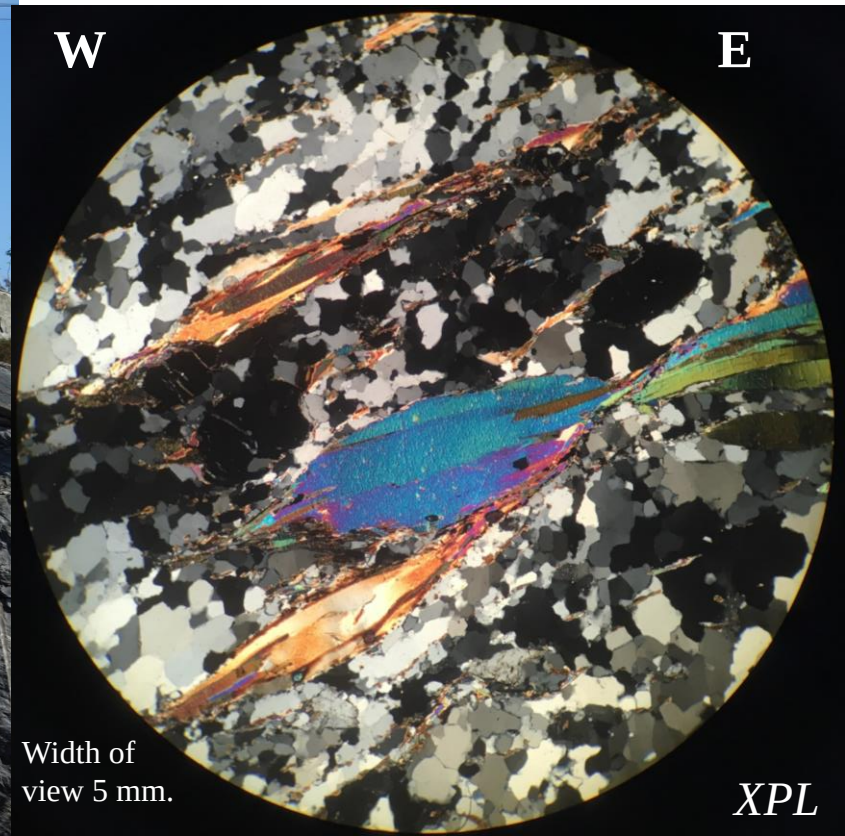
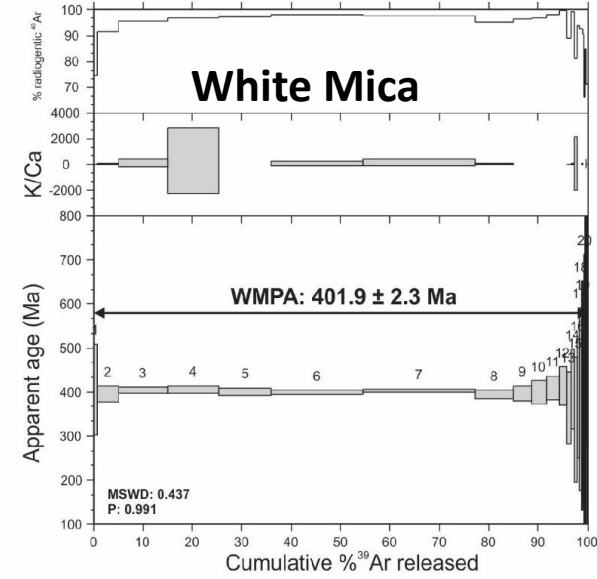
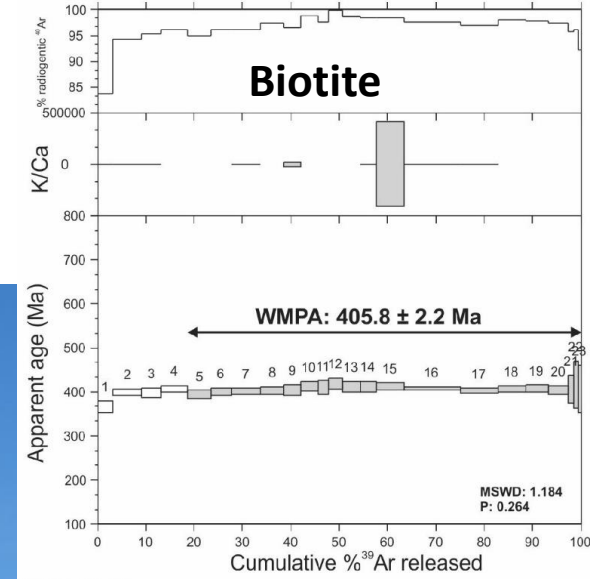
G4

Detachment domain



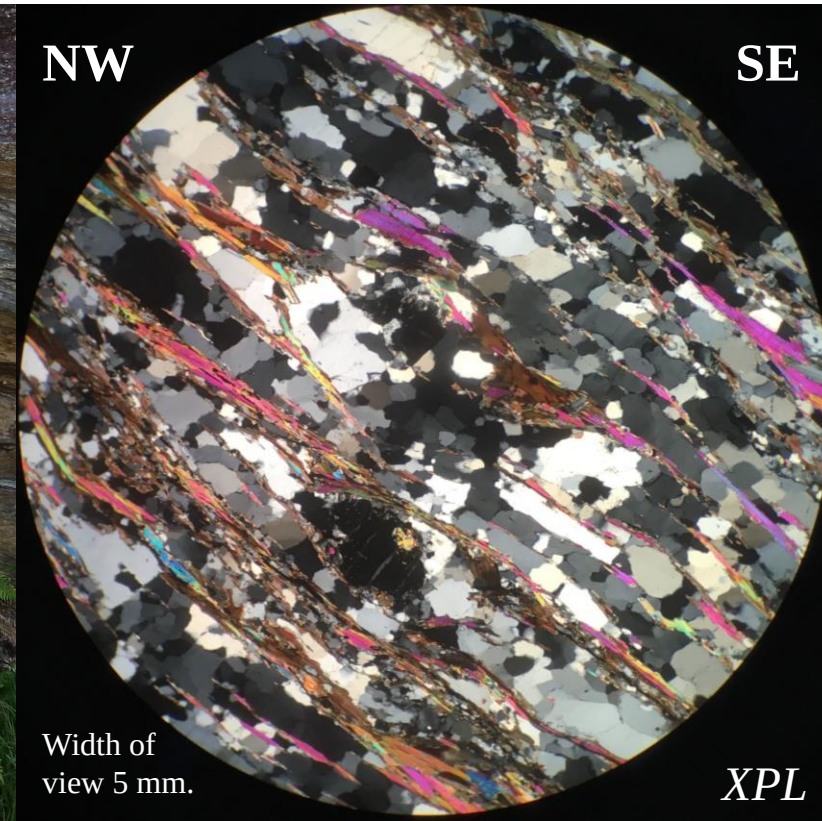
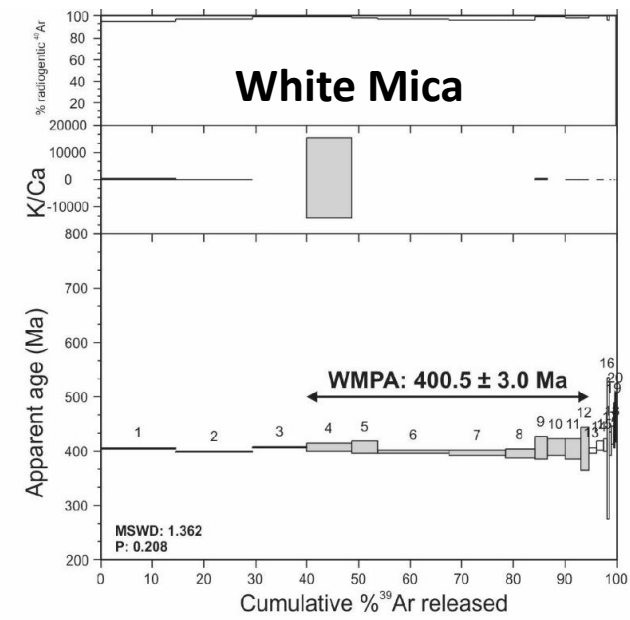
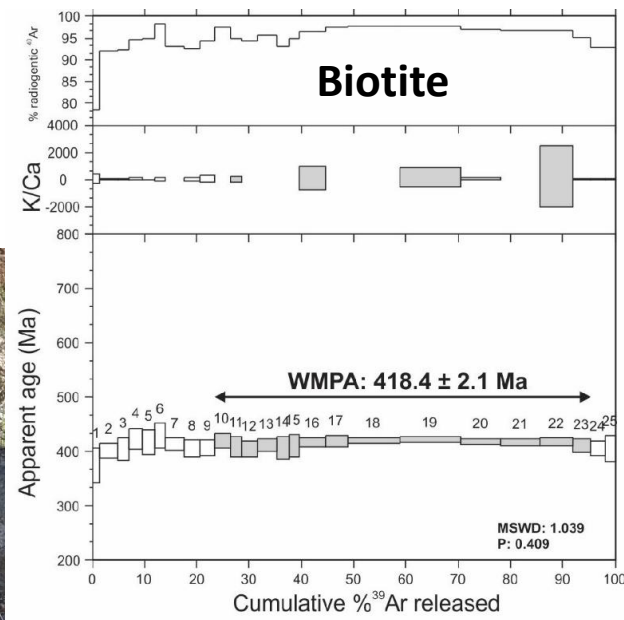
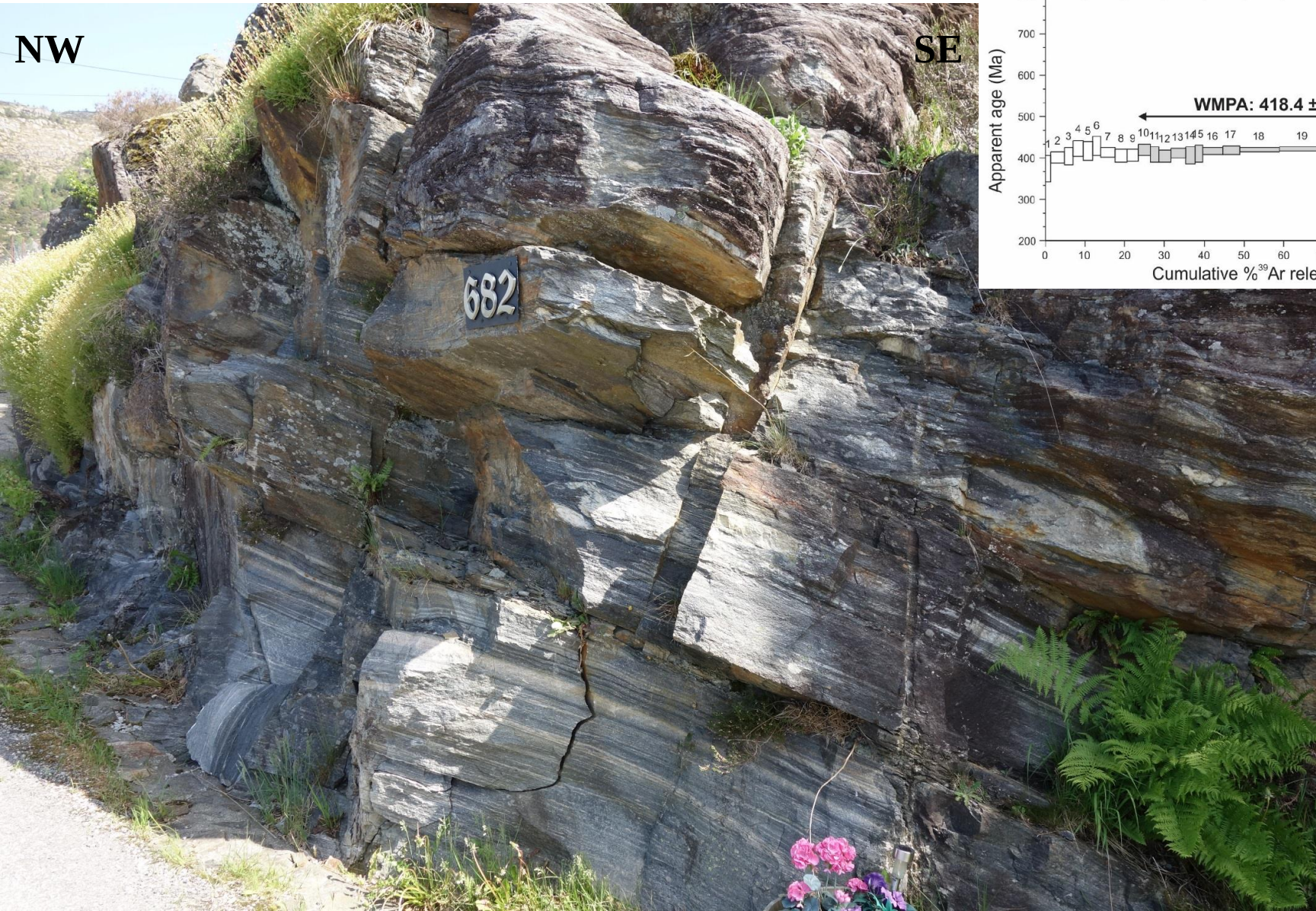
G5

Core domain



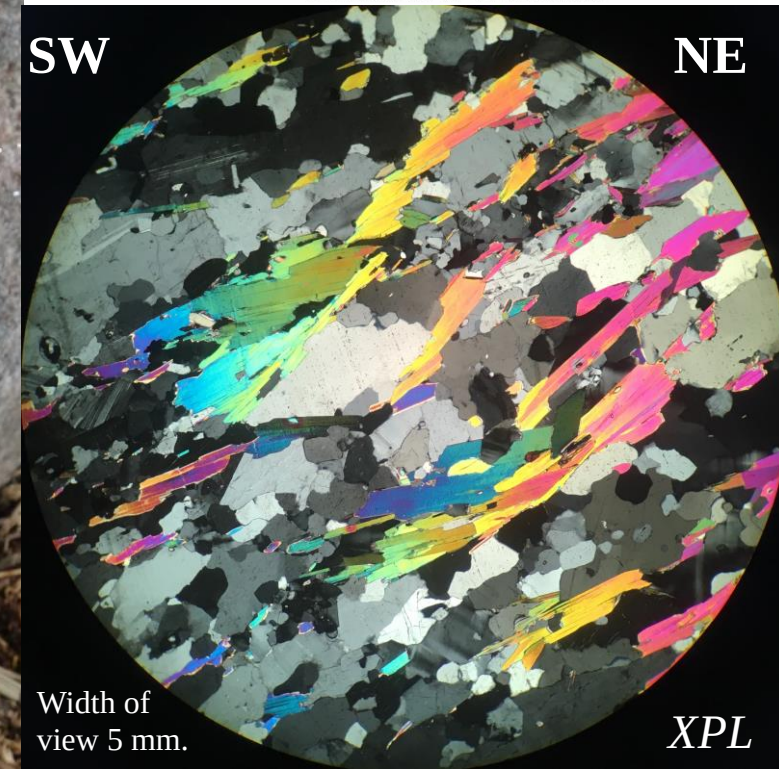
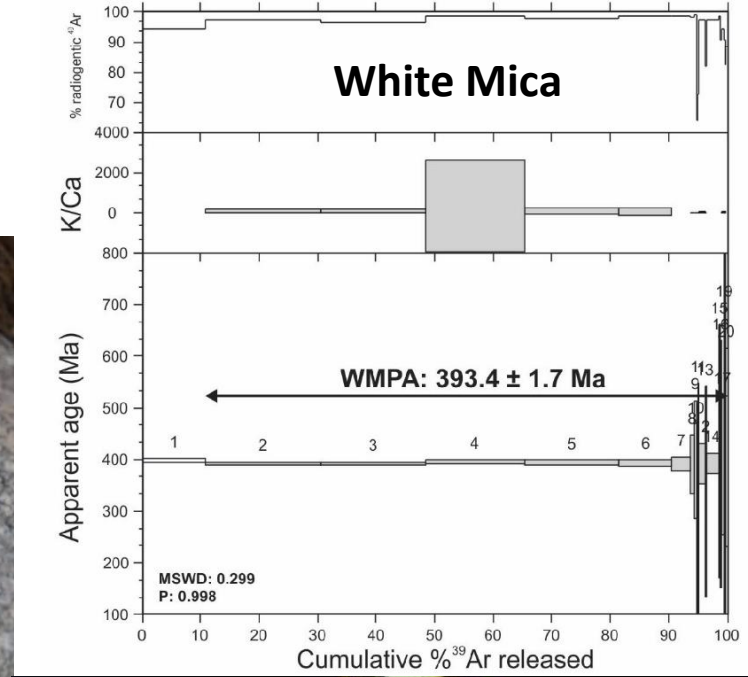
G6

Transition domain

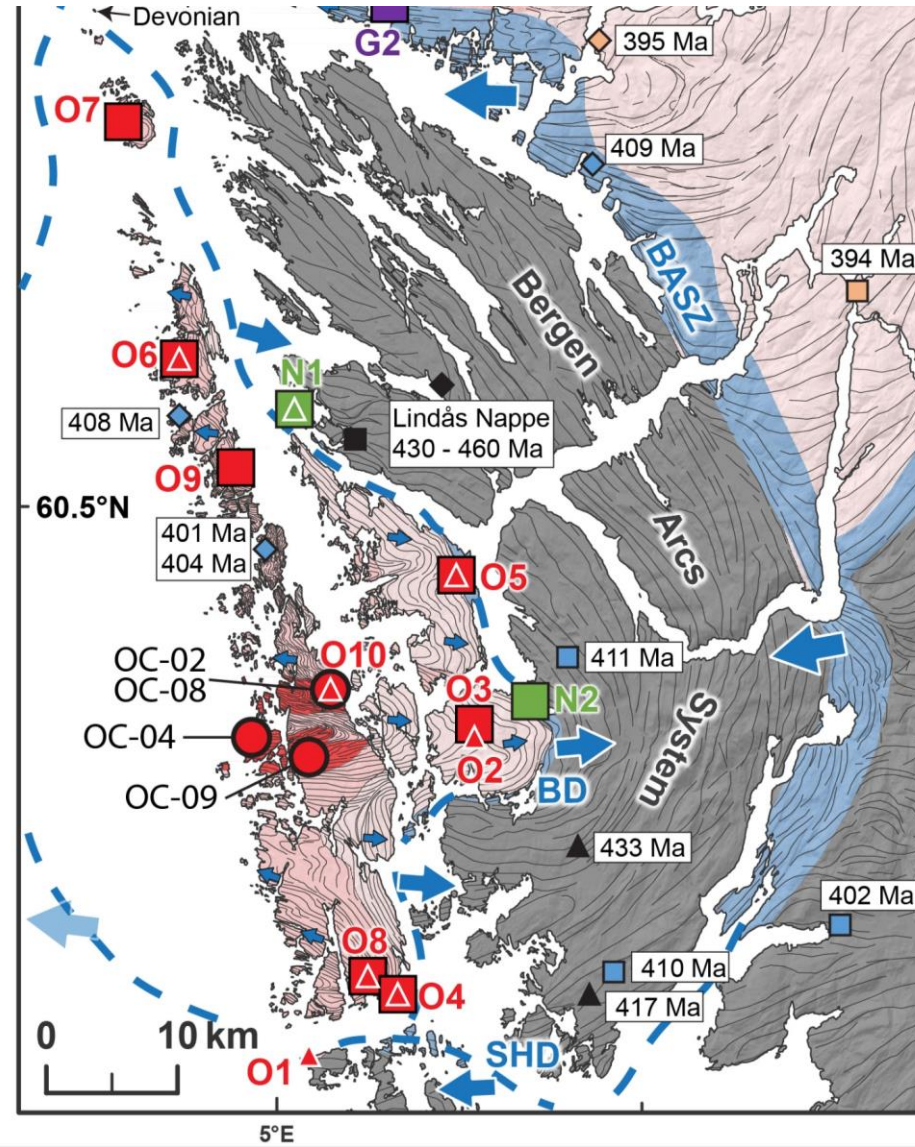


G7

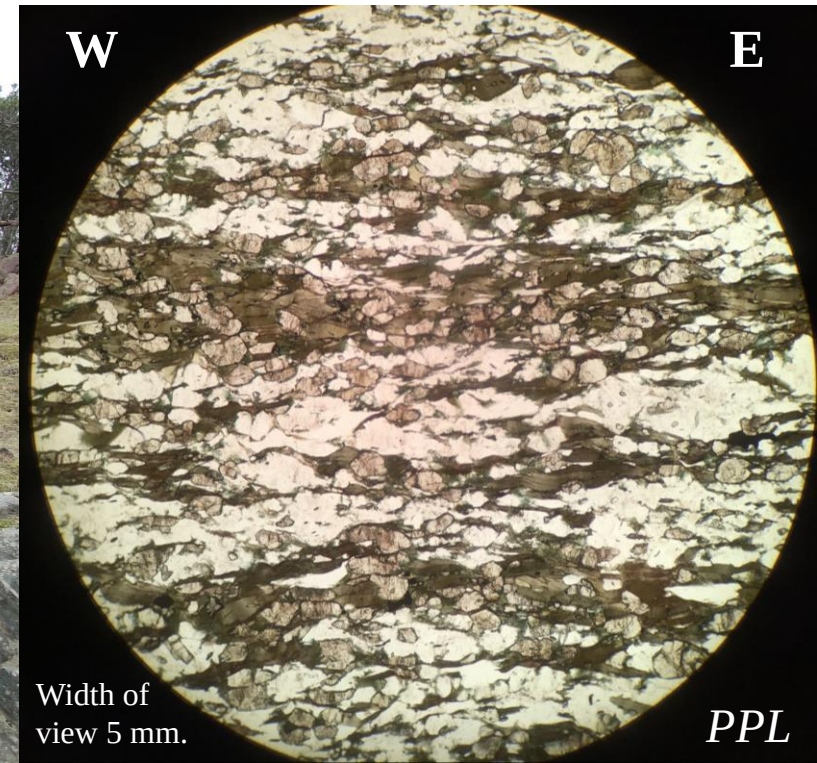
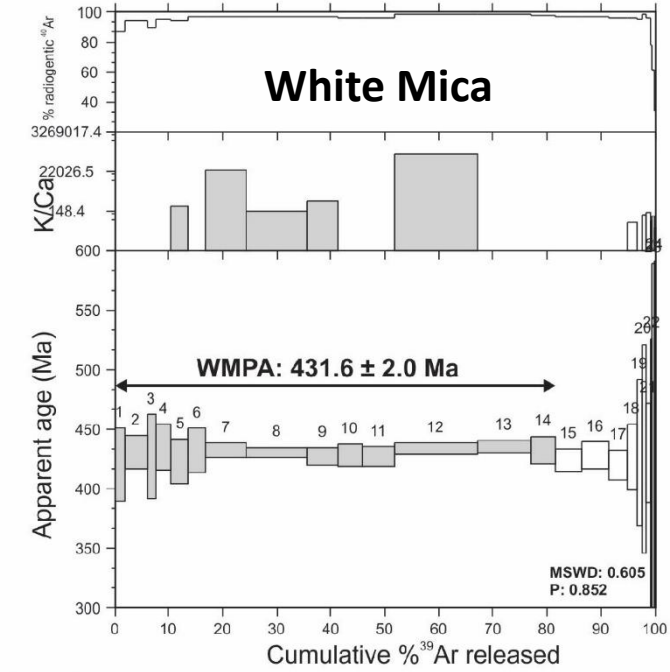
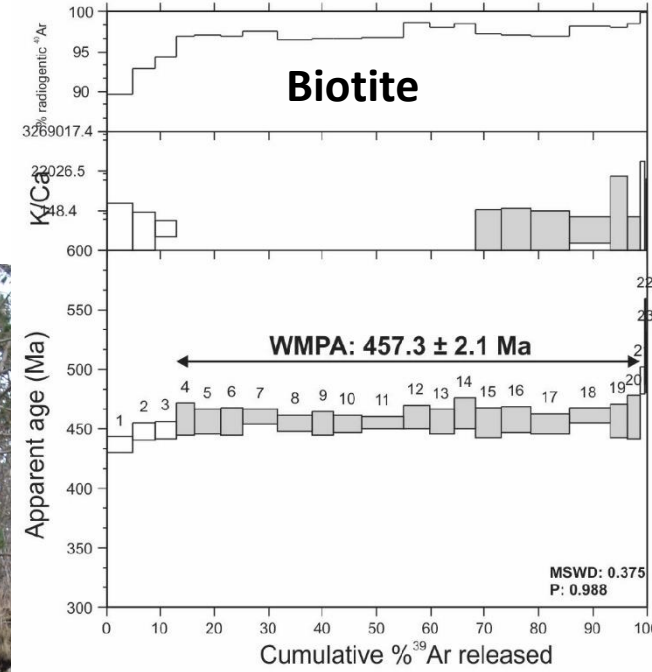
Outside of MCC



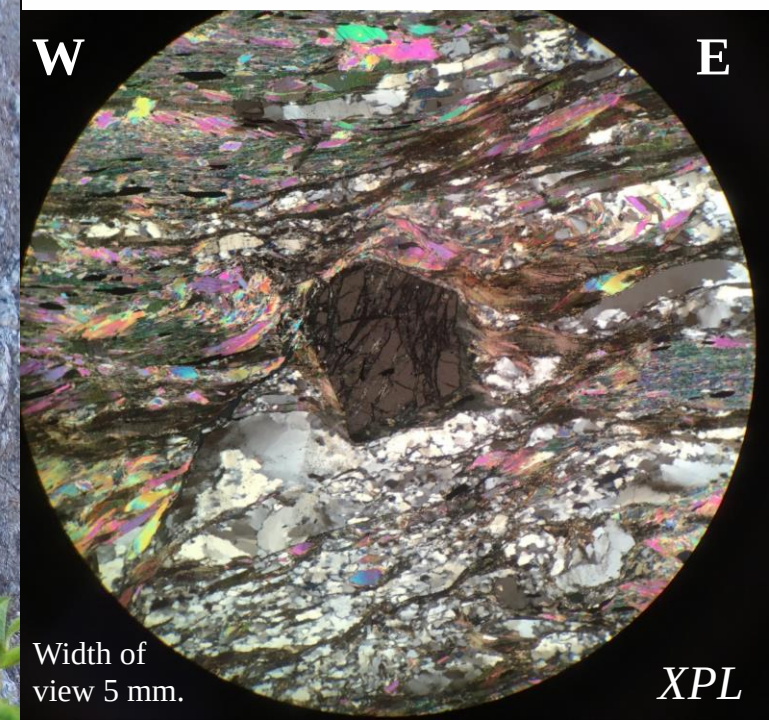
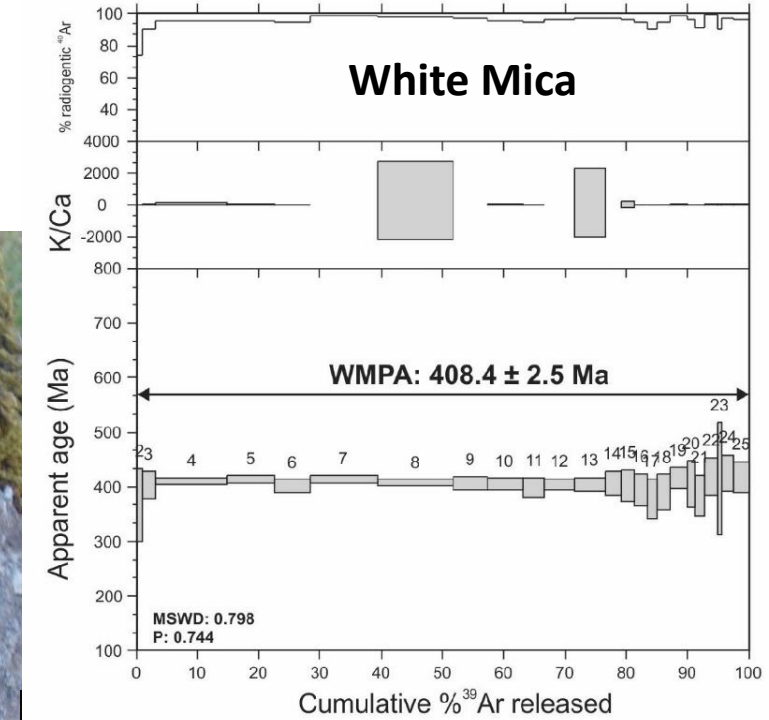
Nappes



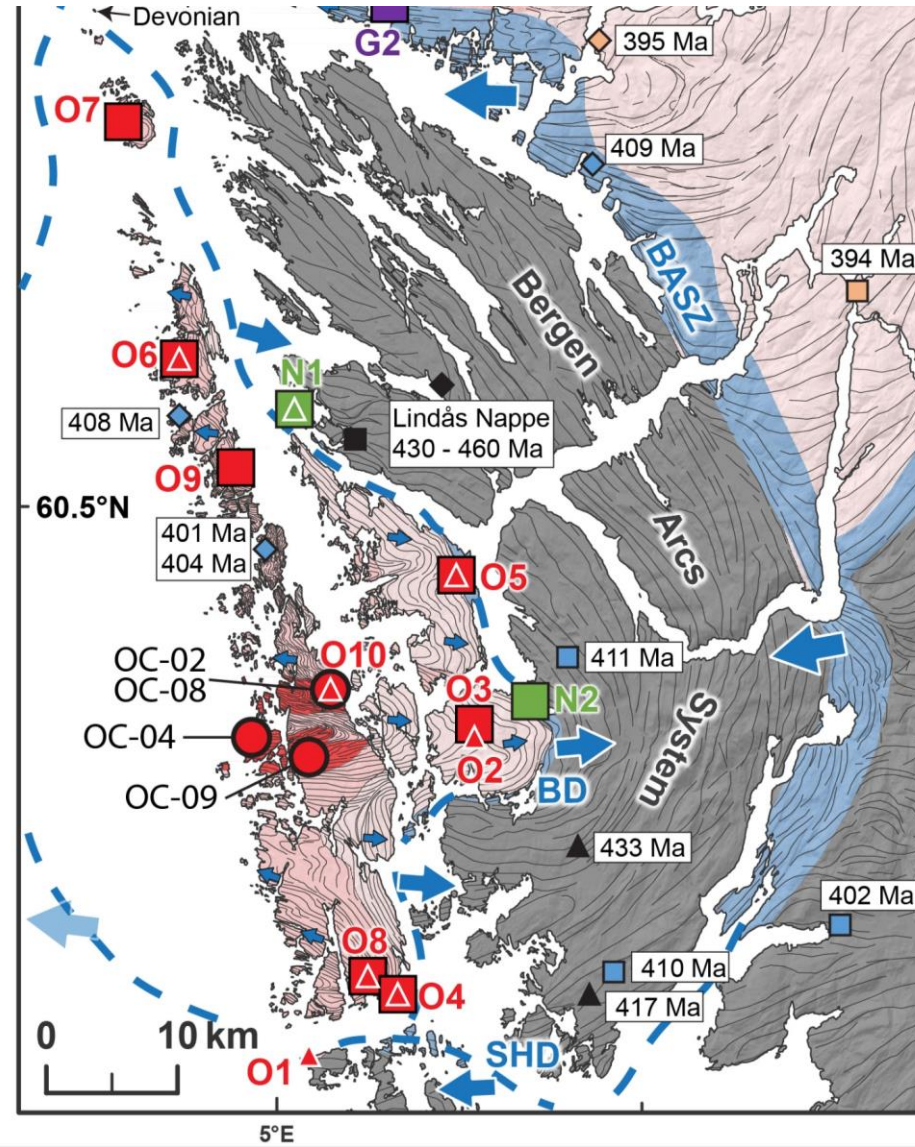
N1



N2

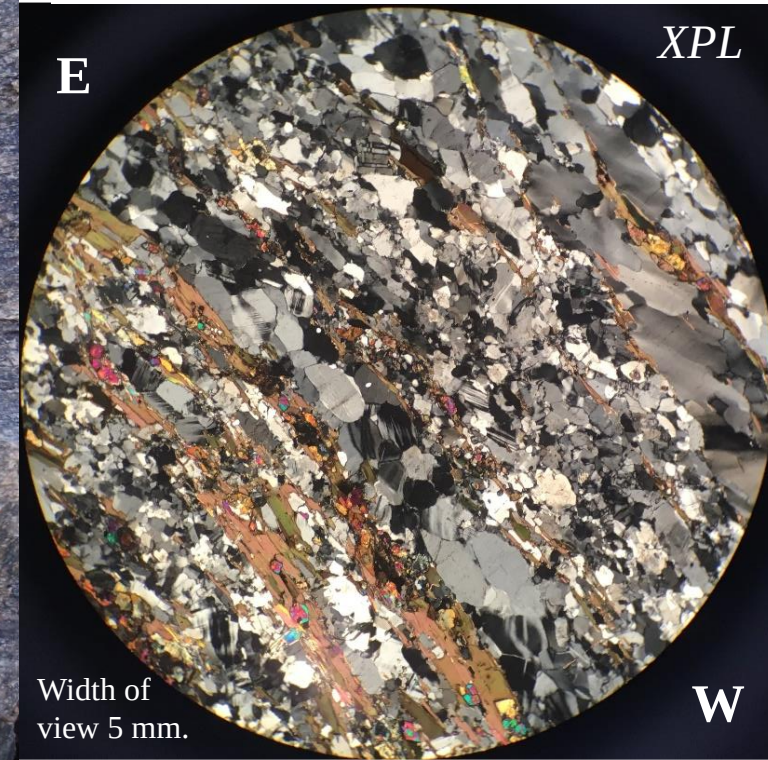
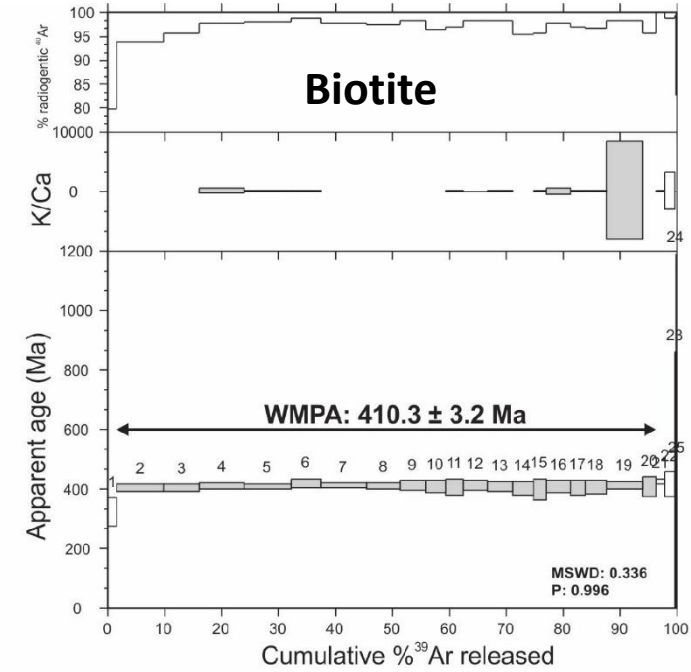


Øygarden Complex



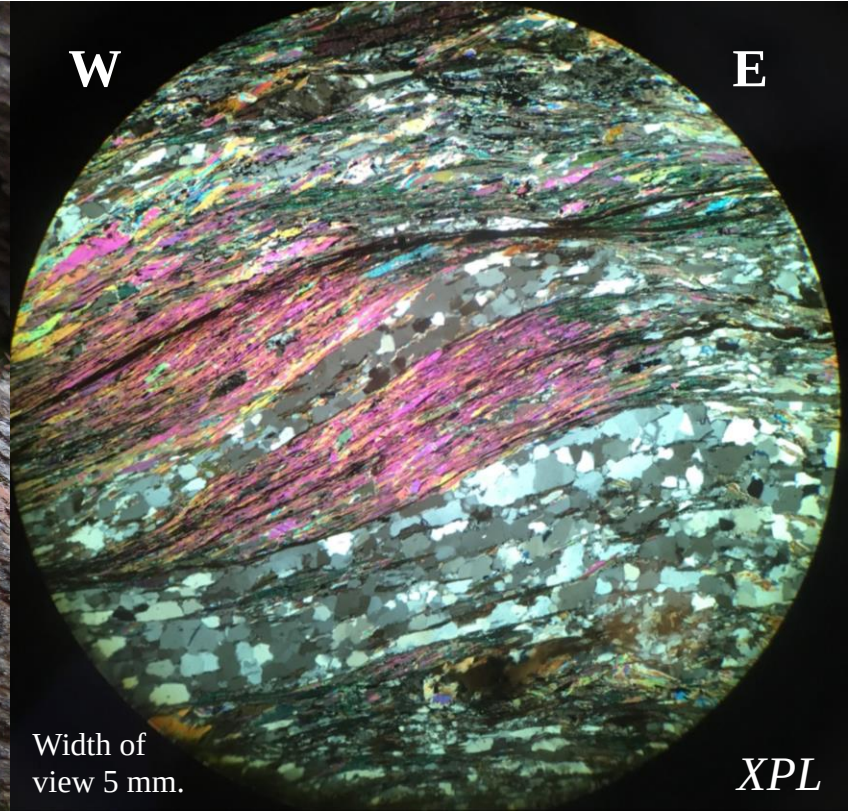
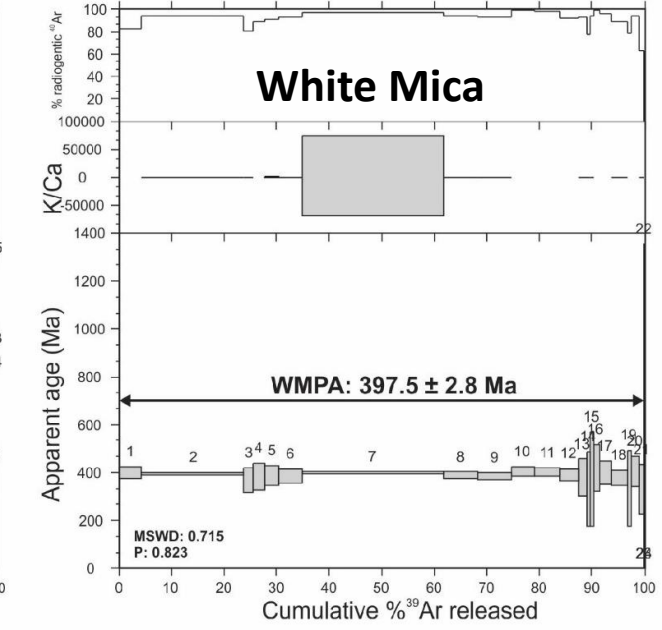
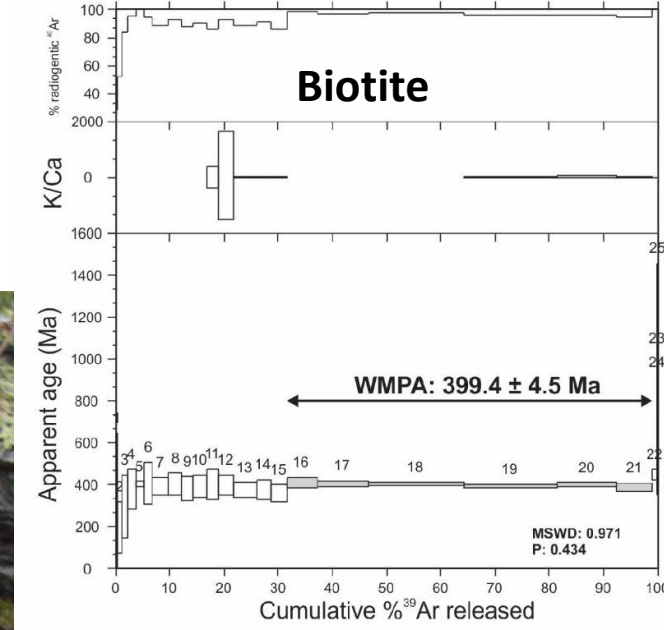
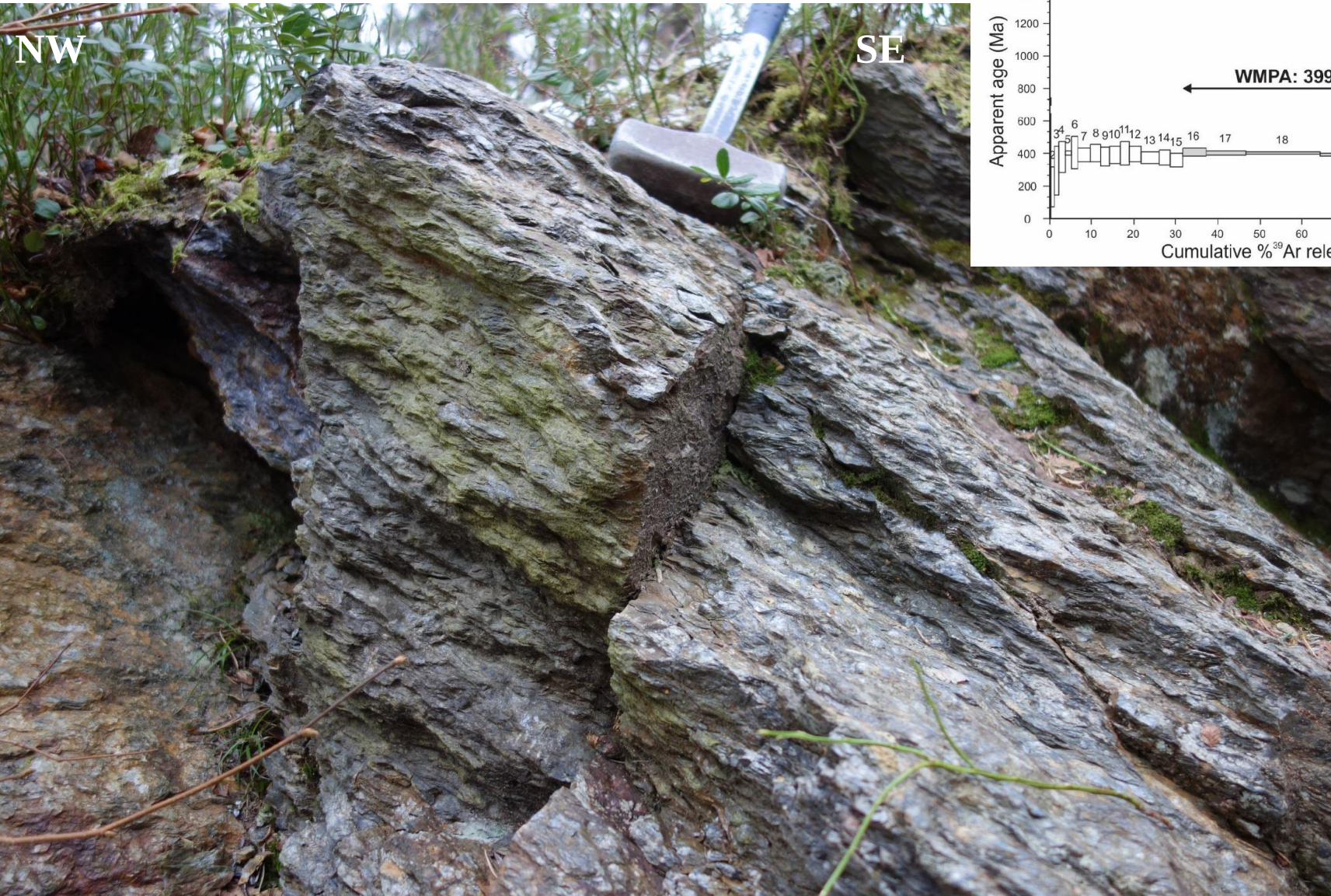
O1

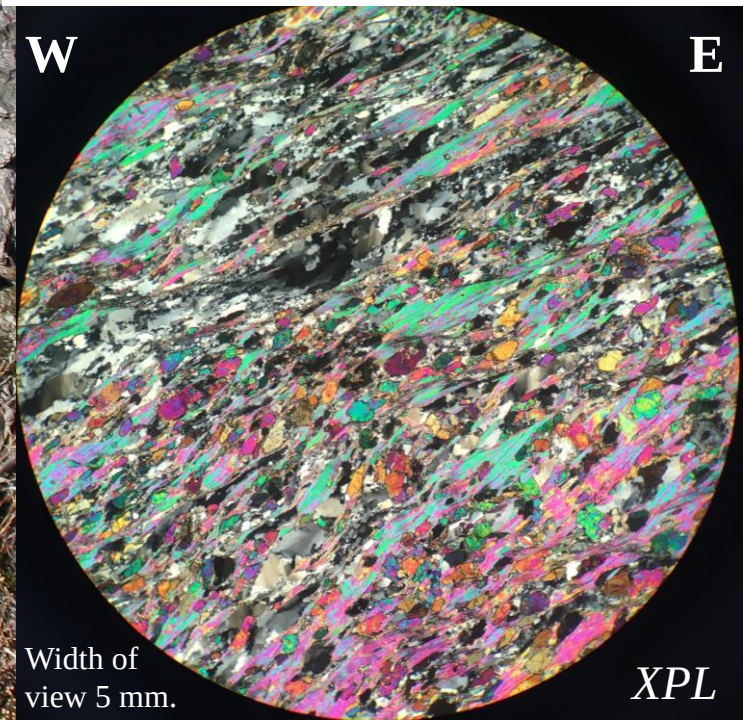
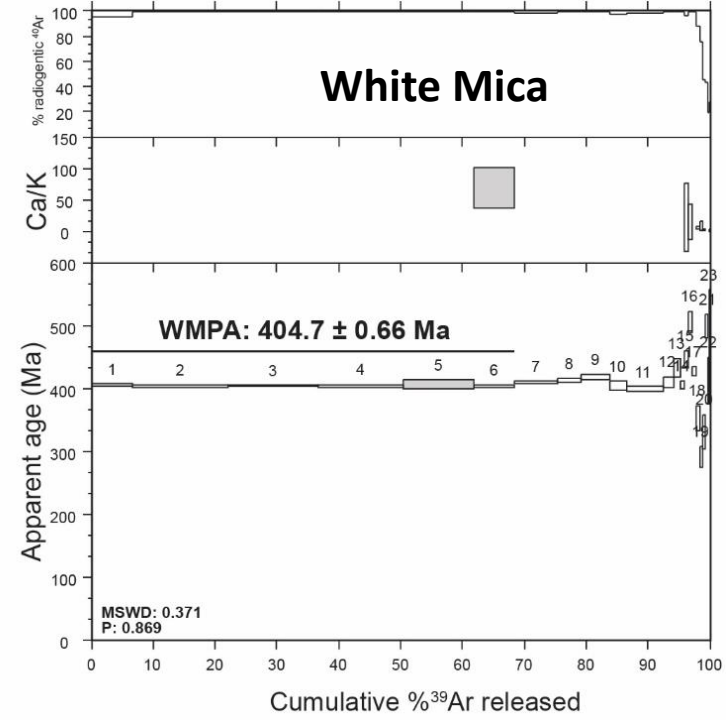
Bounding shear/fault zones



05

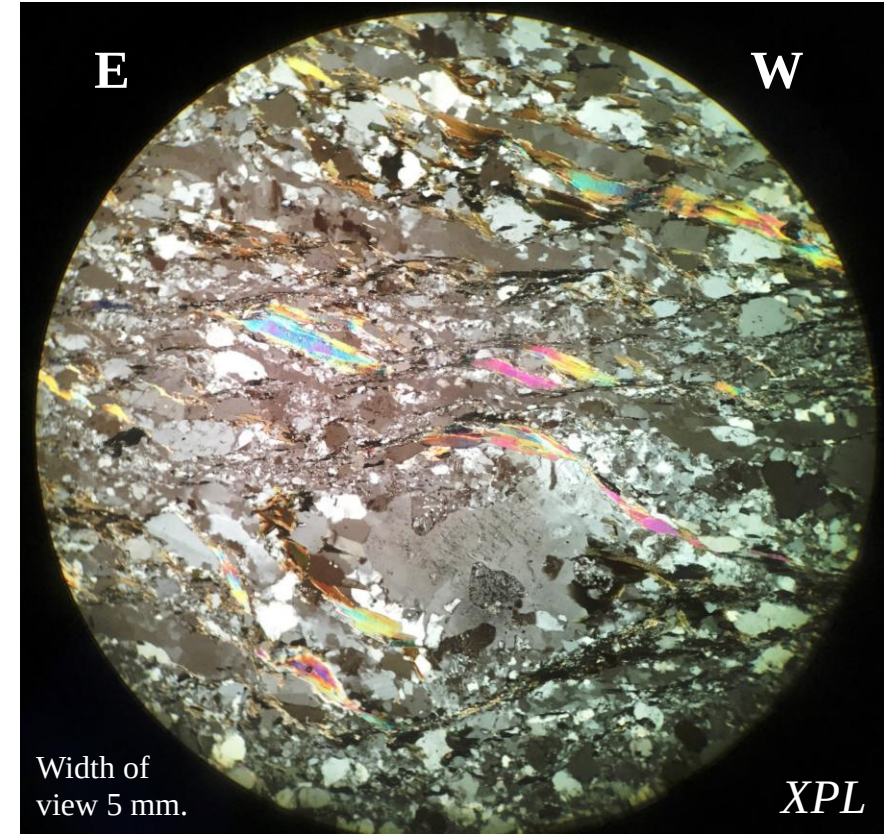
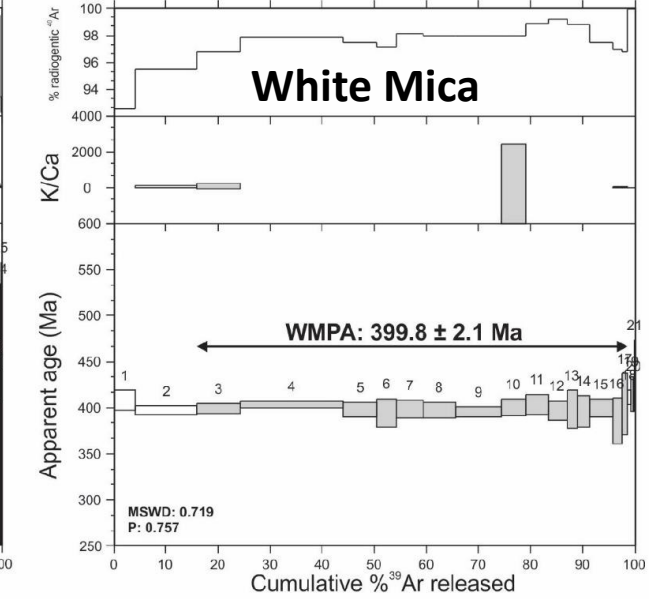
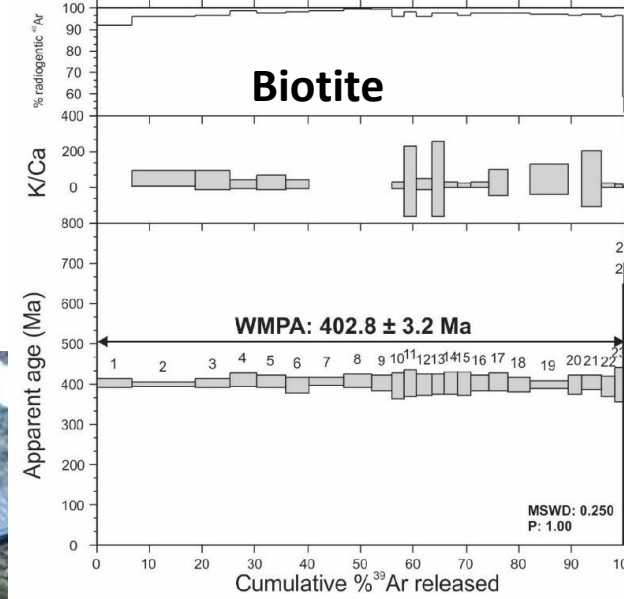
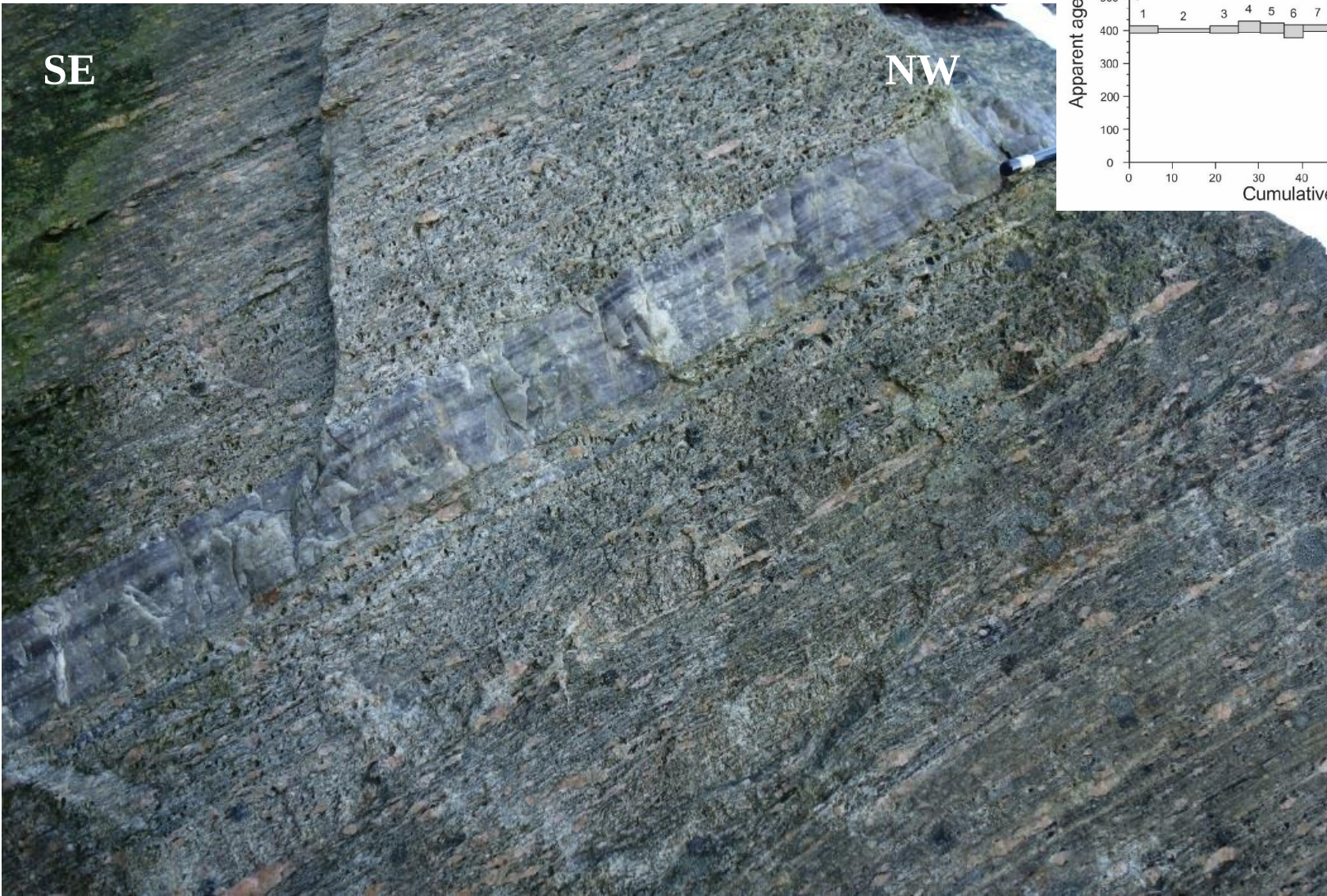
Bounding shear/fault zones





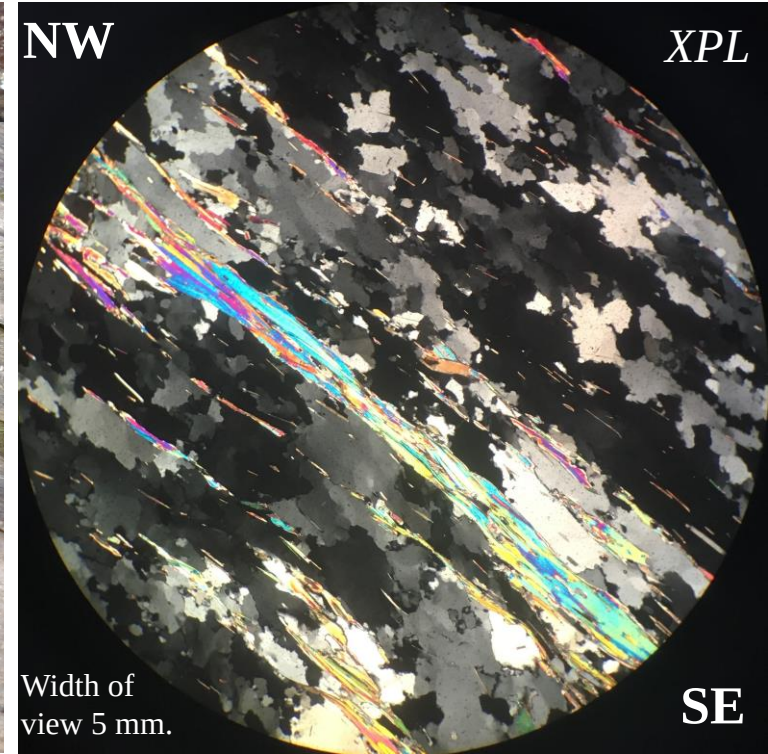
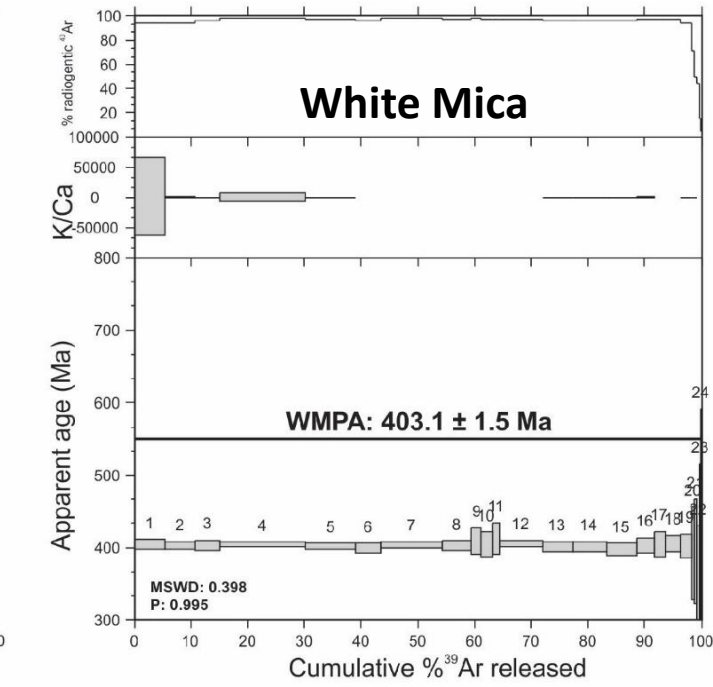
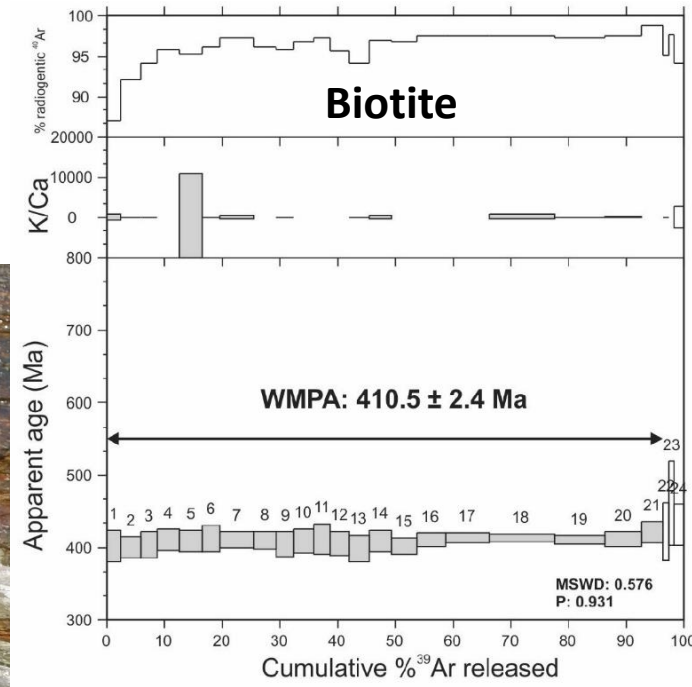
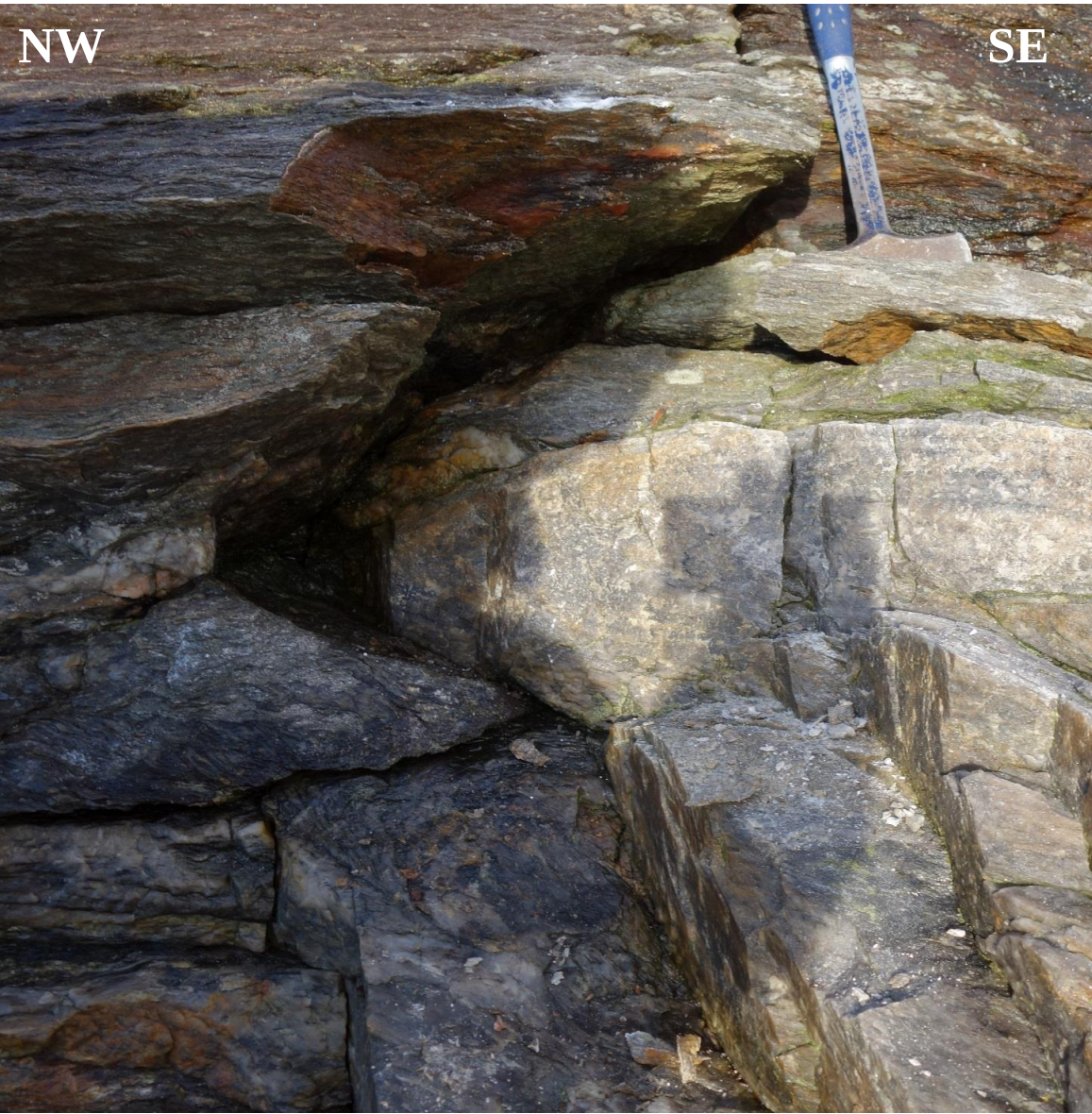
O4

Upper unit



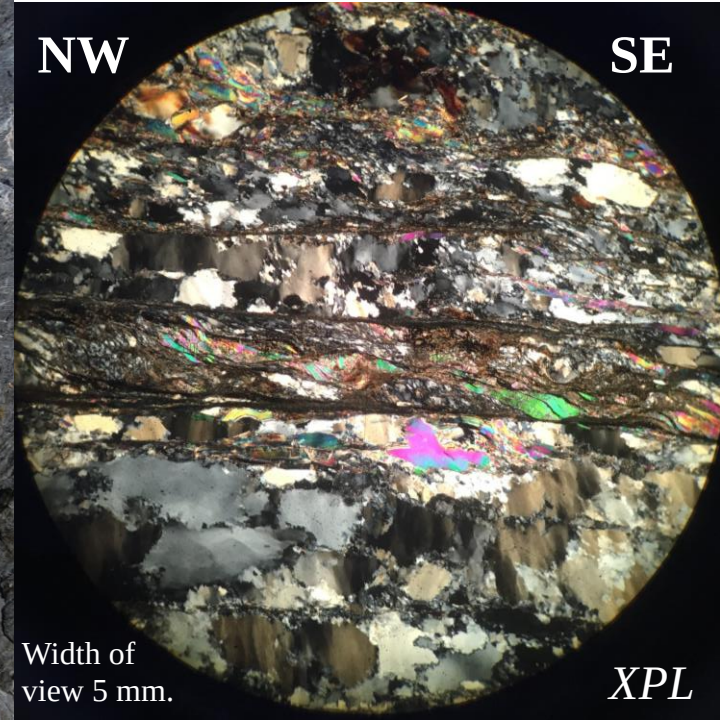
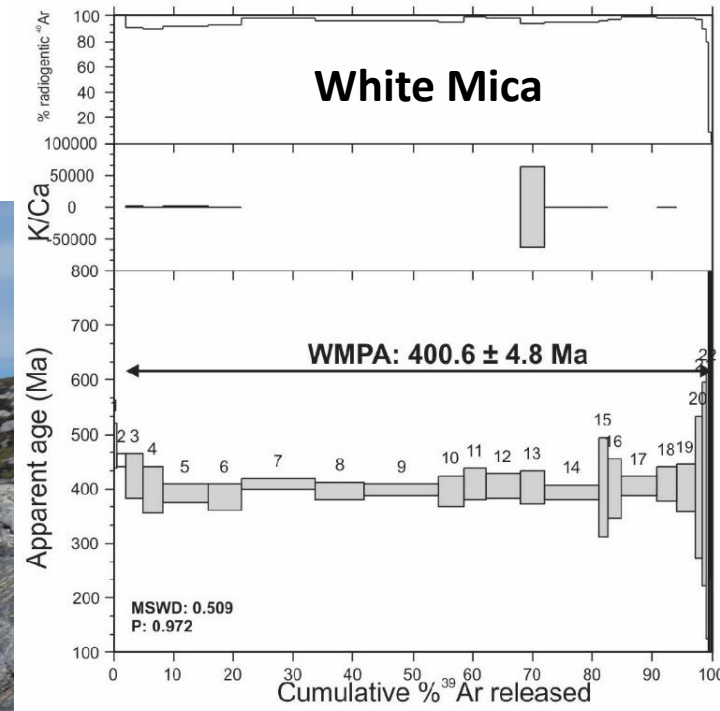
06

Middle unit



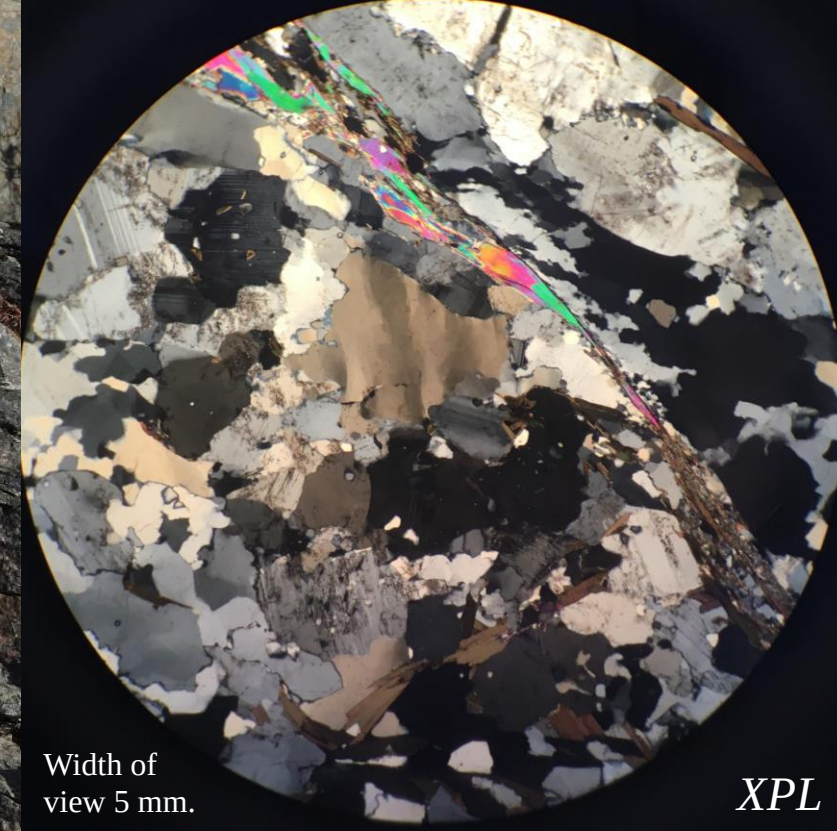
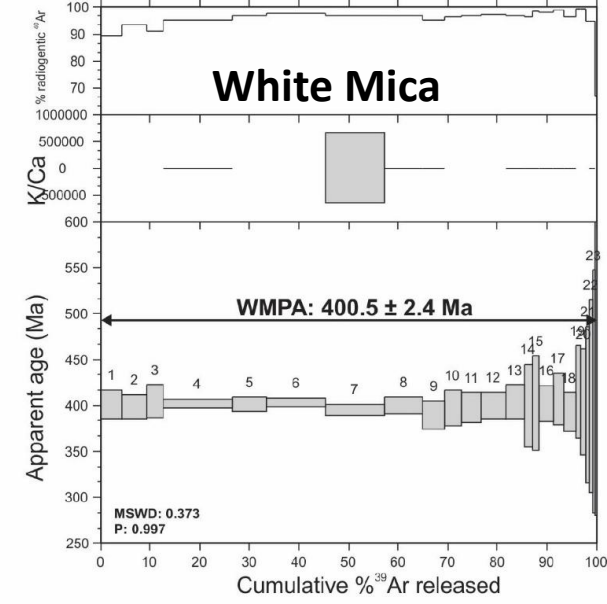
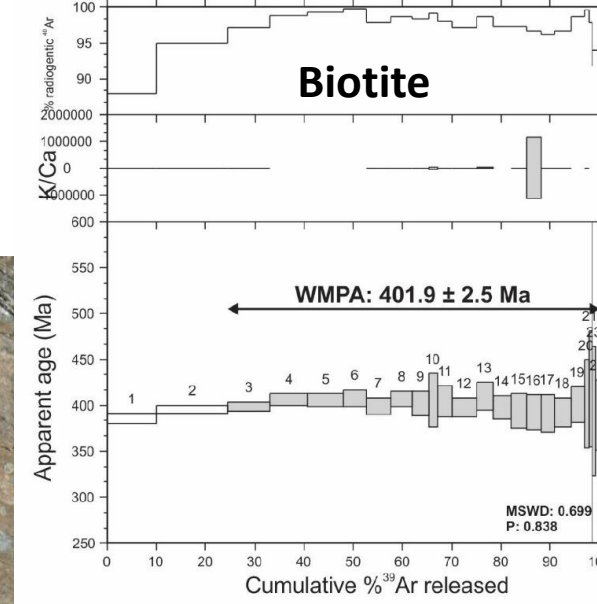
07

Middle unit



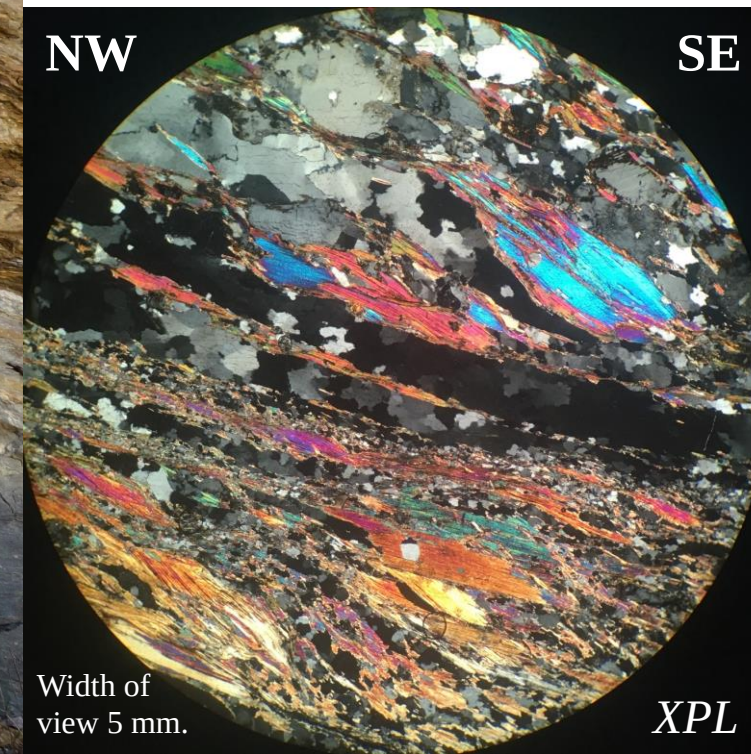
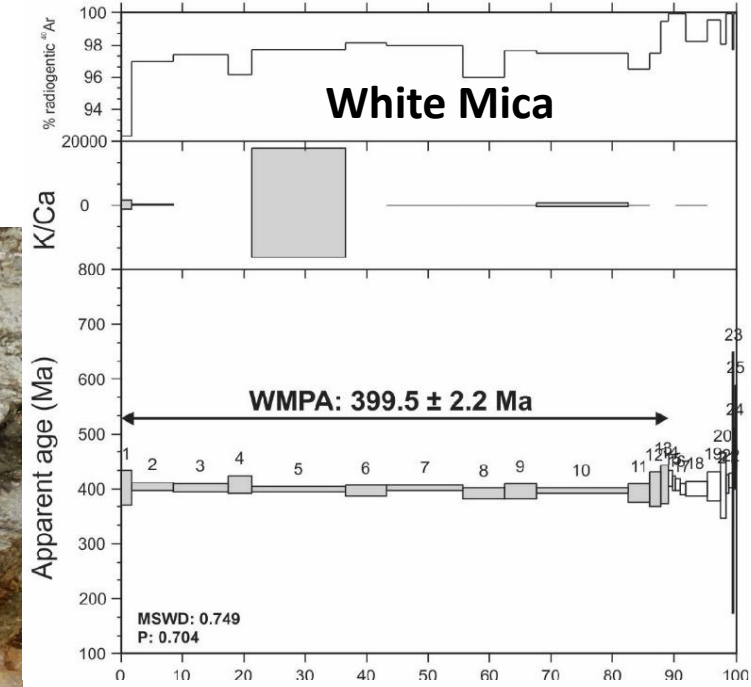
08

Middle unit



09

Middle unit





Lower unit O10

U-Pb zircon Concordia age (OC-02): 404.7 ± 3.4 Ma

