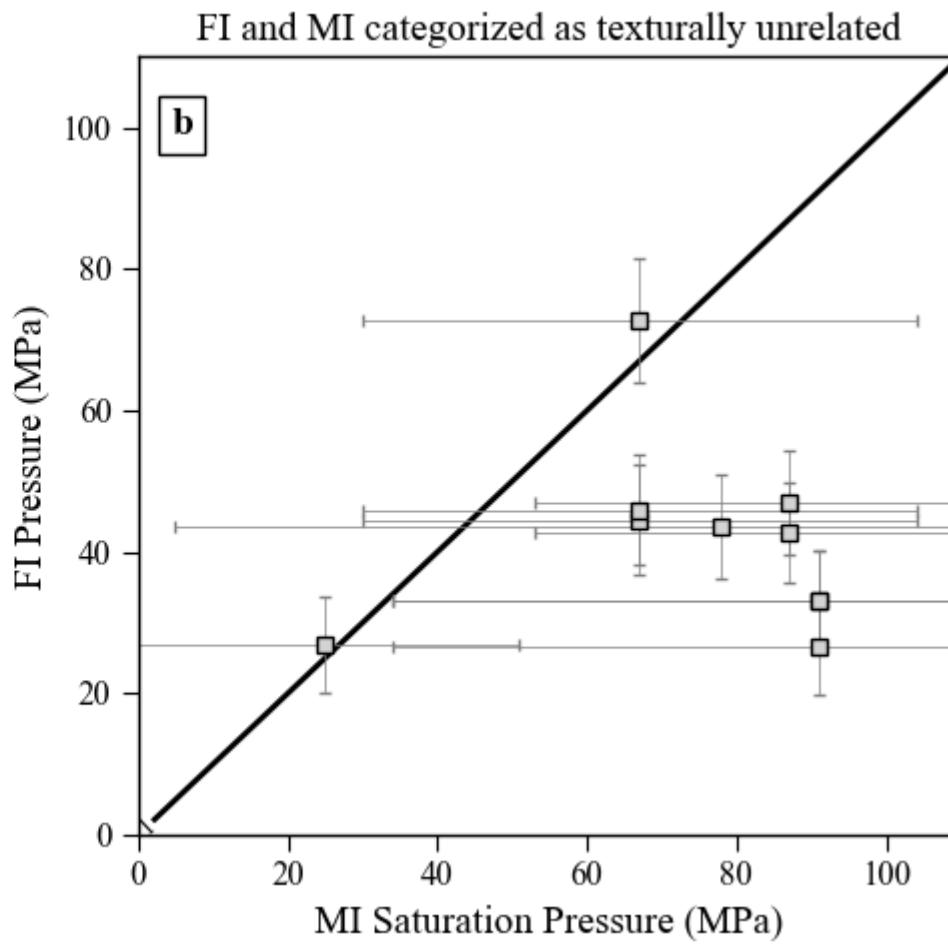
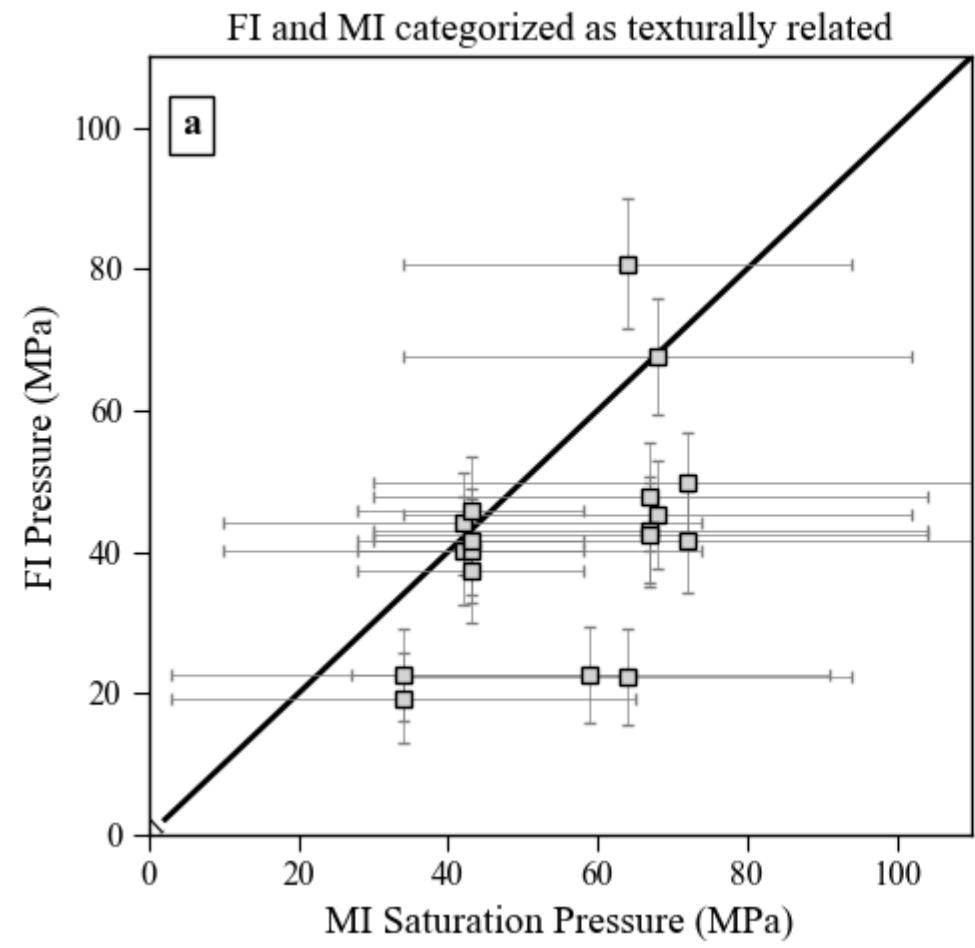


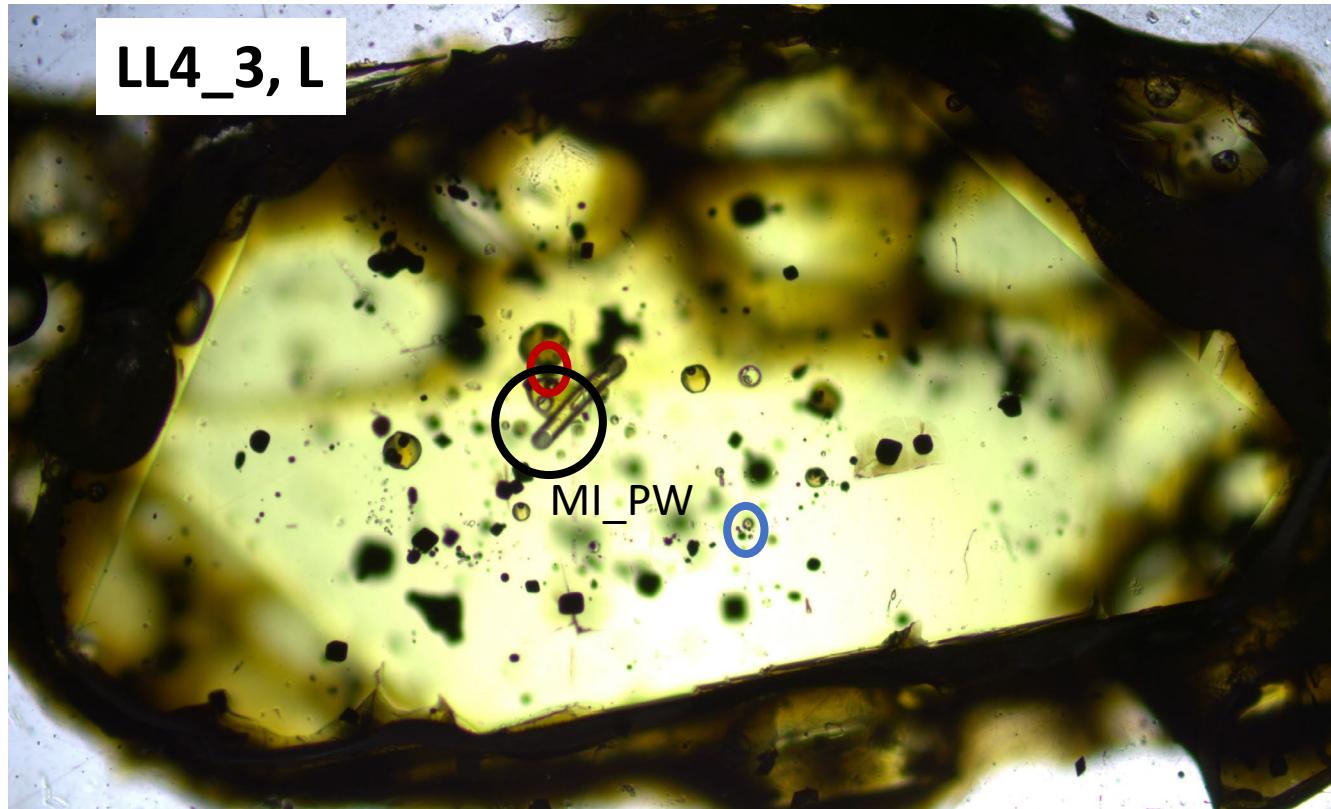
This section depicts melt and fluid inclusions found in crystals from Wieser et al., 2021.

Note: samples categorized as texturally related based on the information available to us are indicated with a green letter R, and those deemed unrelated are shown with a red UR.



Overall comparison of melt and fluid inclusion pairs. (a) melt and fluid inclusions categorized as texturally related. (b) melt and fluid inclusions categorized as texturally unrelated. Although some of the fluid inclusions categorized as texturally related appear lightly offset from the 1:1 line, we note that they are within the large uncertainty of the MI measurements. They also tend to be fluid inclusions which were more difficult to categorize with available data and observations (e.g., on a slightly different depth plane, an apparently similar growth zone but not immediately adjacent to the melt inclusion or a slightly offset growth zone). Specific crystal plots and images are provided in the next slides for detailed comparisons.

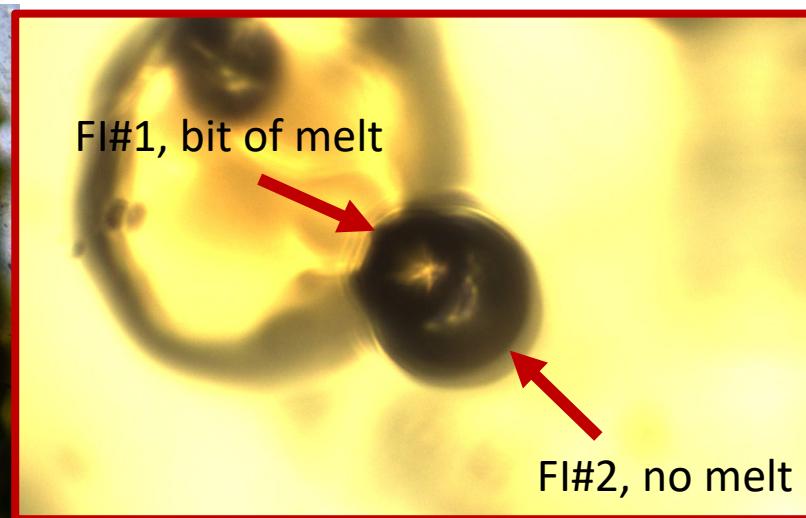
LL4_3, L



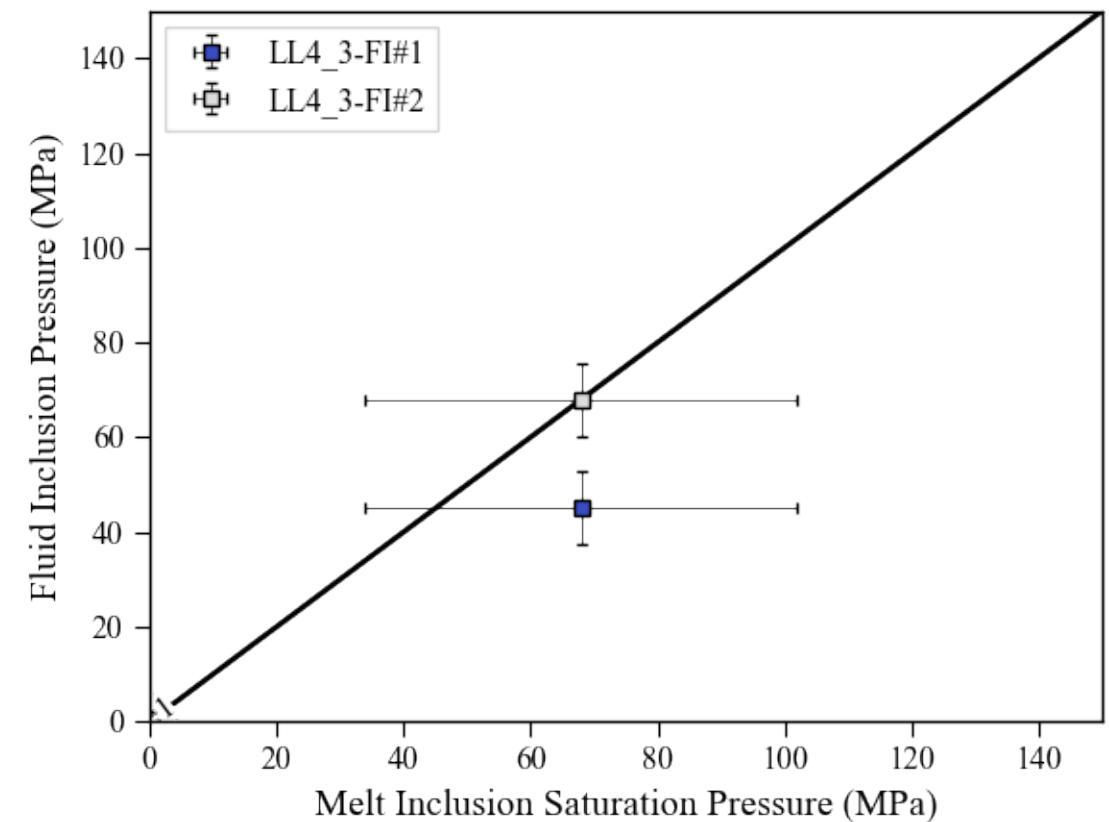
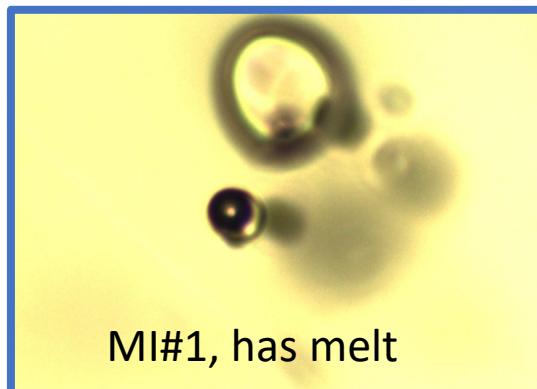
R

FI#1, bit of melt

FI#2, no melt

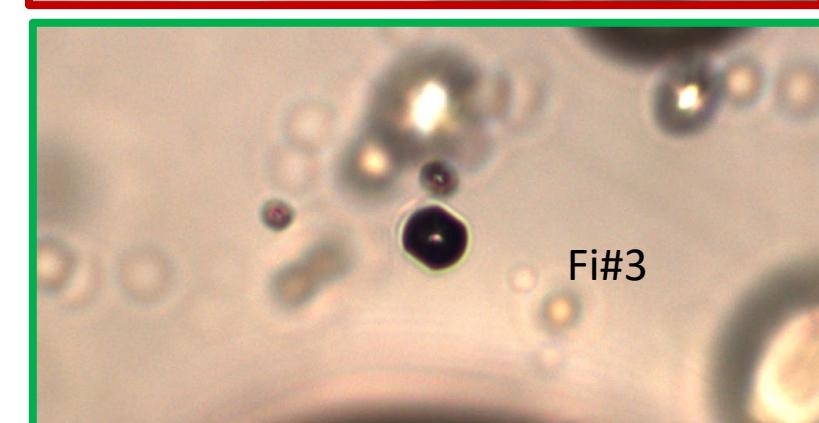
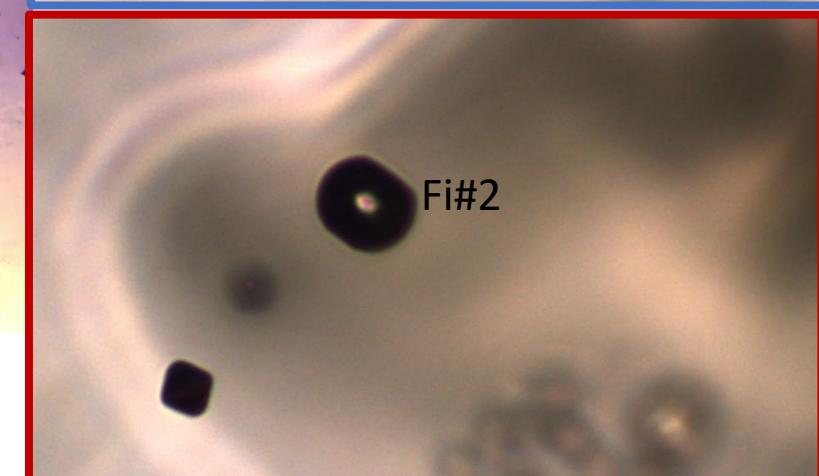
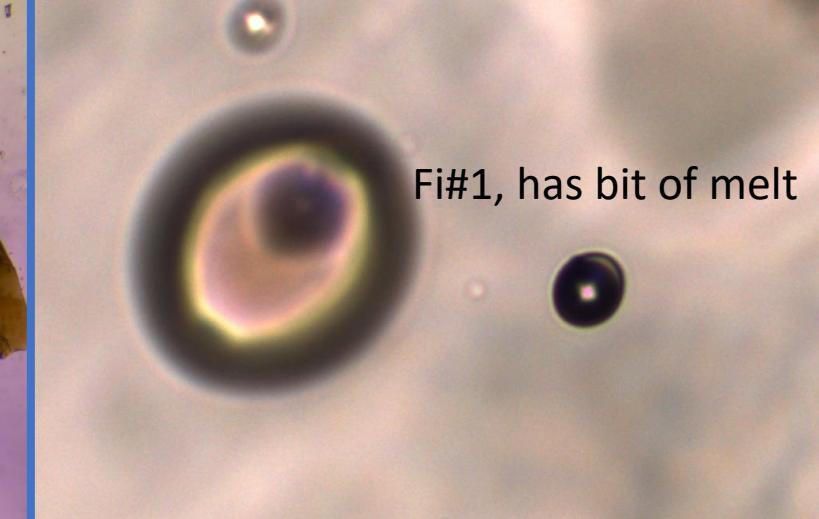
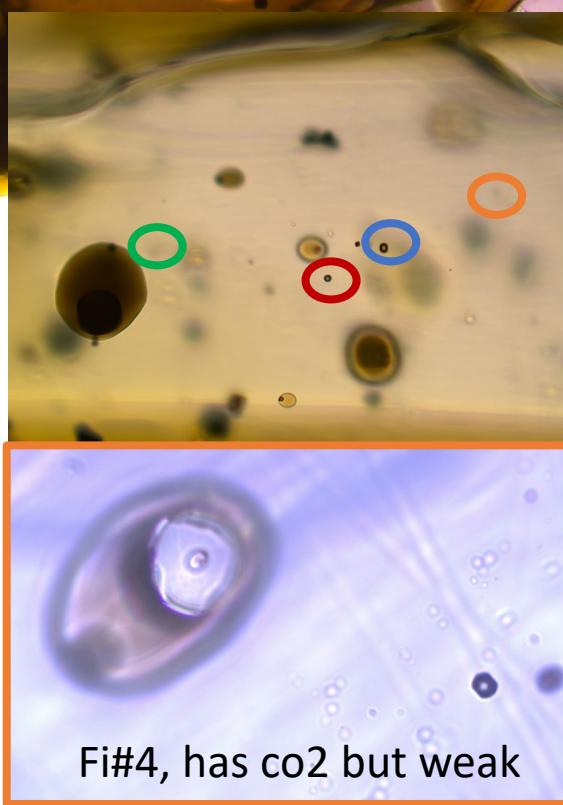
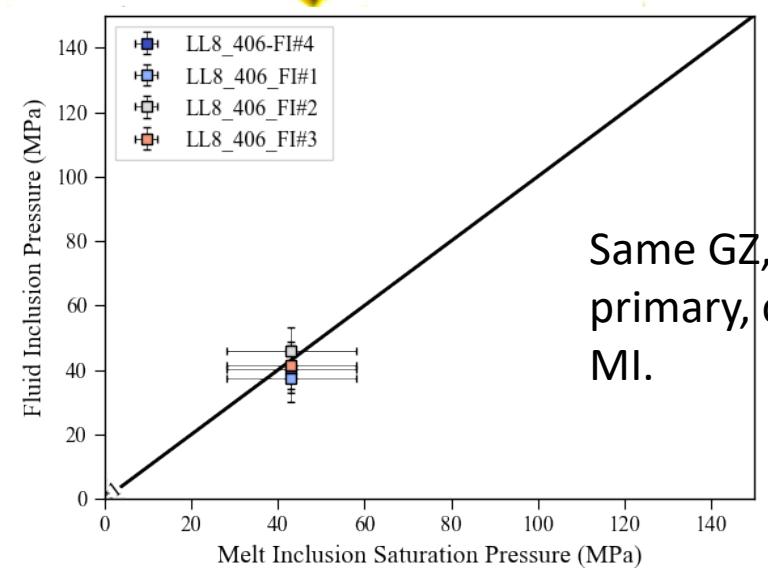
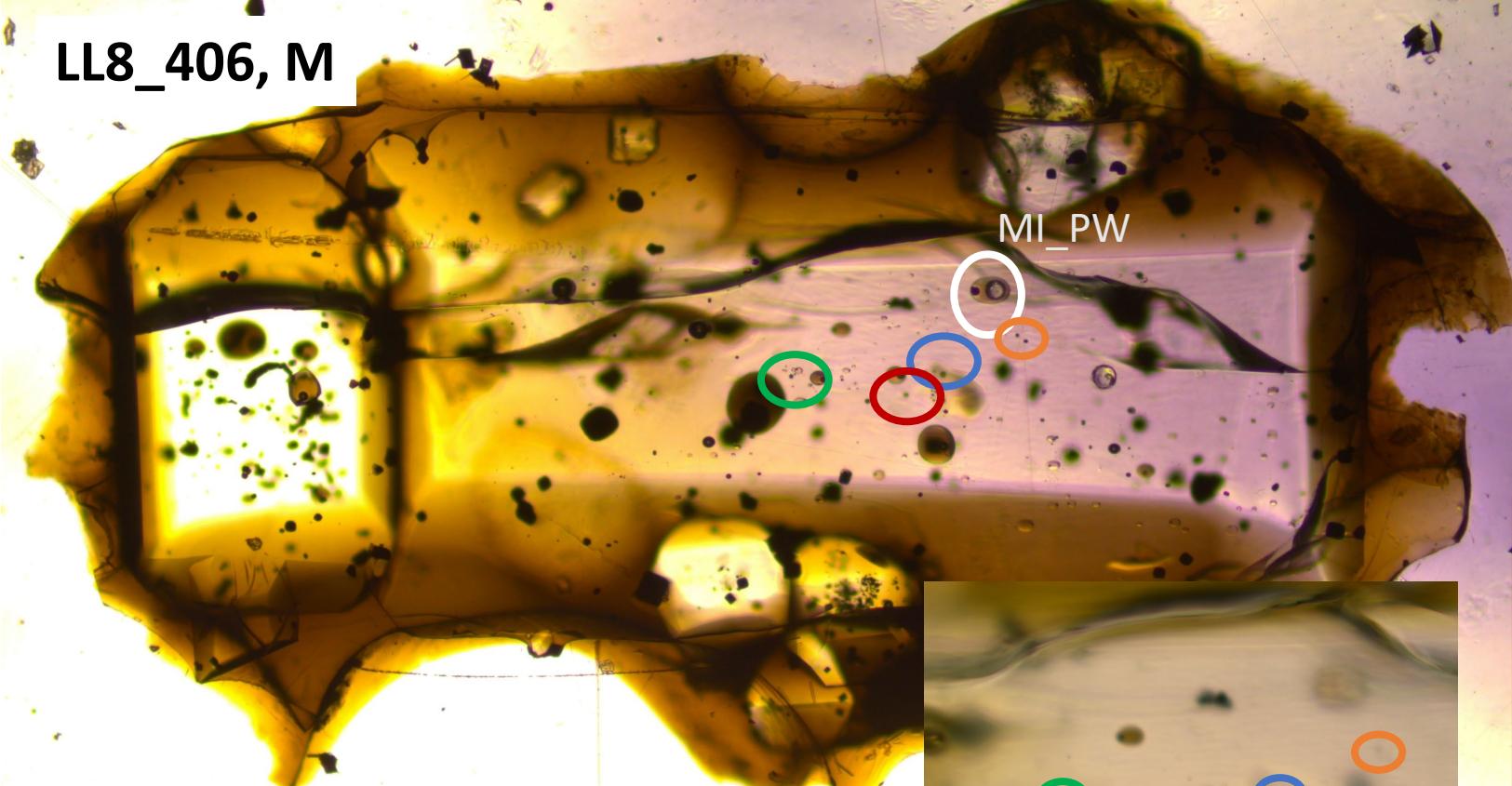


This one works,
The FI are in close
proximity to the MI
MI#1 is a bit
further but seems
on the same
growth plane
optically.

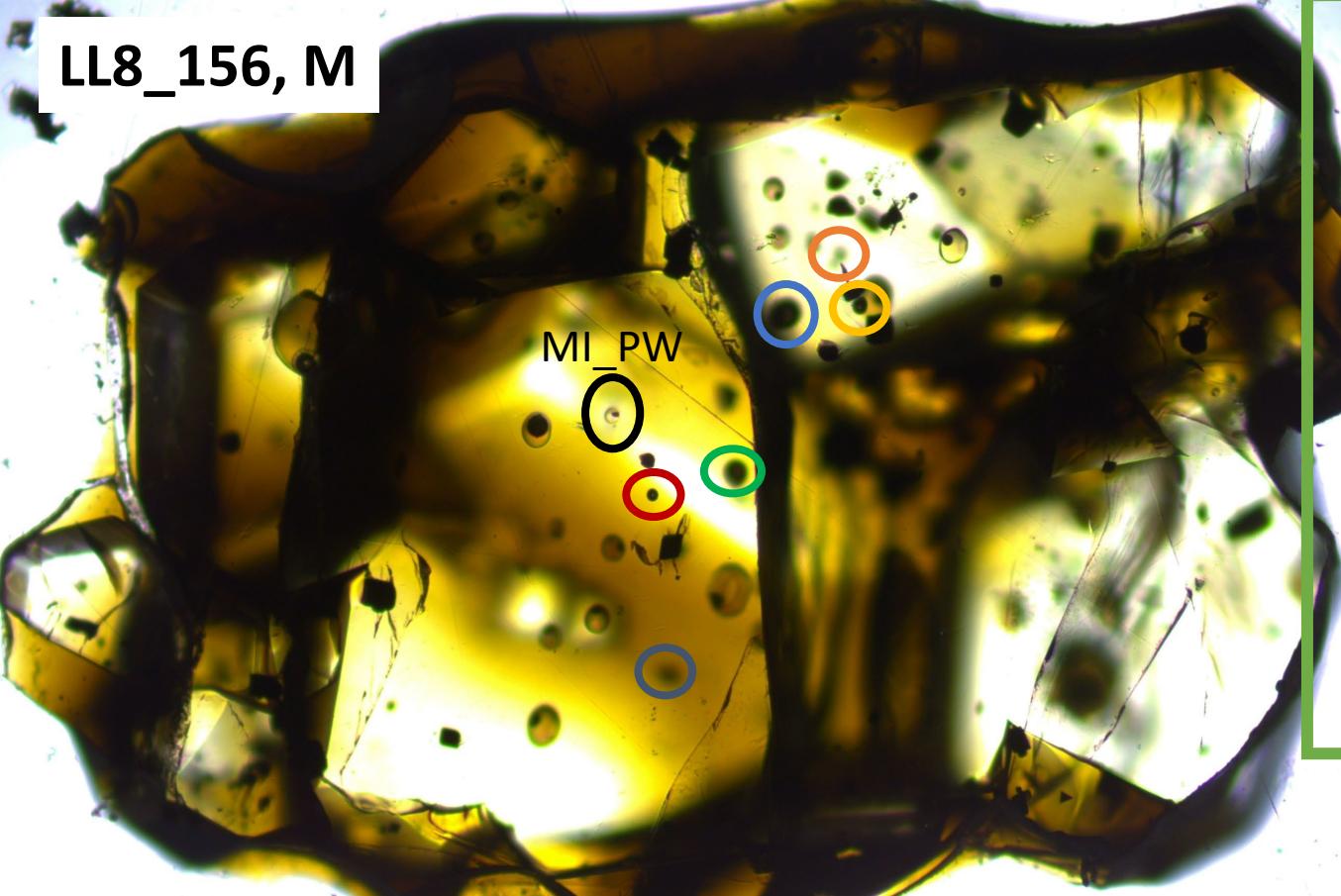


LL8_406, M

R



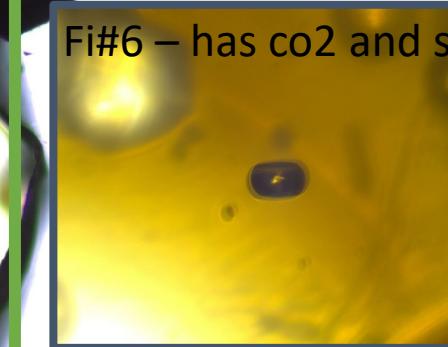
LL8_156, M



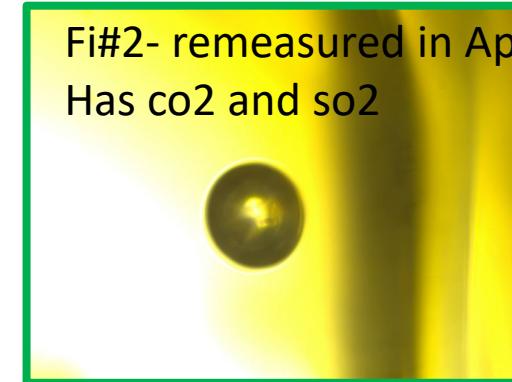
Fi#4, remeasured
Has co₂ and so₂



Fi#6 – has co₂ and so₂

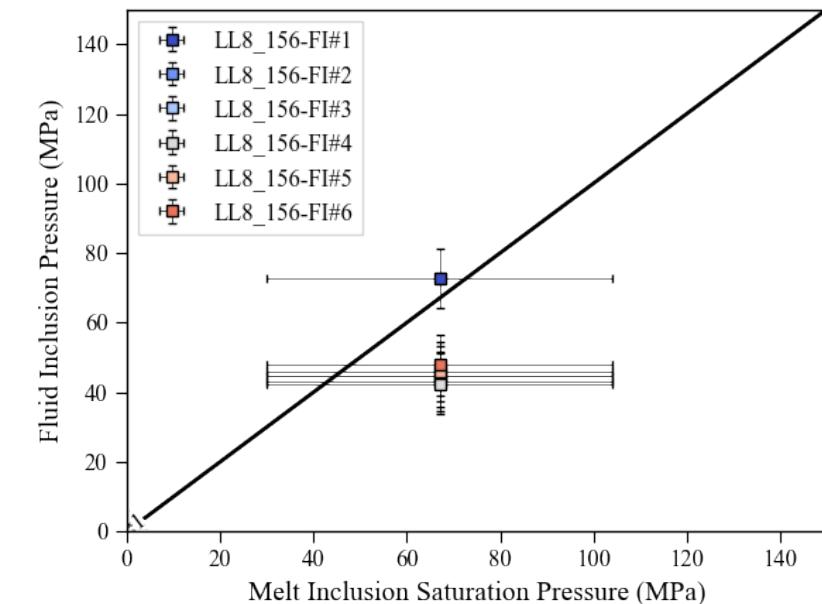
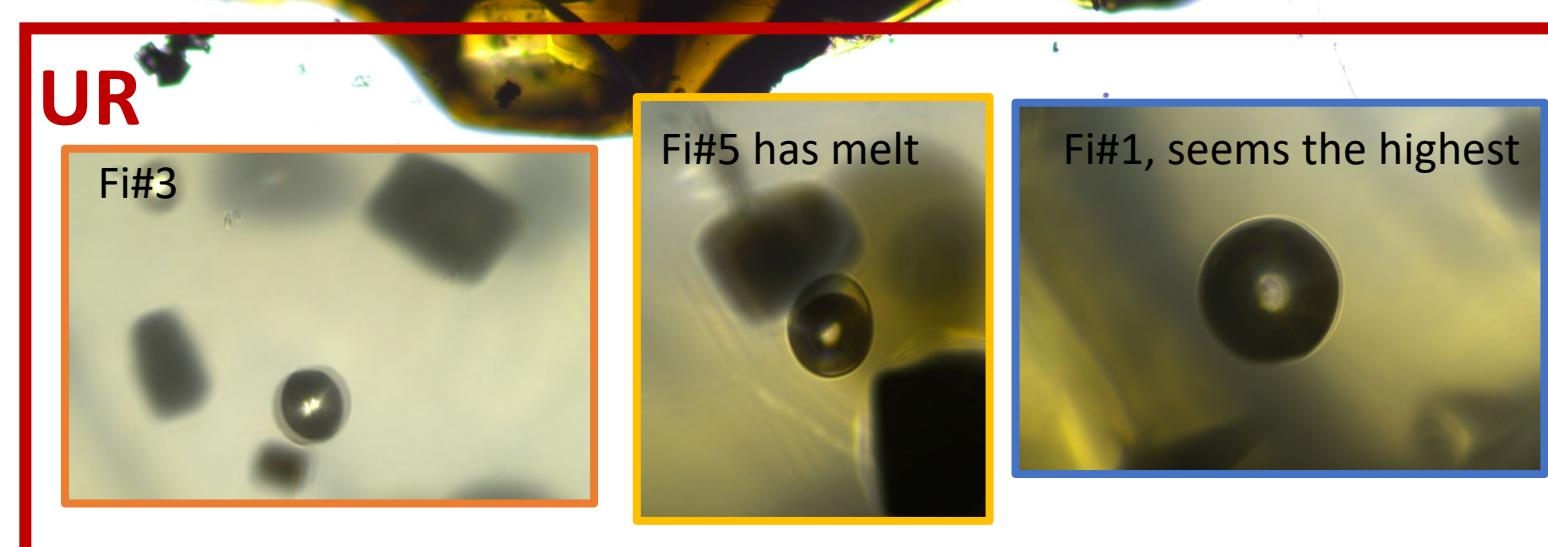


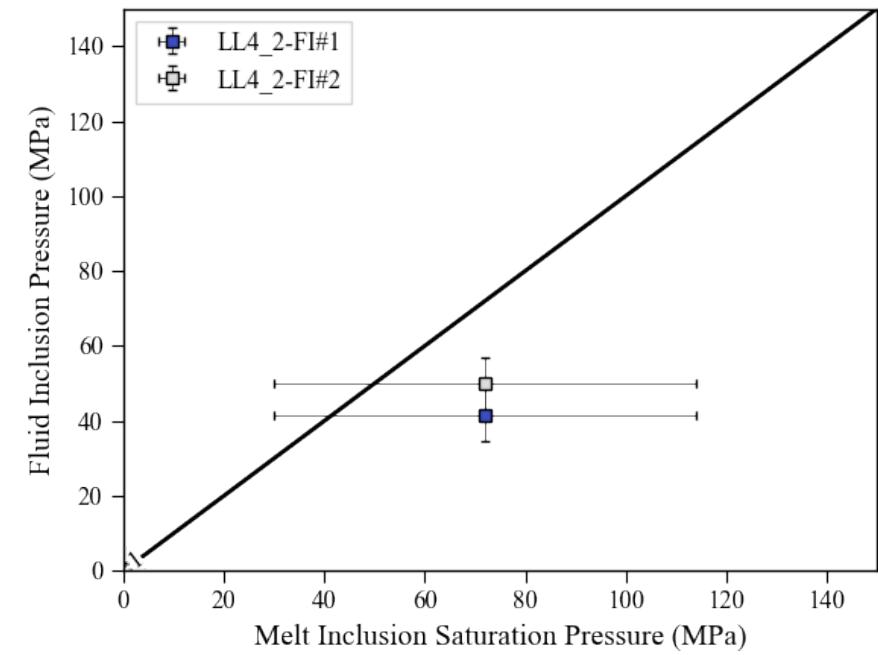
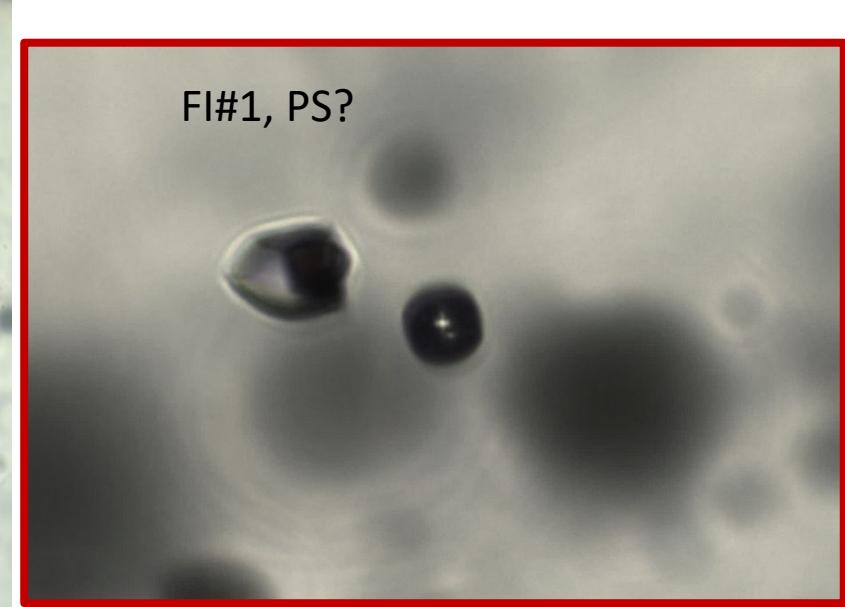
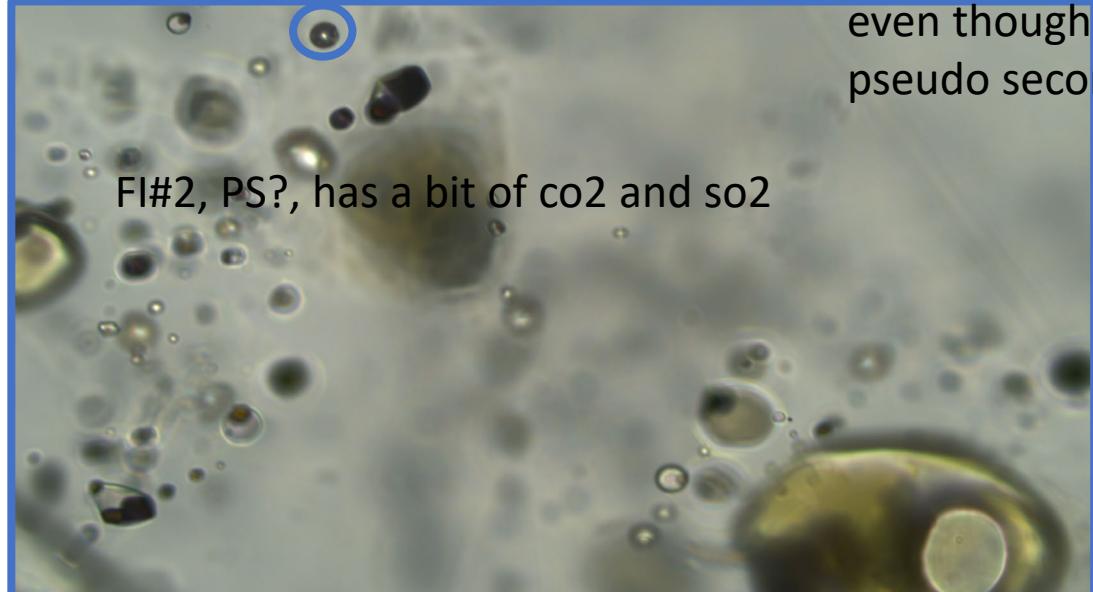
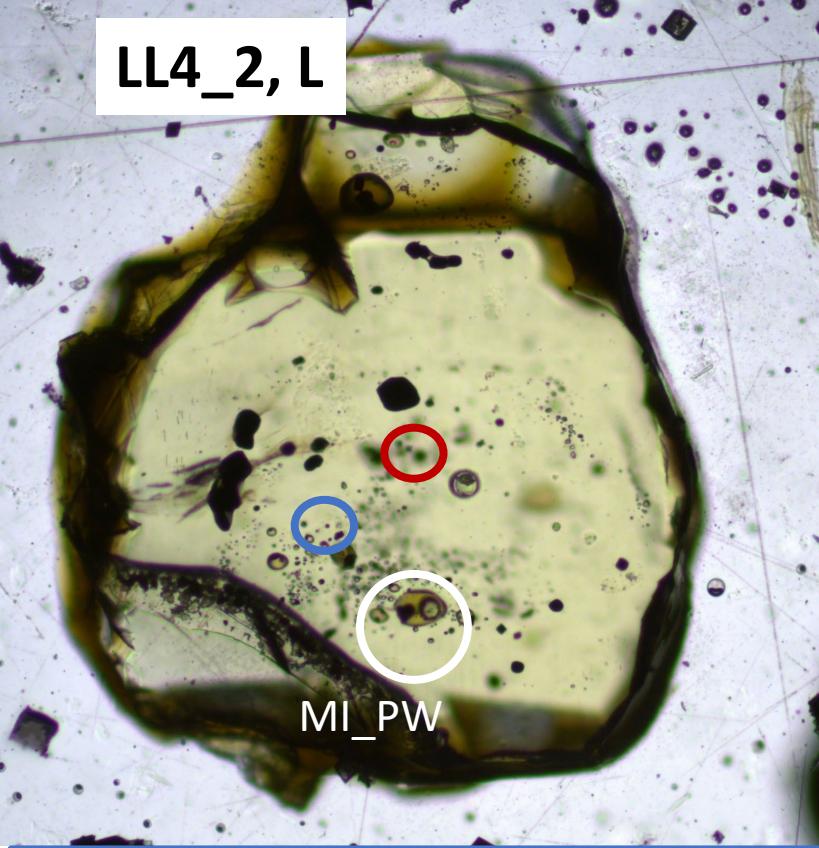
Fi#2- remeasured in Apr23
Has co₂ and so₂



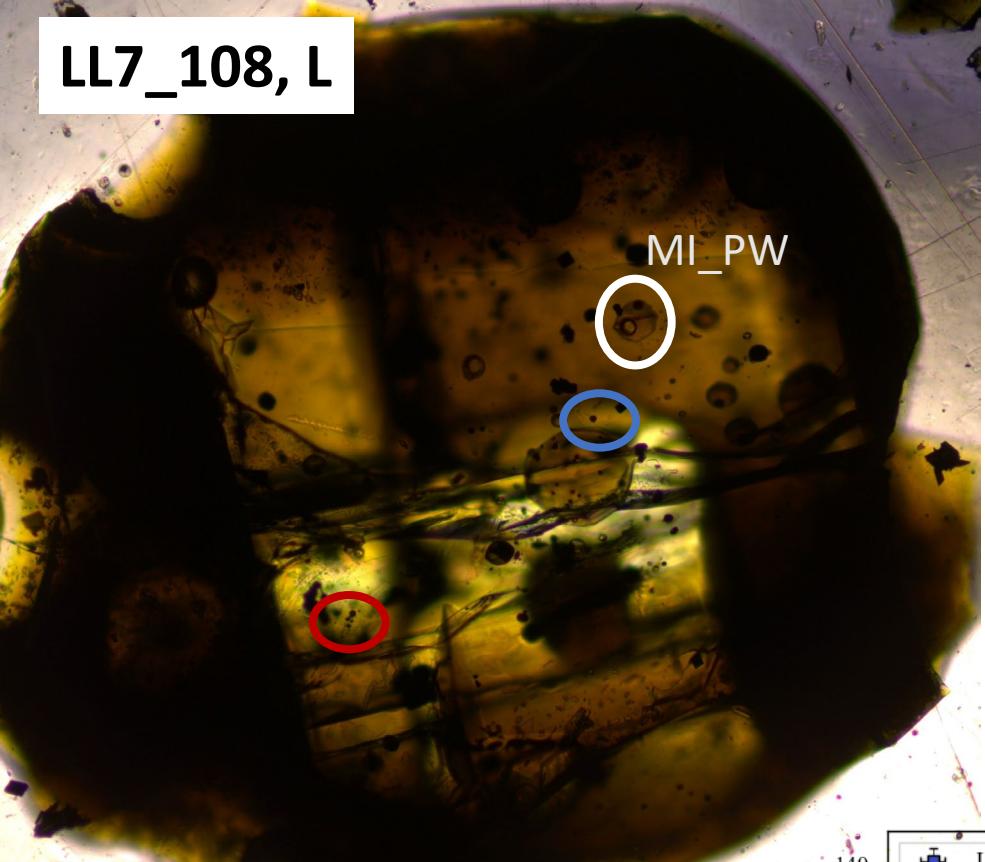
R

2,6,4 are in the same crystal,
they are within the MI error.
1,3,5 are in a subxtal, but it
could be budded. SEM
needed.

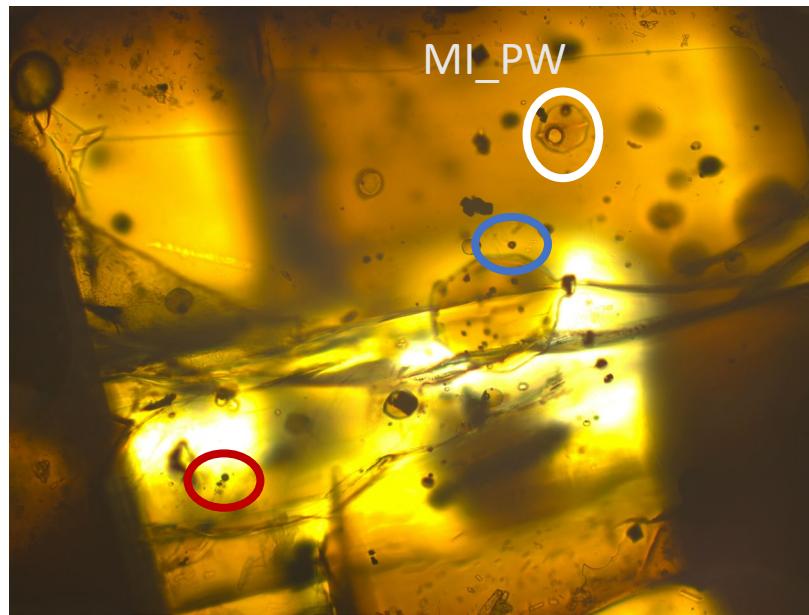
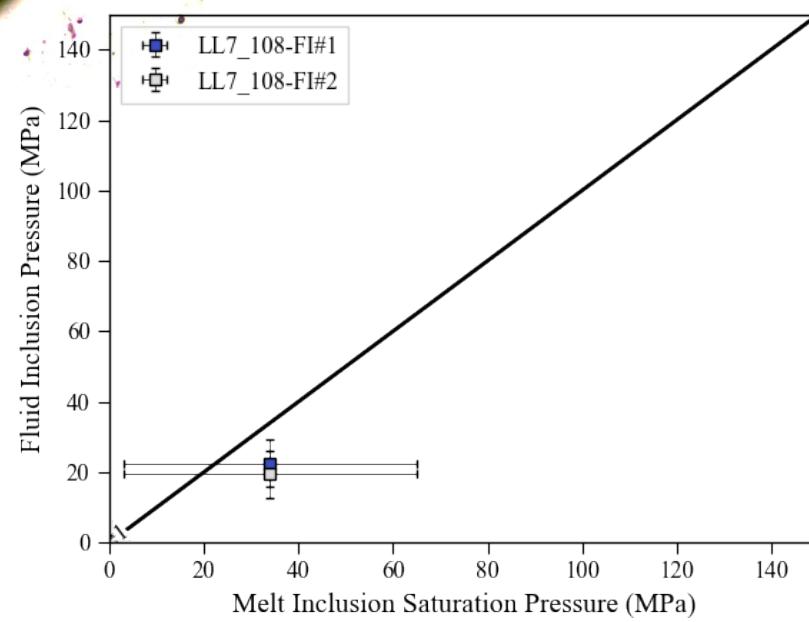




LL7_108, L

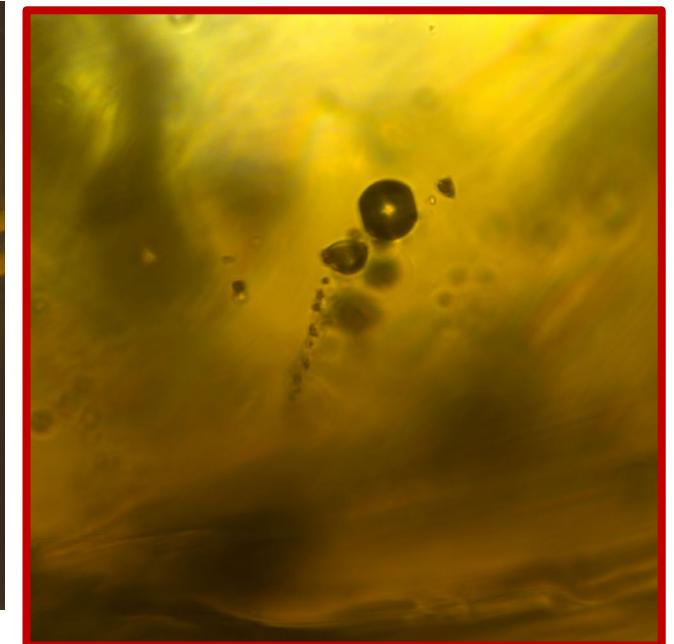


FI#2 is close proximal to the MI,
FI#1 is further and maybe PS, but it records the same pressure.

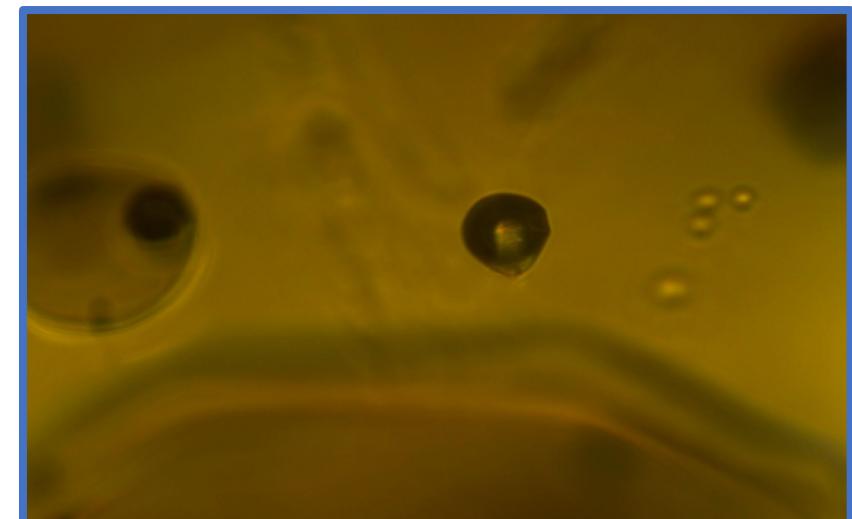


Fi#1, on a trail PS?

R

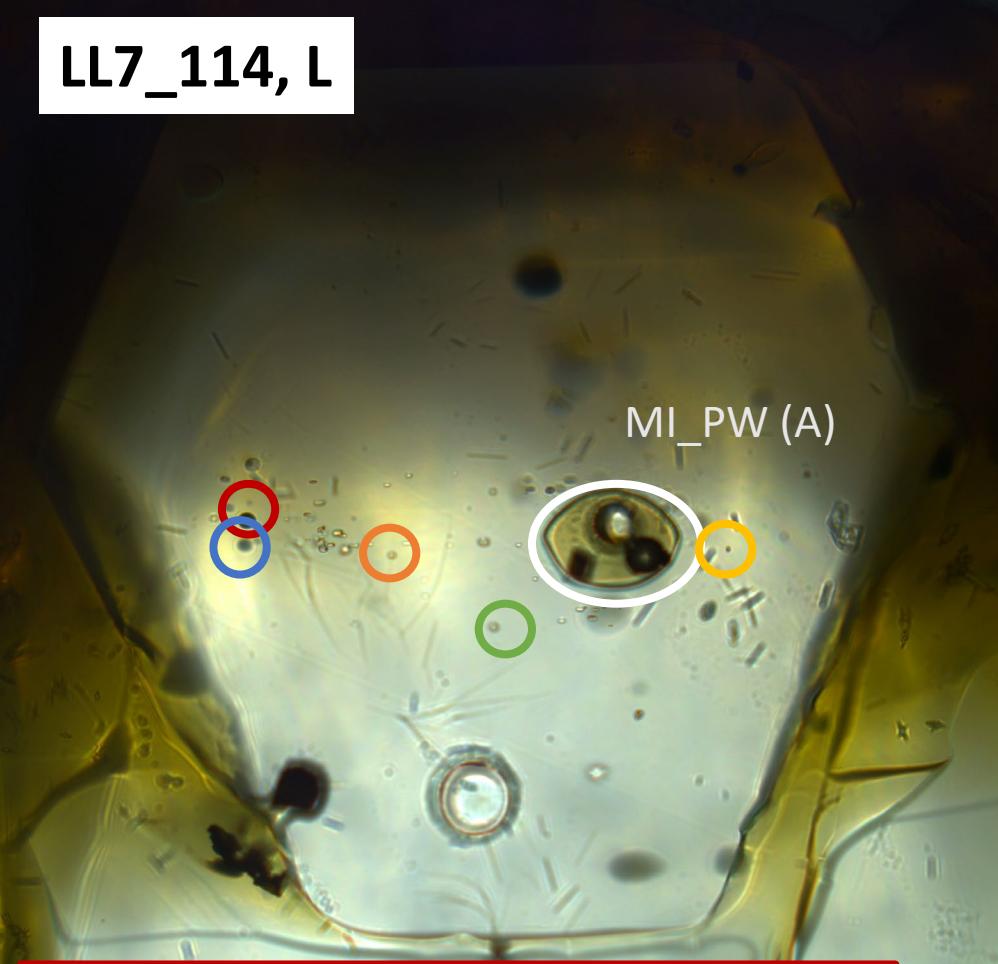


Fi#2, Same xtal, on edge

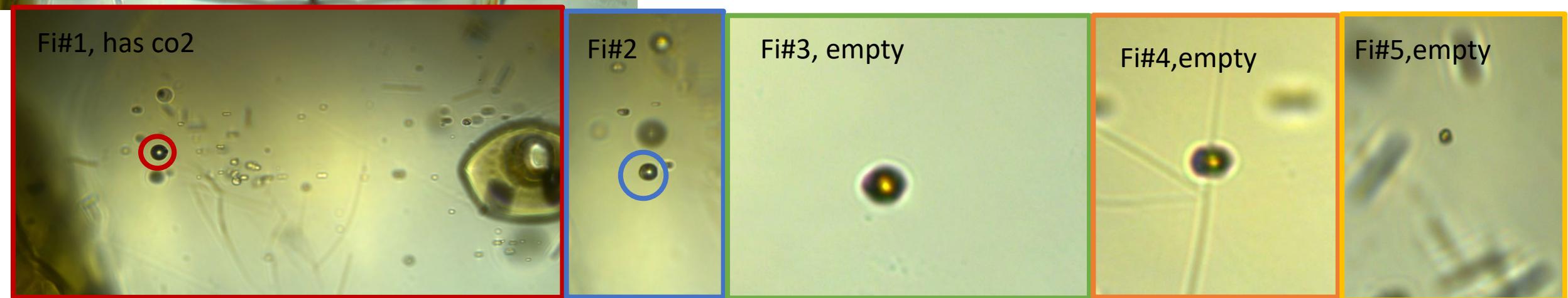
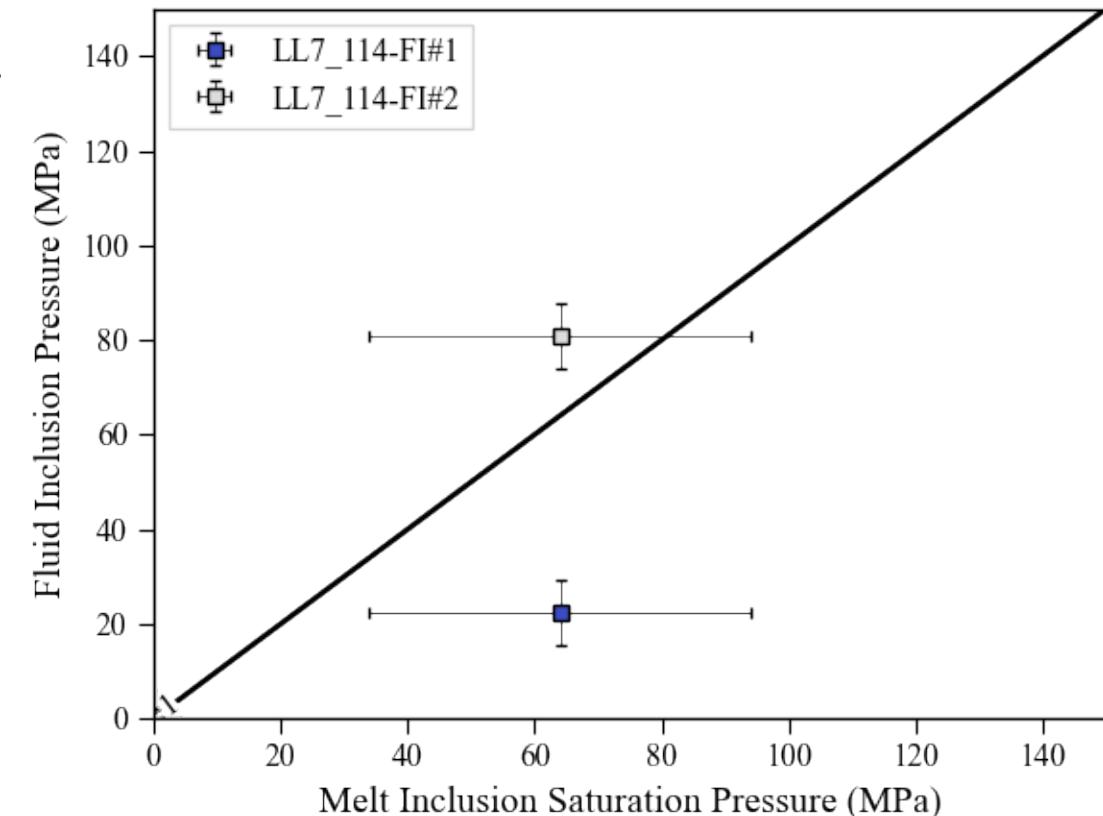


LL7_114, L

R

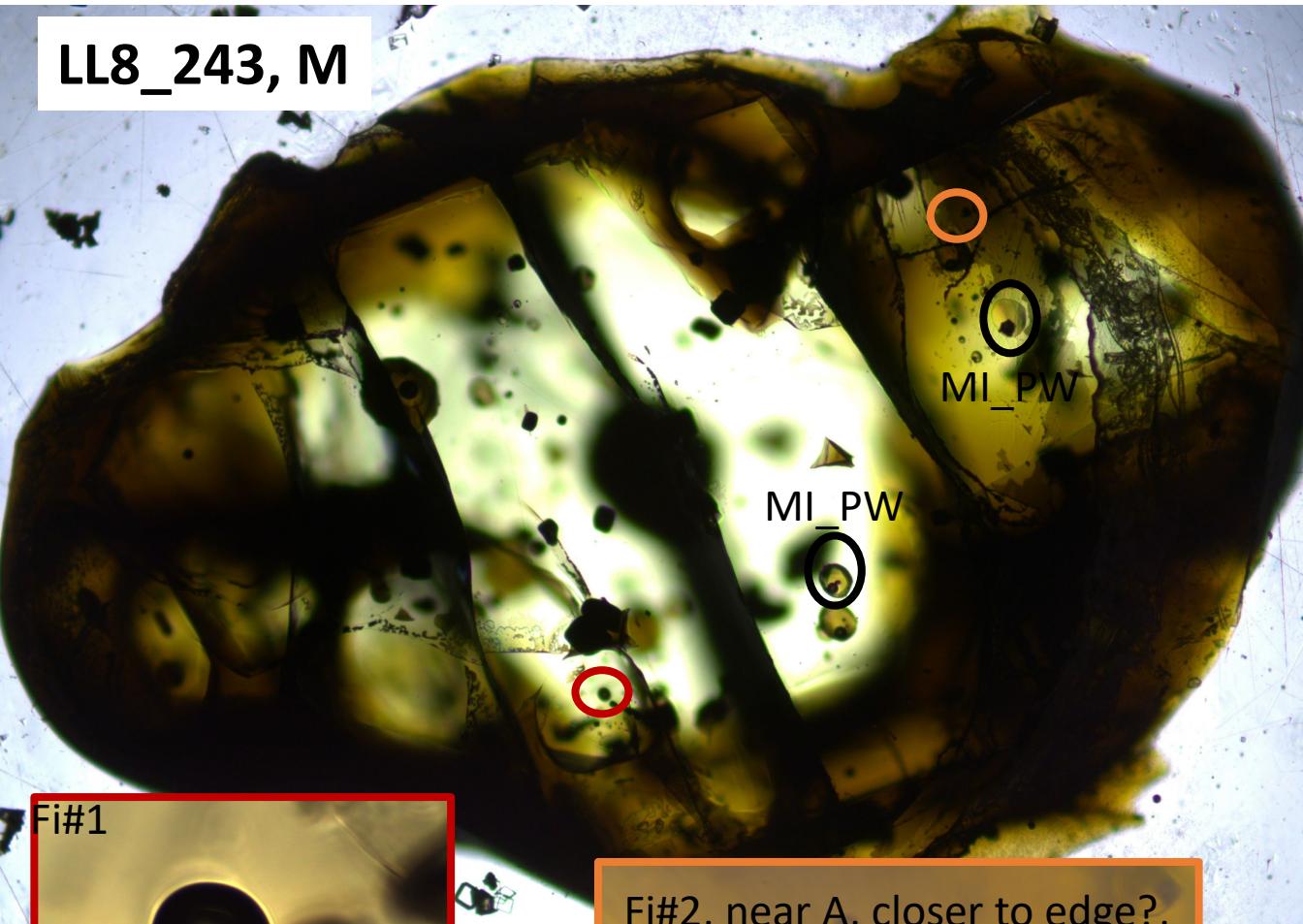


FI#2 is more in the plane of the MI, seems like a similar growth zone of the crystal. FI#1 is deeper but still within a similar GZ. They are close to the MI pressure within error.

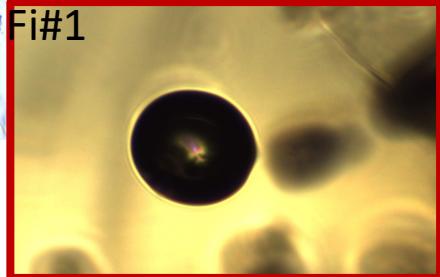


LL8_243, M

R

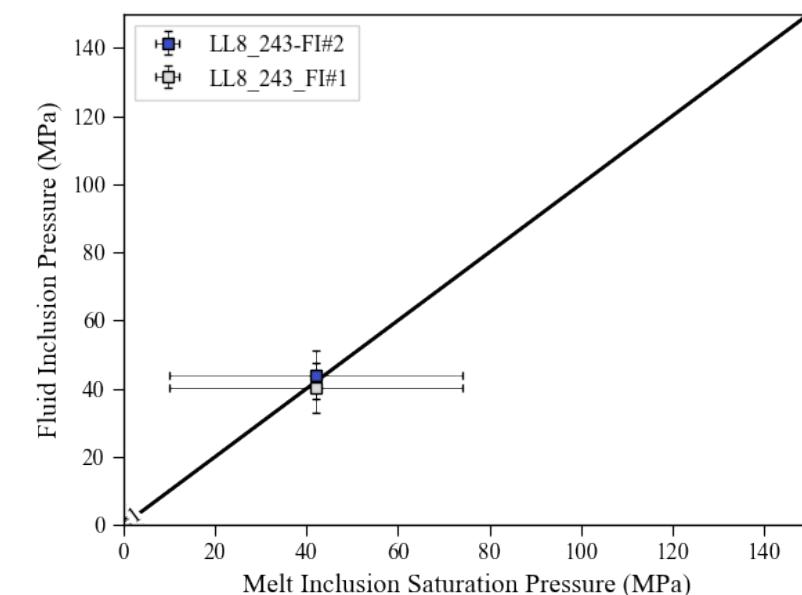
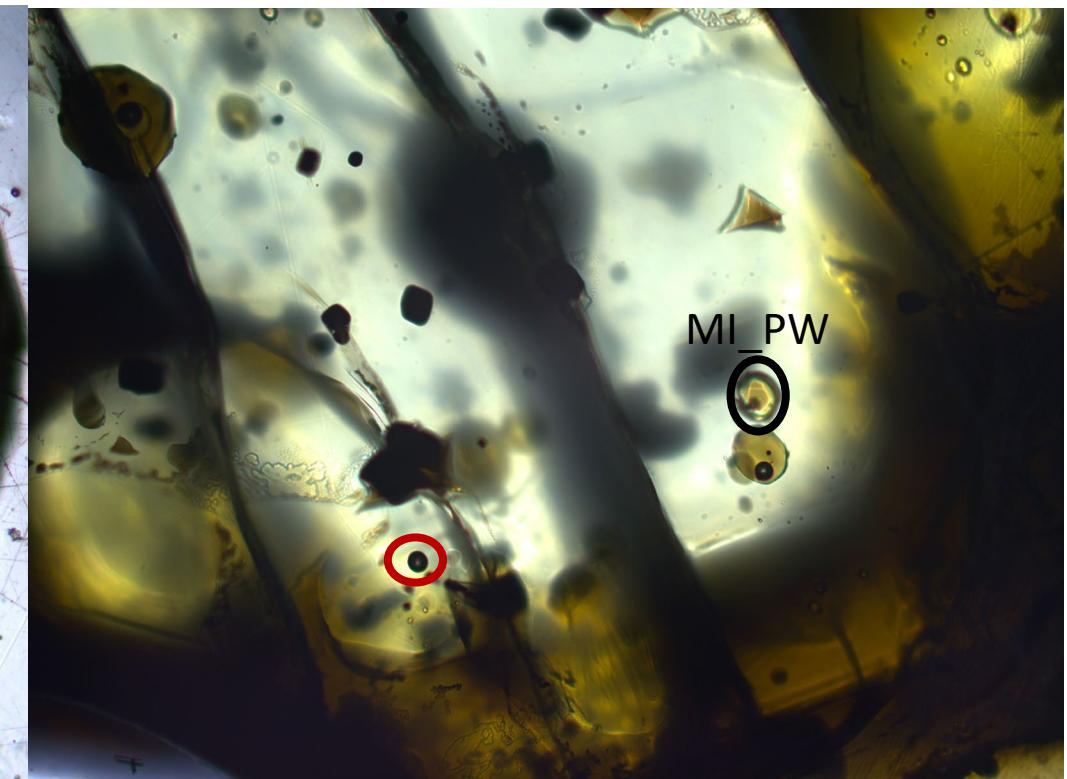
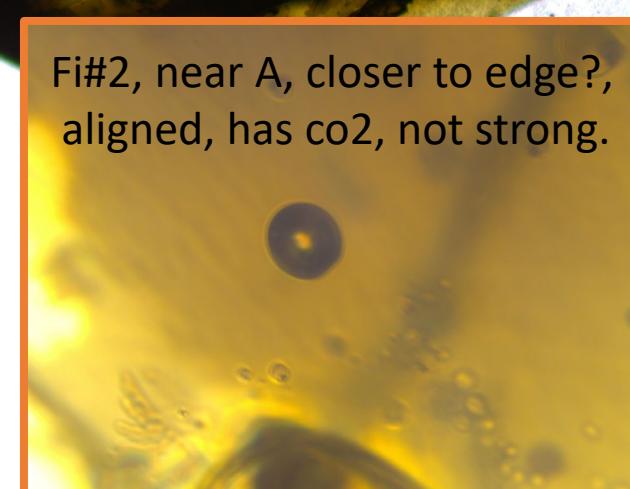


Fi#1

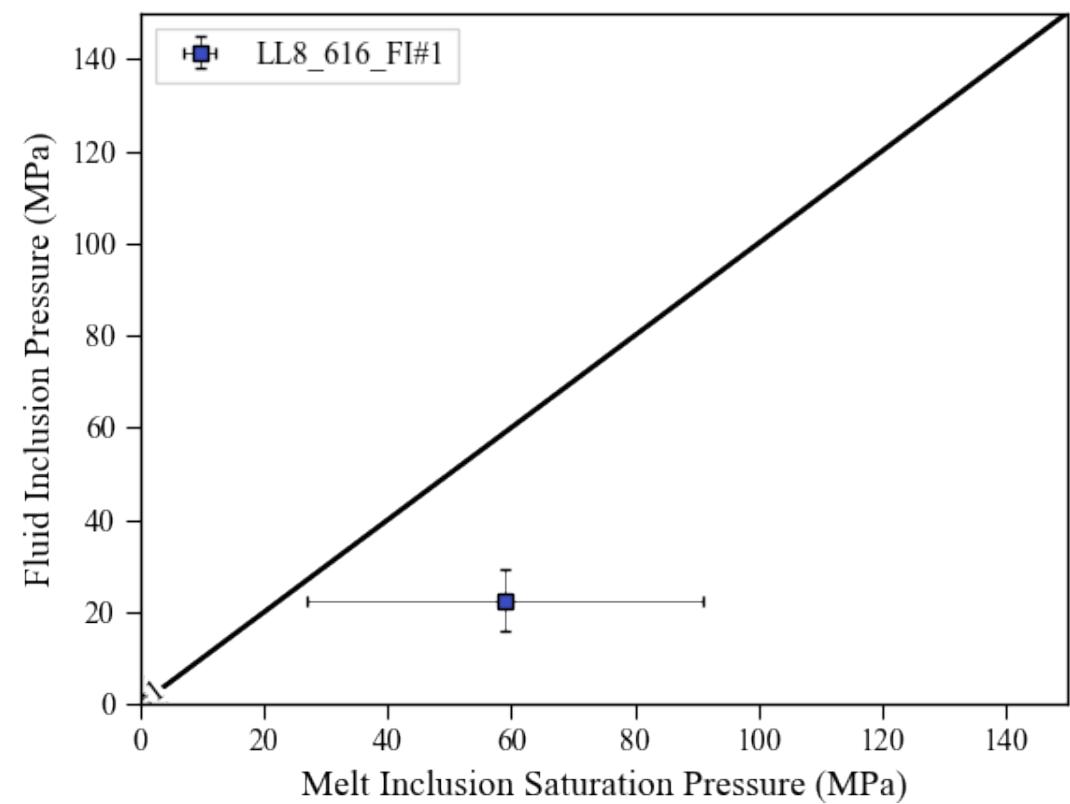
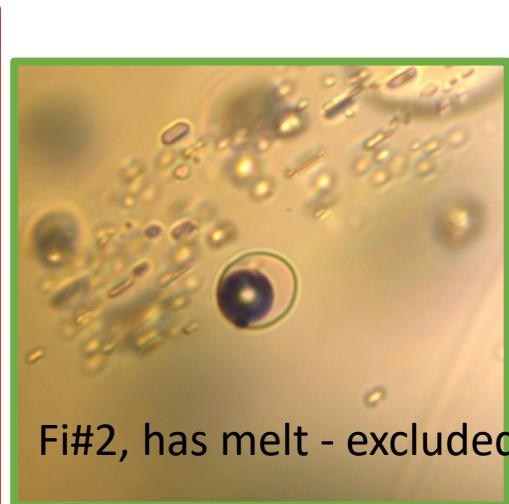
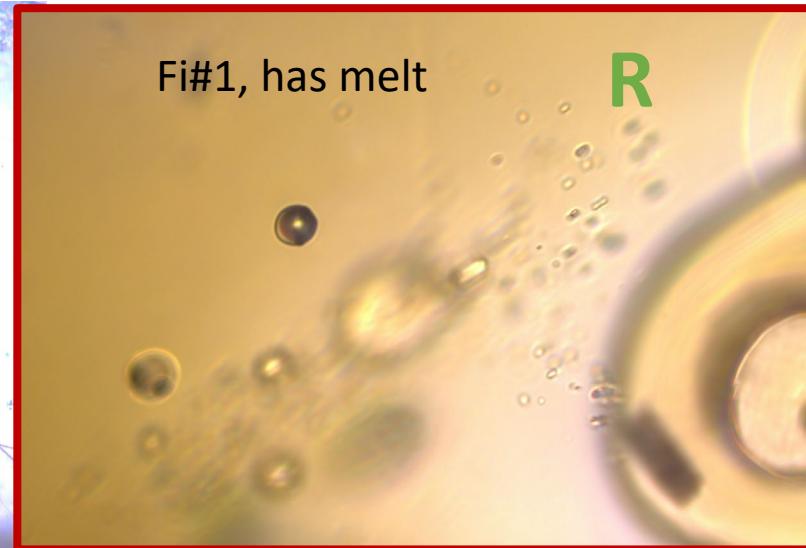
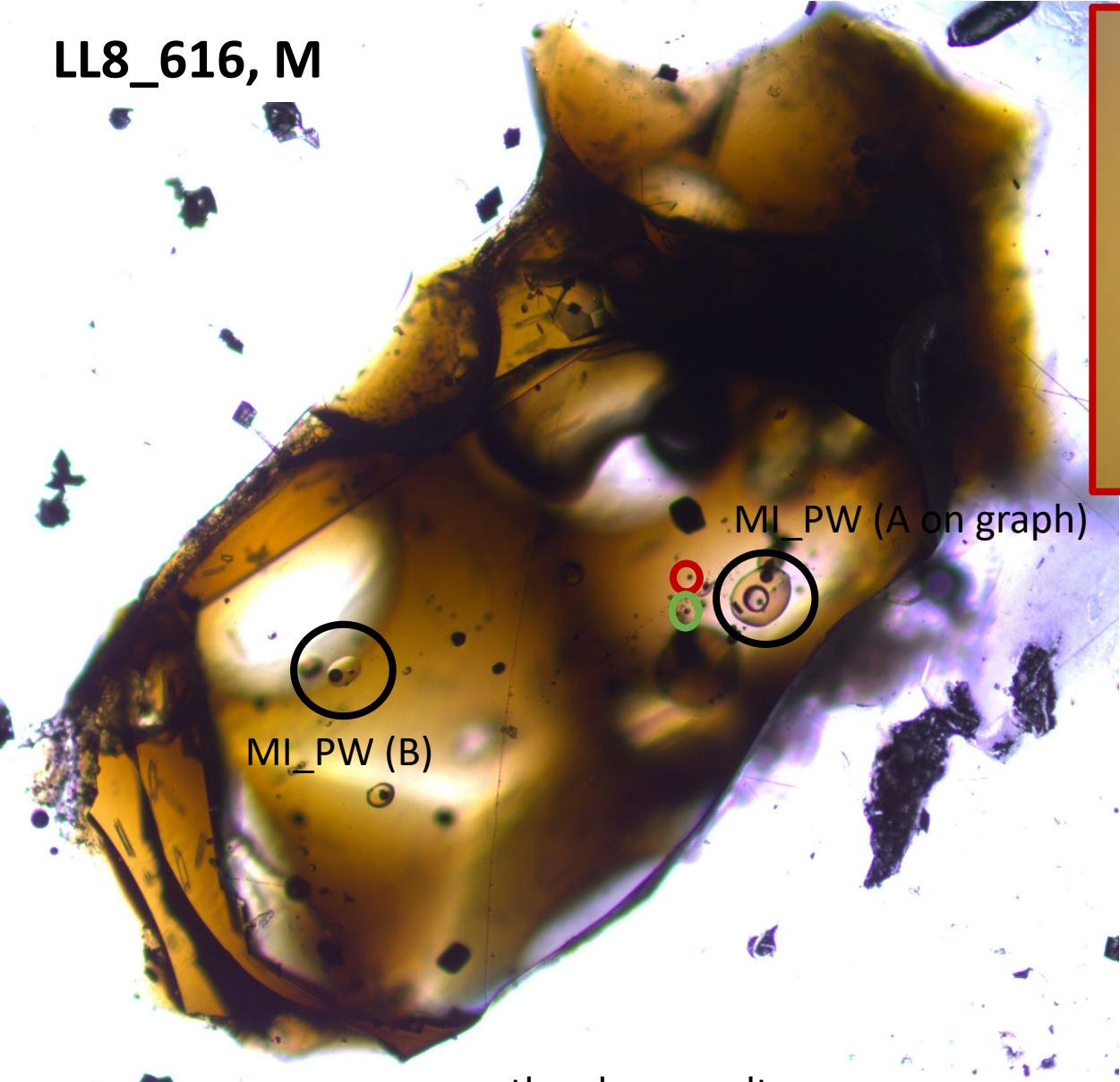


Same crystal for Fi#1.
Fi#2 is in different
crystal, but could be
budded. Fi#1 and MI are
near crystal edge.

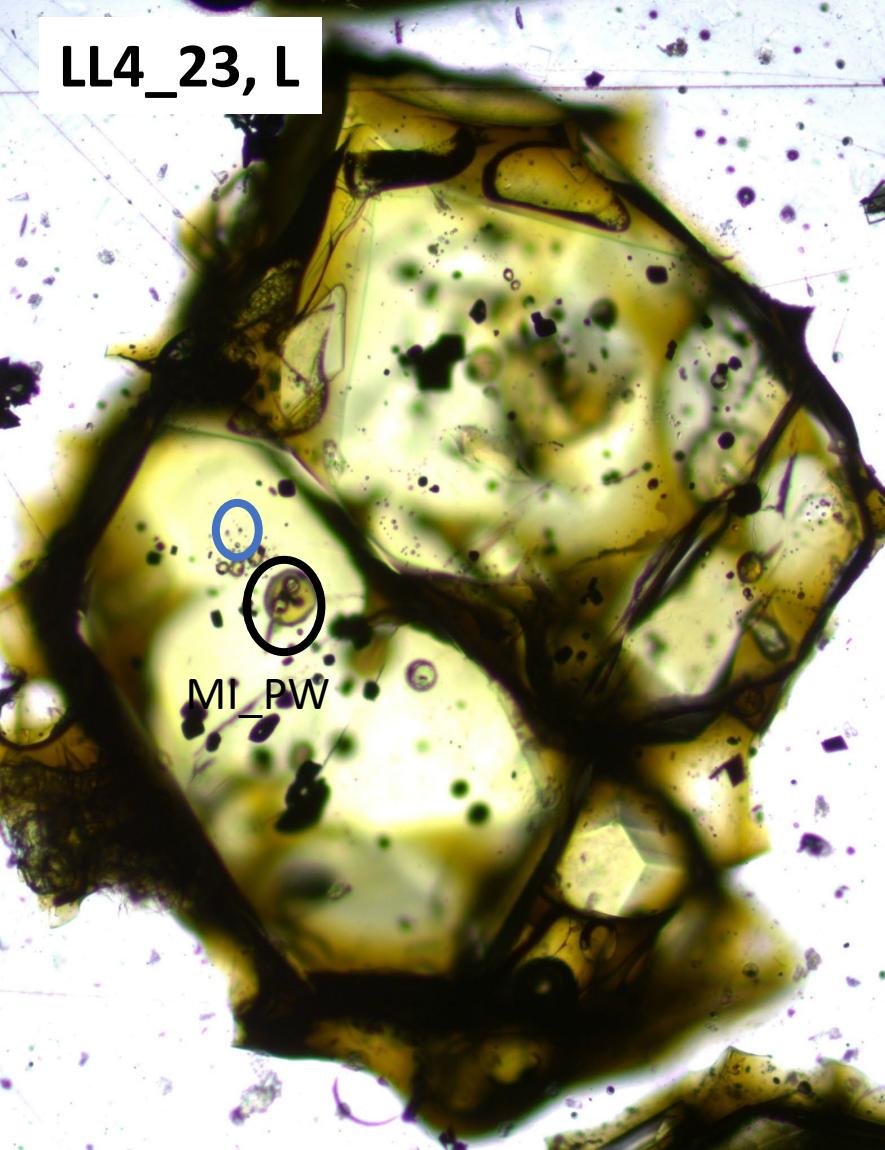
Fi#2, near A, closer to edge?,
aligned, has co2, not strong.



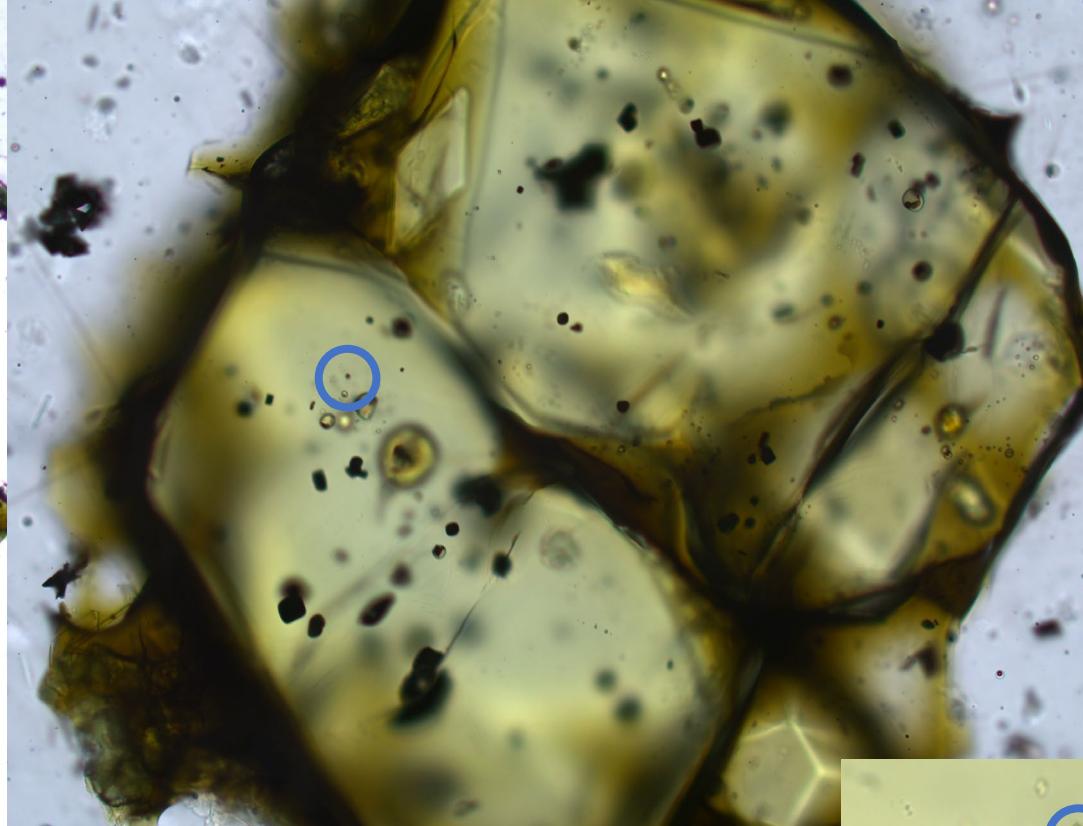
LL8_616, M



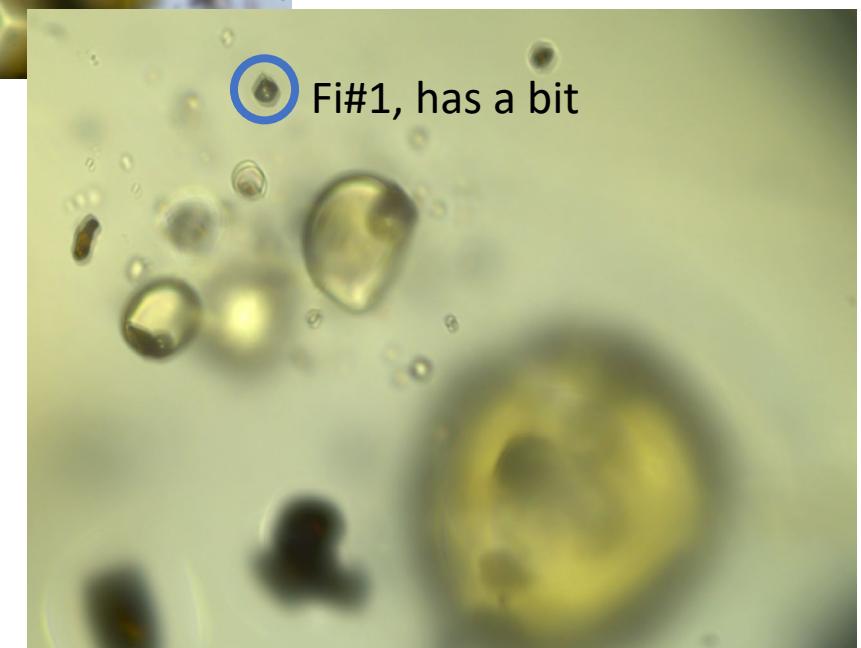
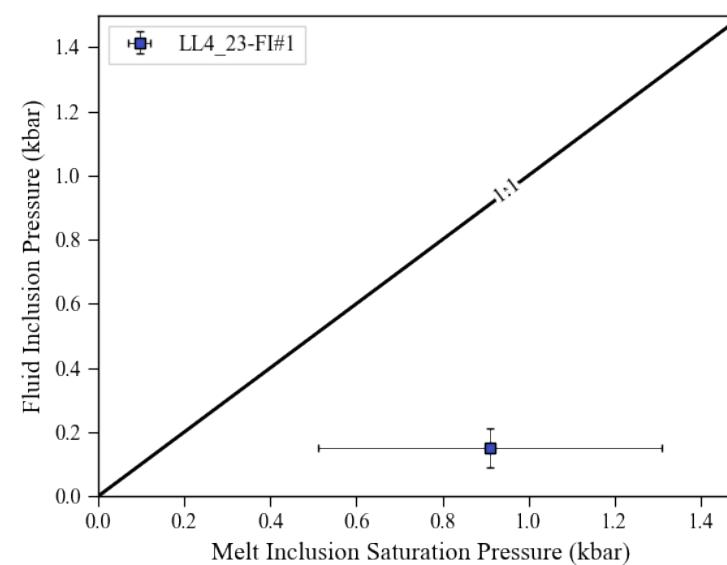
LL4_23, L



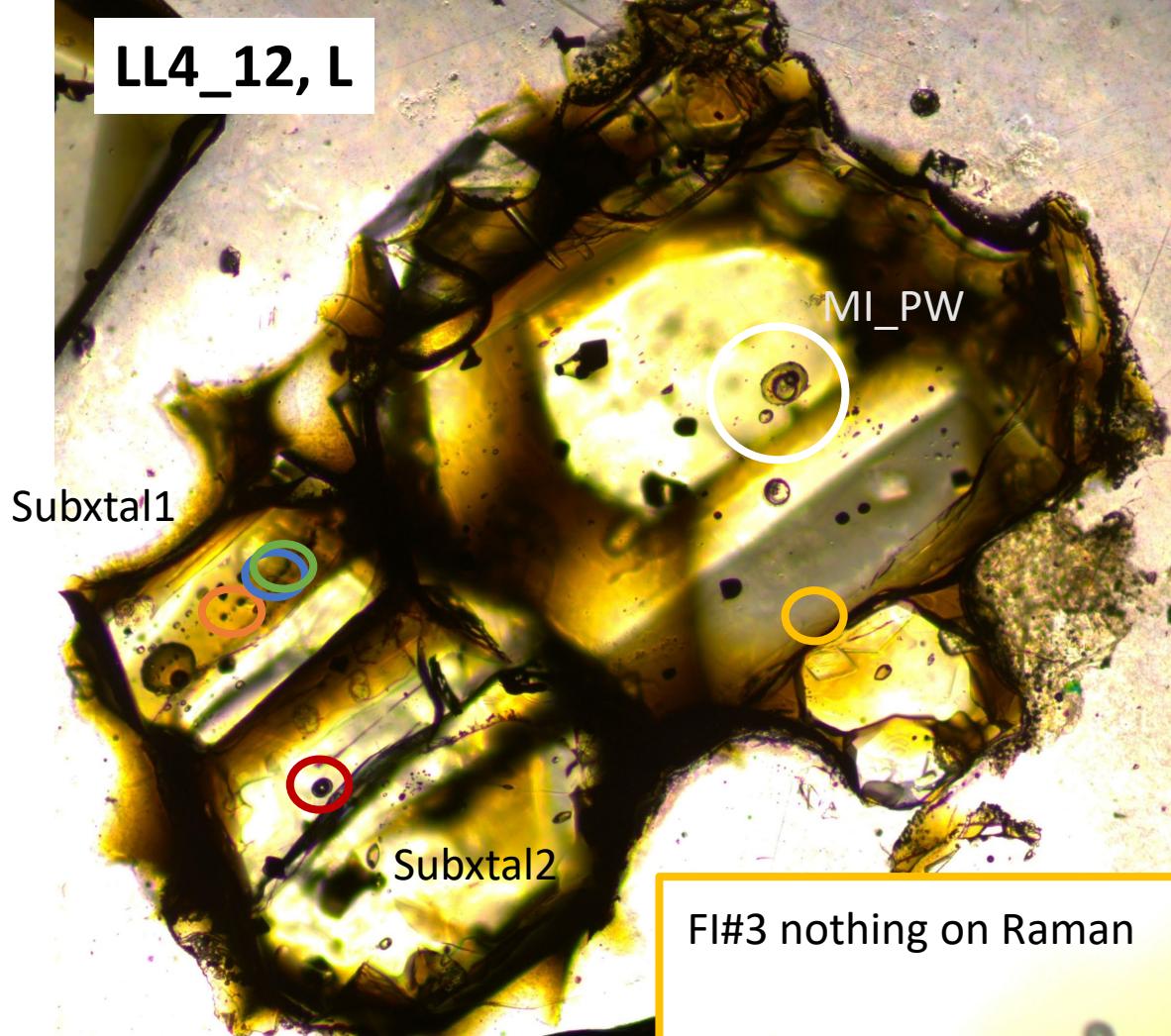
R



This was a really bad spec. High bckg, not lots of points above, low Intensity/FWHM ratio (below 200). the fit error was high (30% on density). It has SO₂.

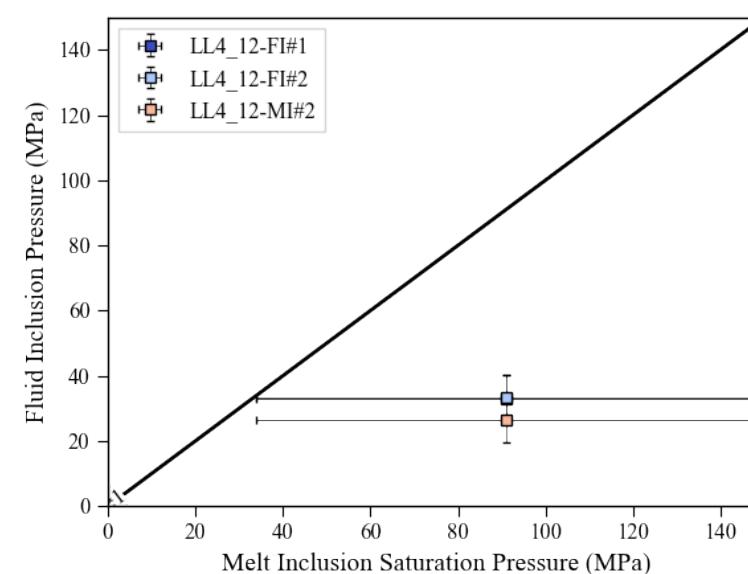
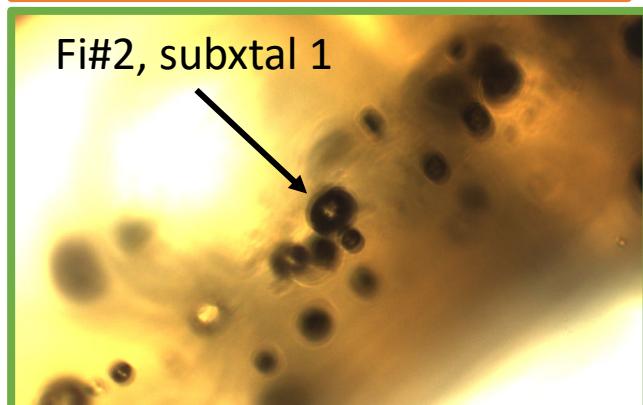
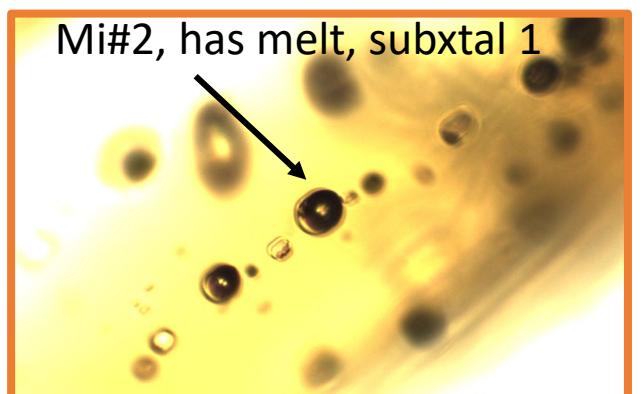
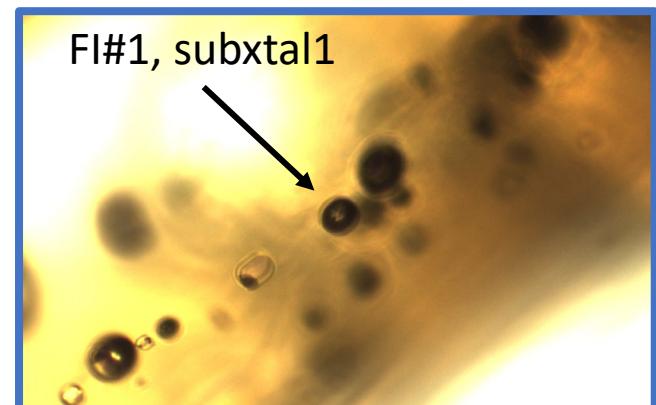
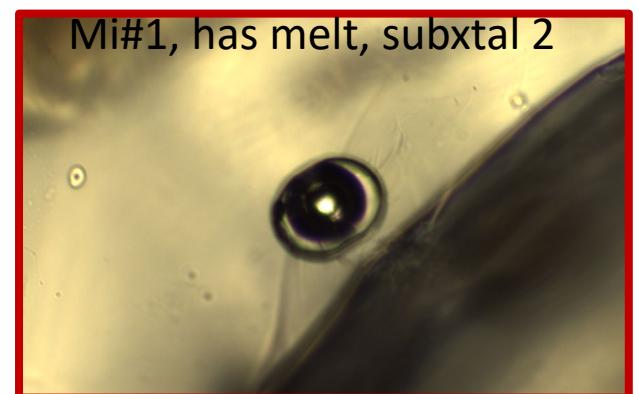


LL4_12, L

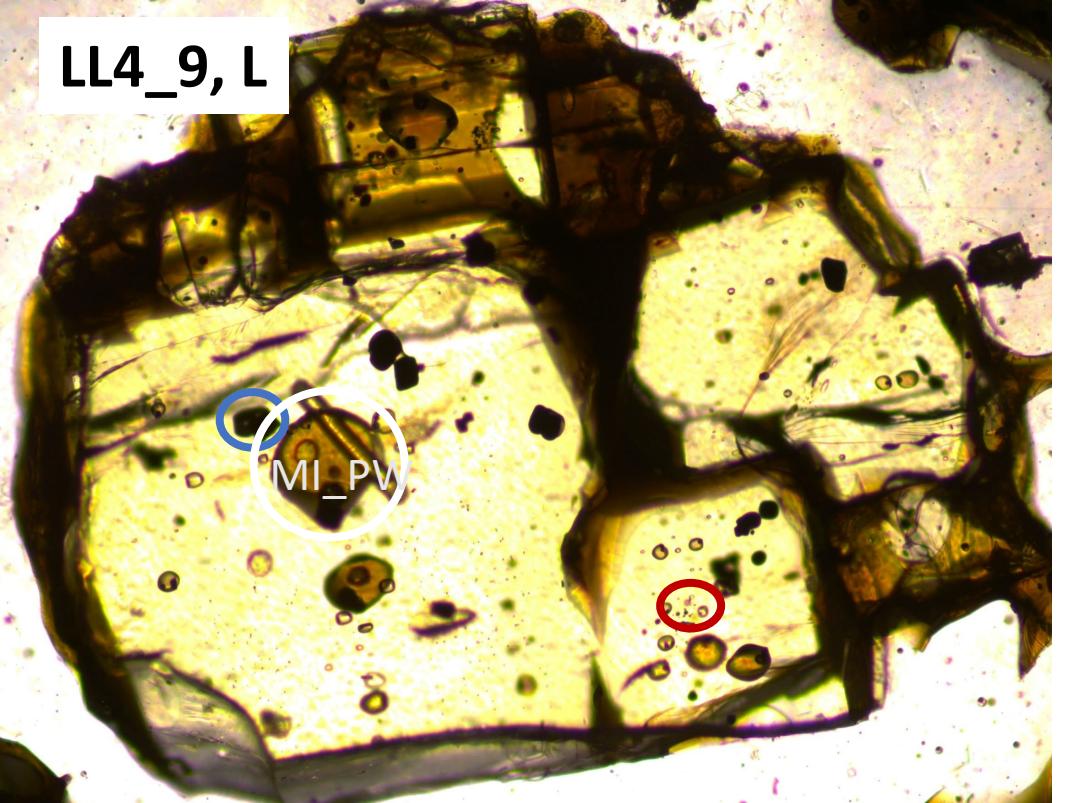


The FI are in a separate subxtal,
so they don't work
Example in main
article

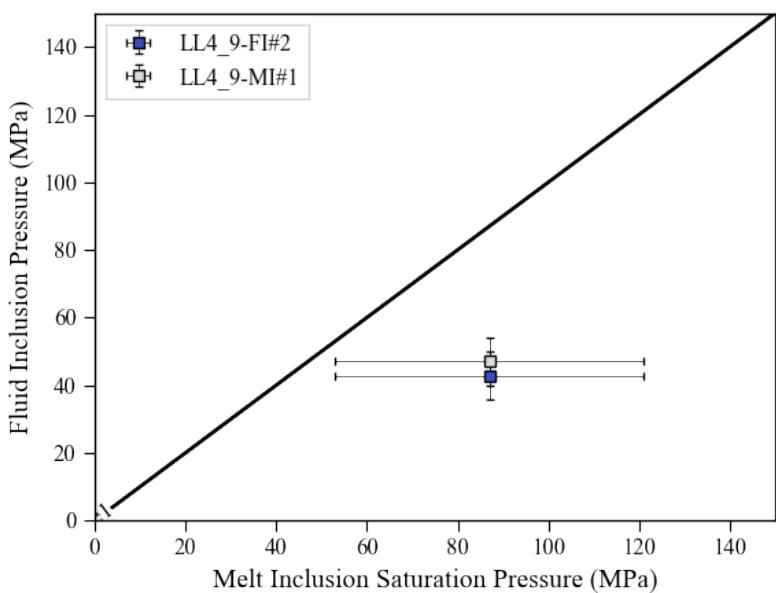
FI#3 nothing on Raman



LL4_9, L

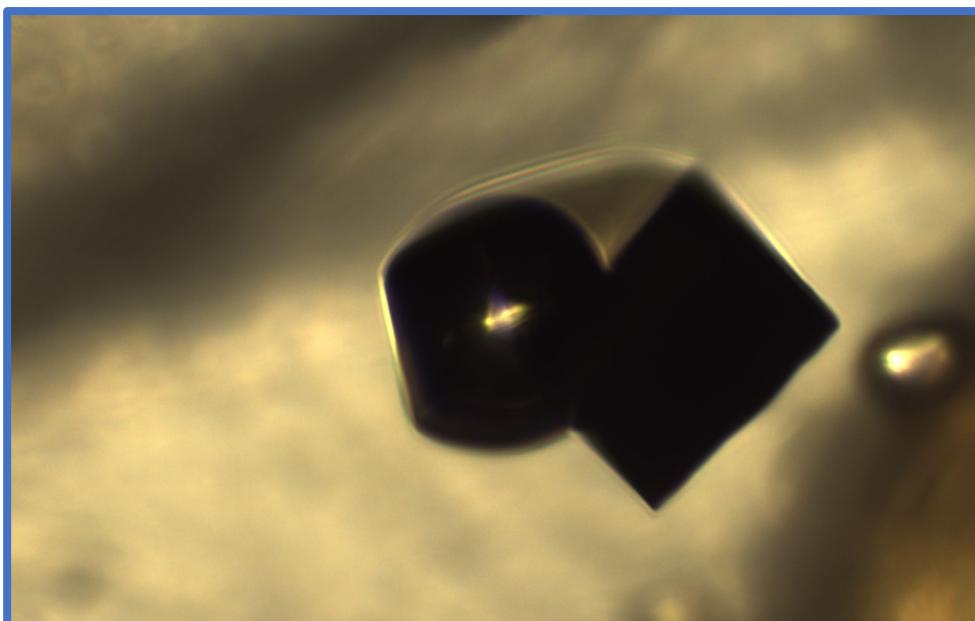


The FI with no melt is in a separate xtal. The other one has melt

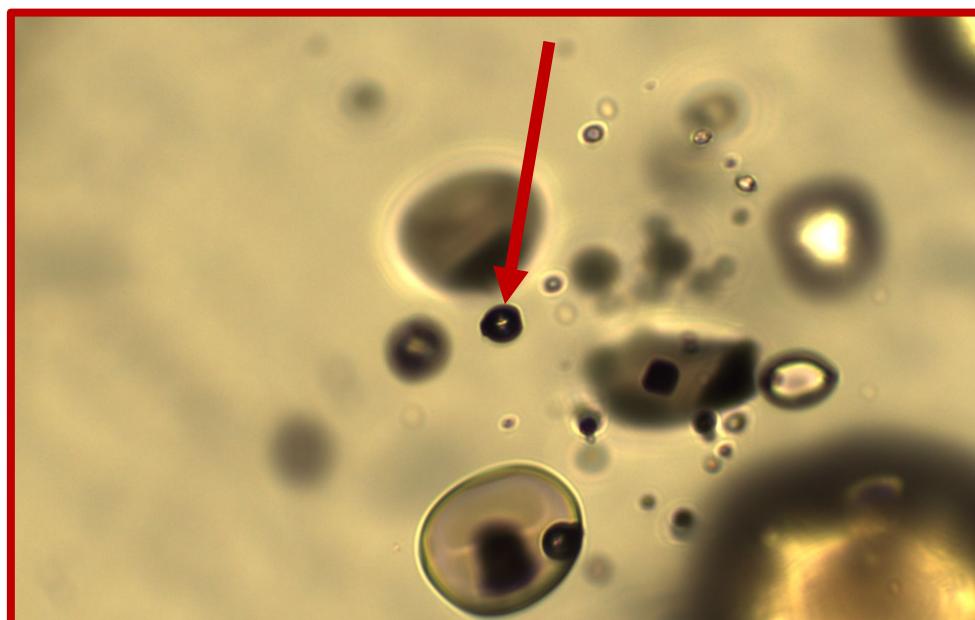


Mi#1, has some melt

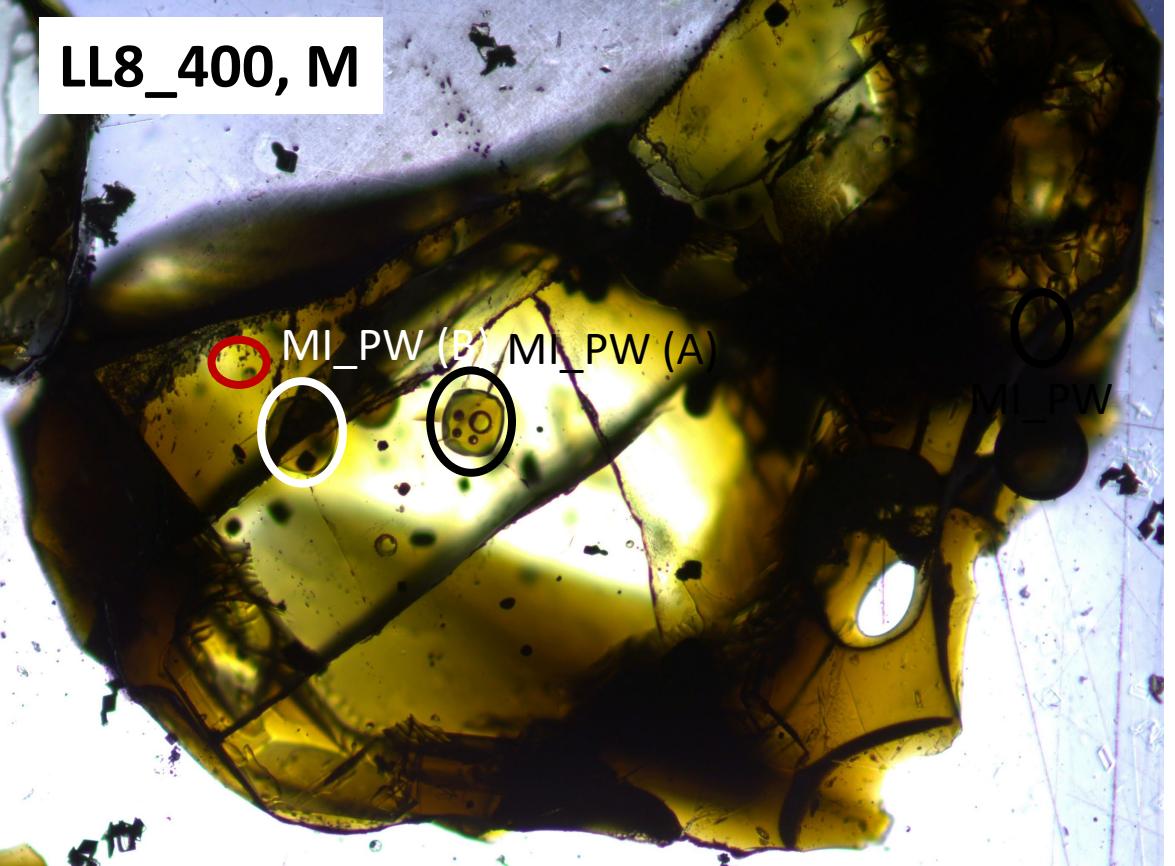
UR



Fi#2, separate sub xtal

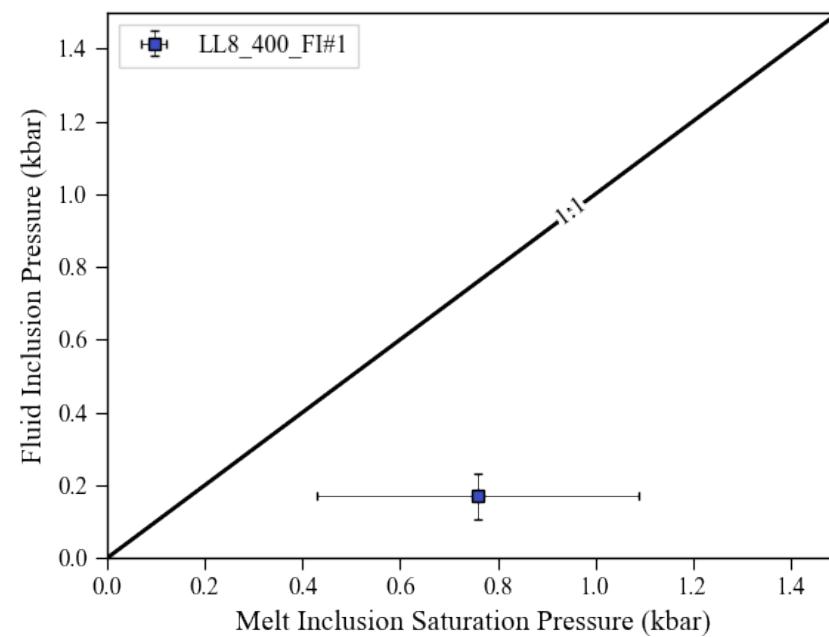
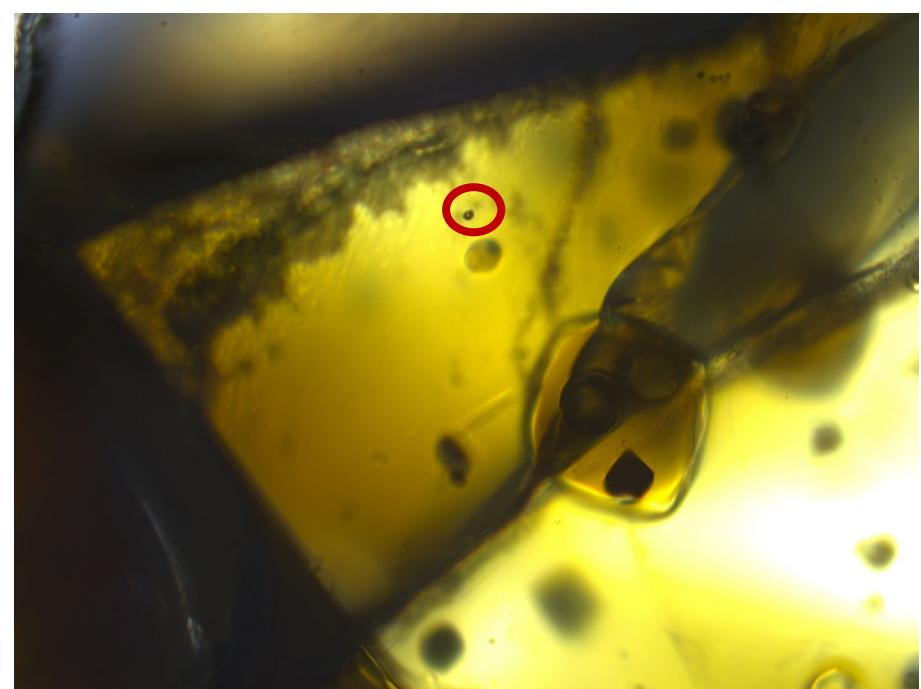


LL8_400, M

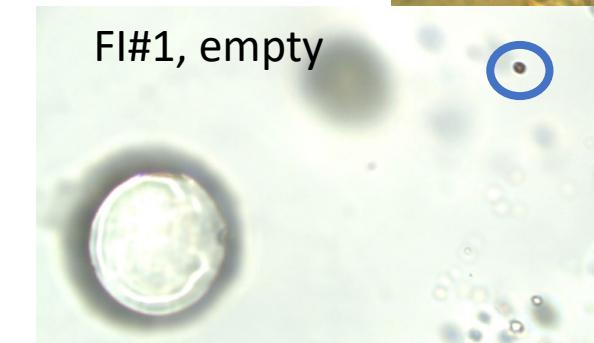
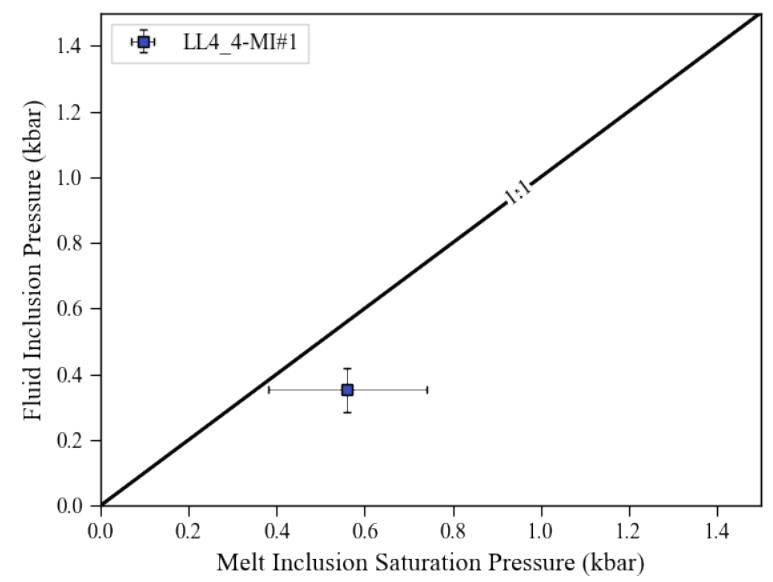
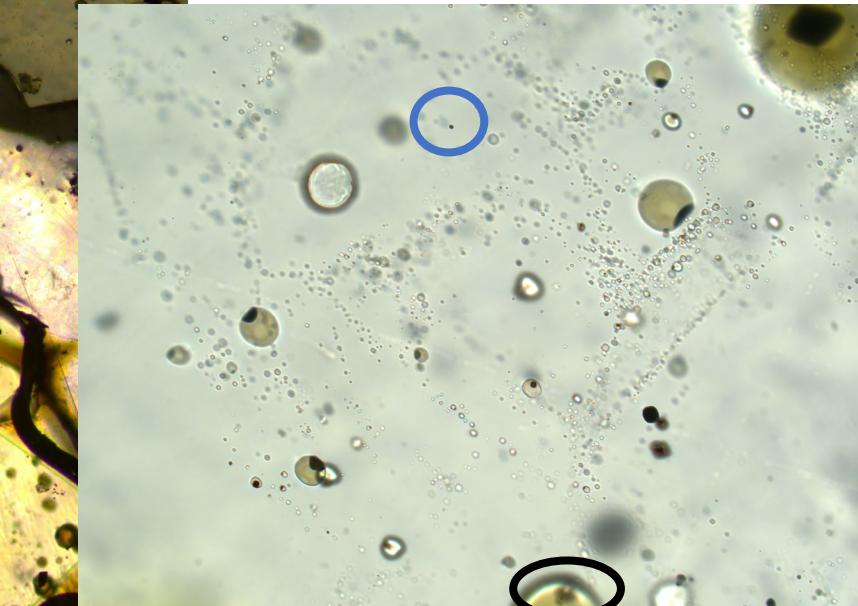
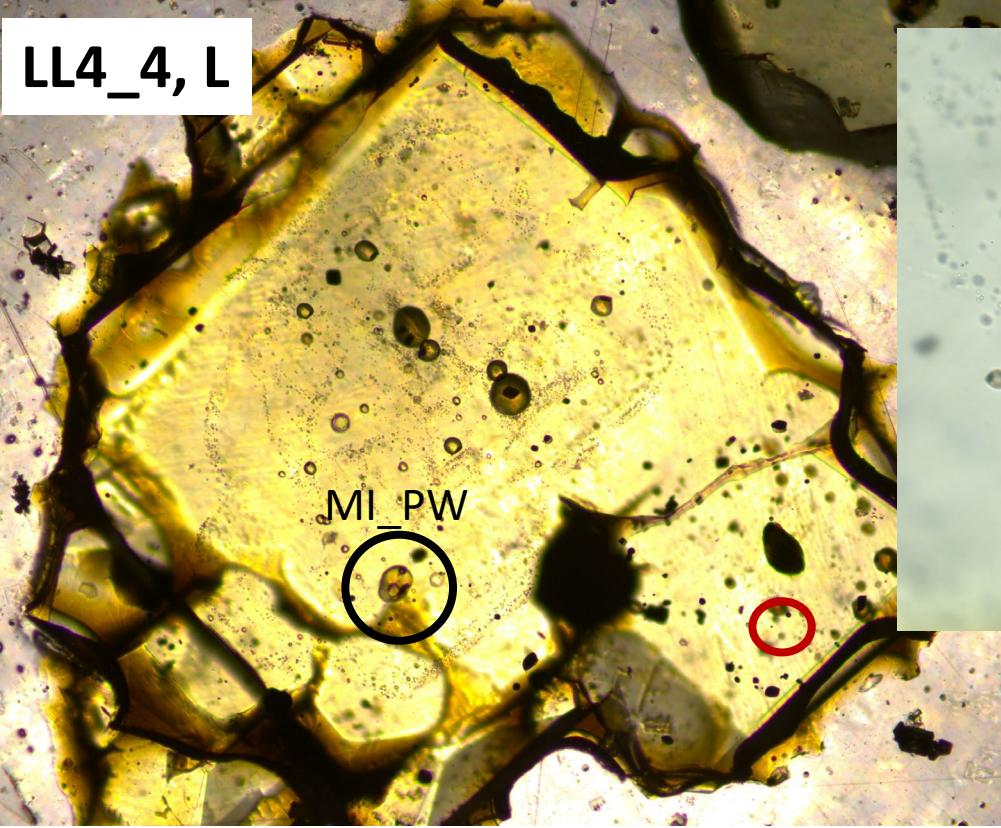


Fi#1, similar position as B,
Tiny bit of melt

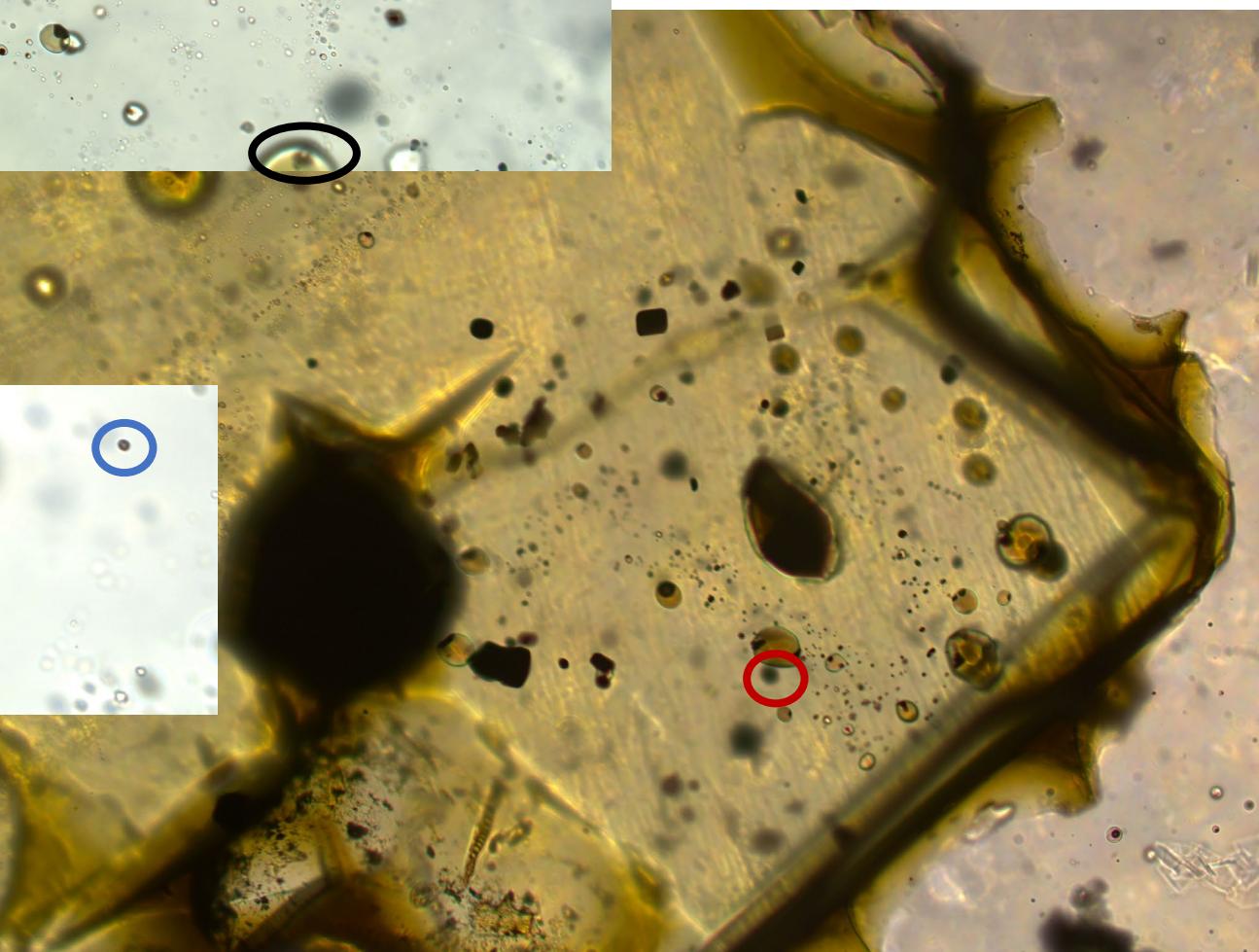
This one is nearer edge
of crystal and has melt.
MI A is the good MI
here, B was cracked
(bad MI). Also, bad spec
with high error (58%)
with bad features and
low intensity/fwhm.



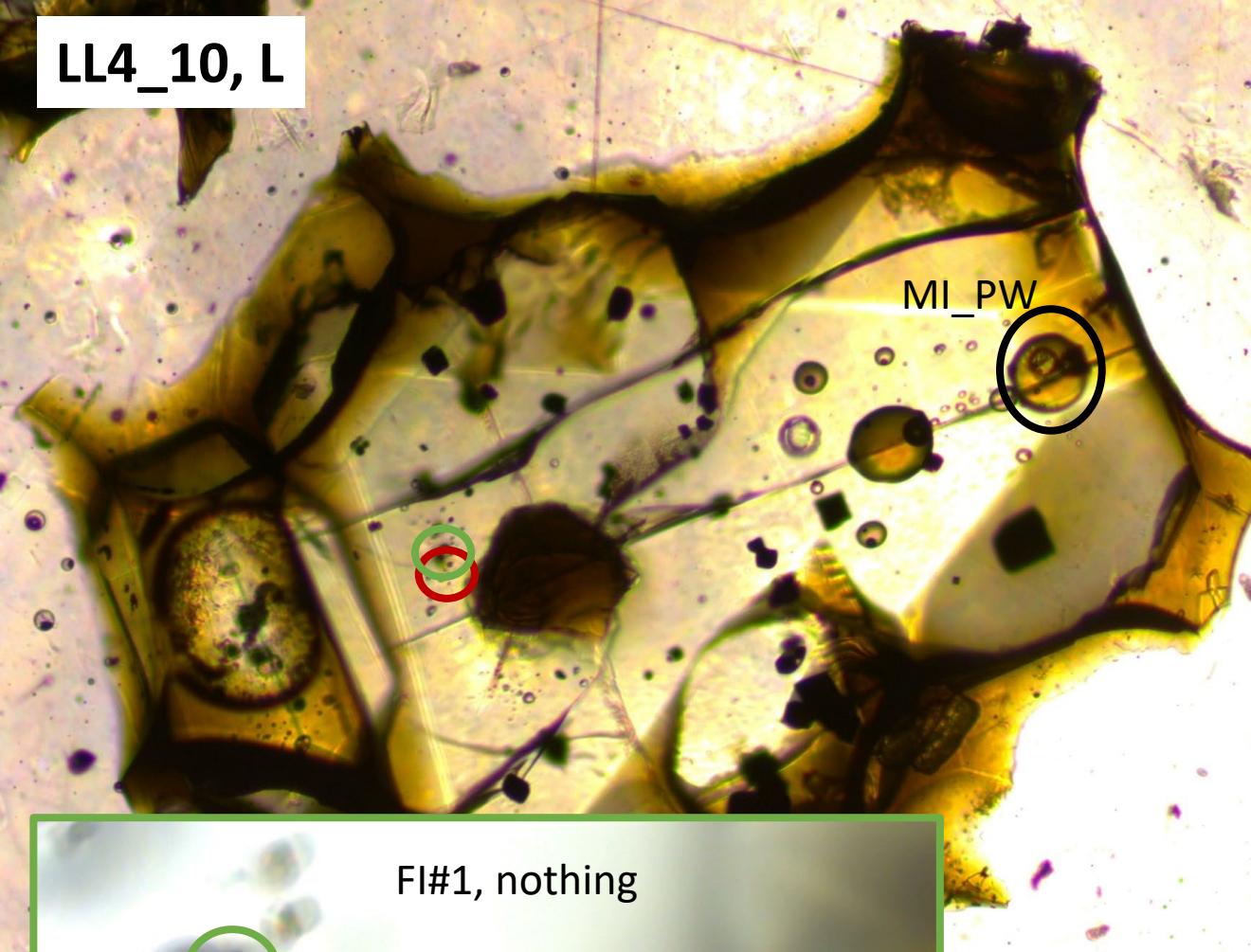
LL4_4, L



This one appears to be a bud, needs more data, also has melt.



LL4_10, L



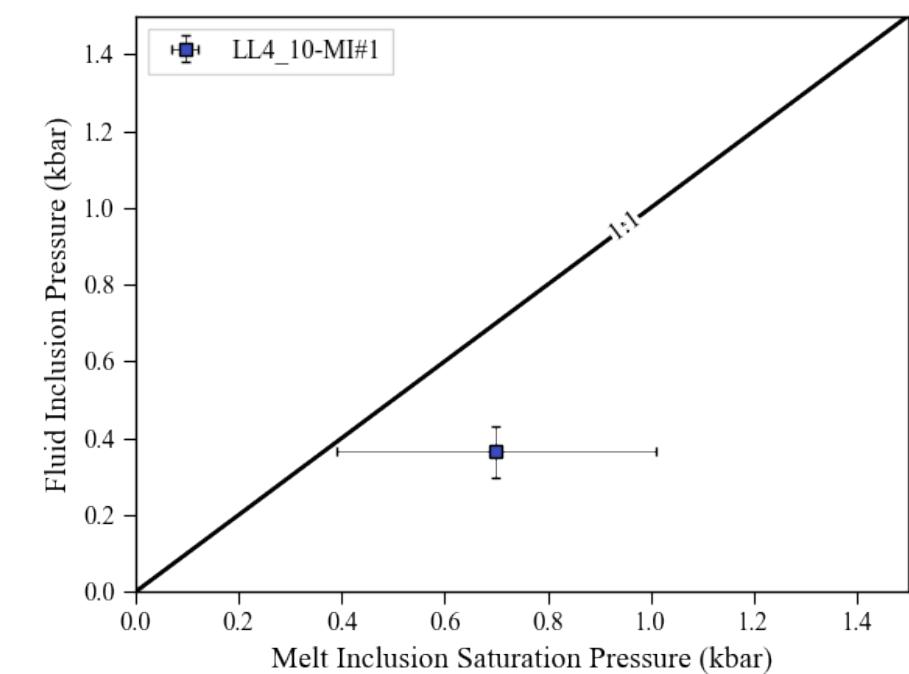
FI#1, nothing



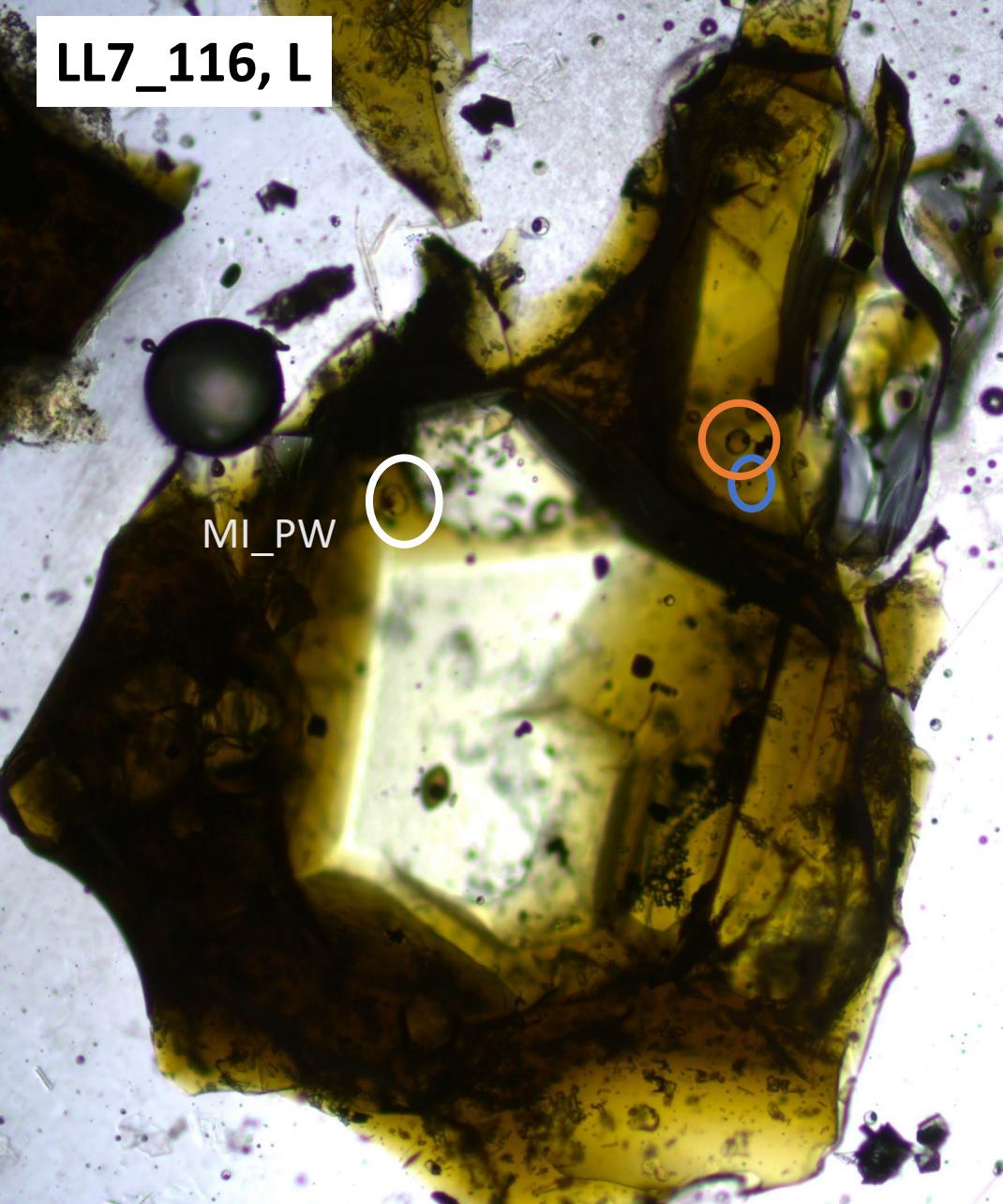
It has melt, but it could be related to the decrepitation of the big MI



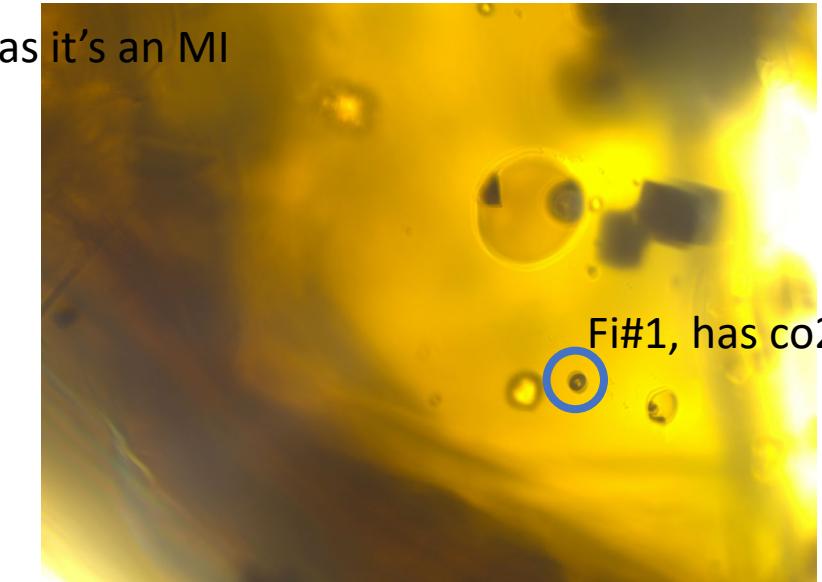
UR



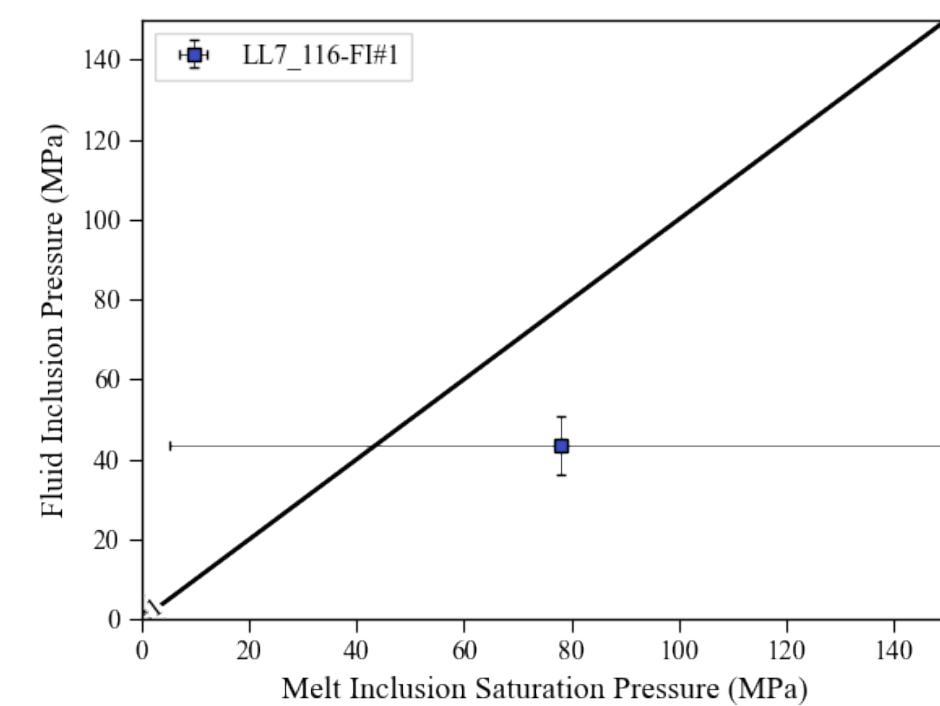
LL7_116, L



MI#1, has co₂, excluded as it's an MI

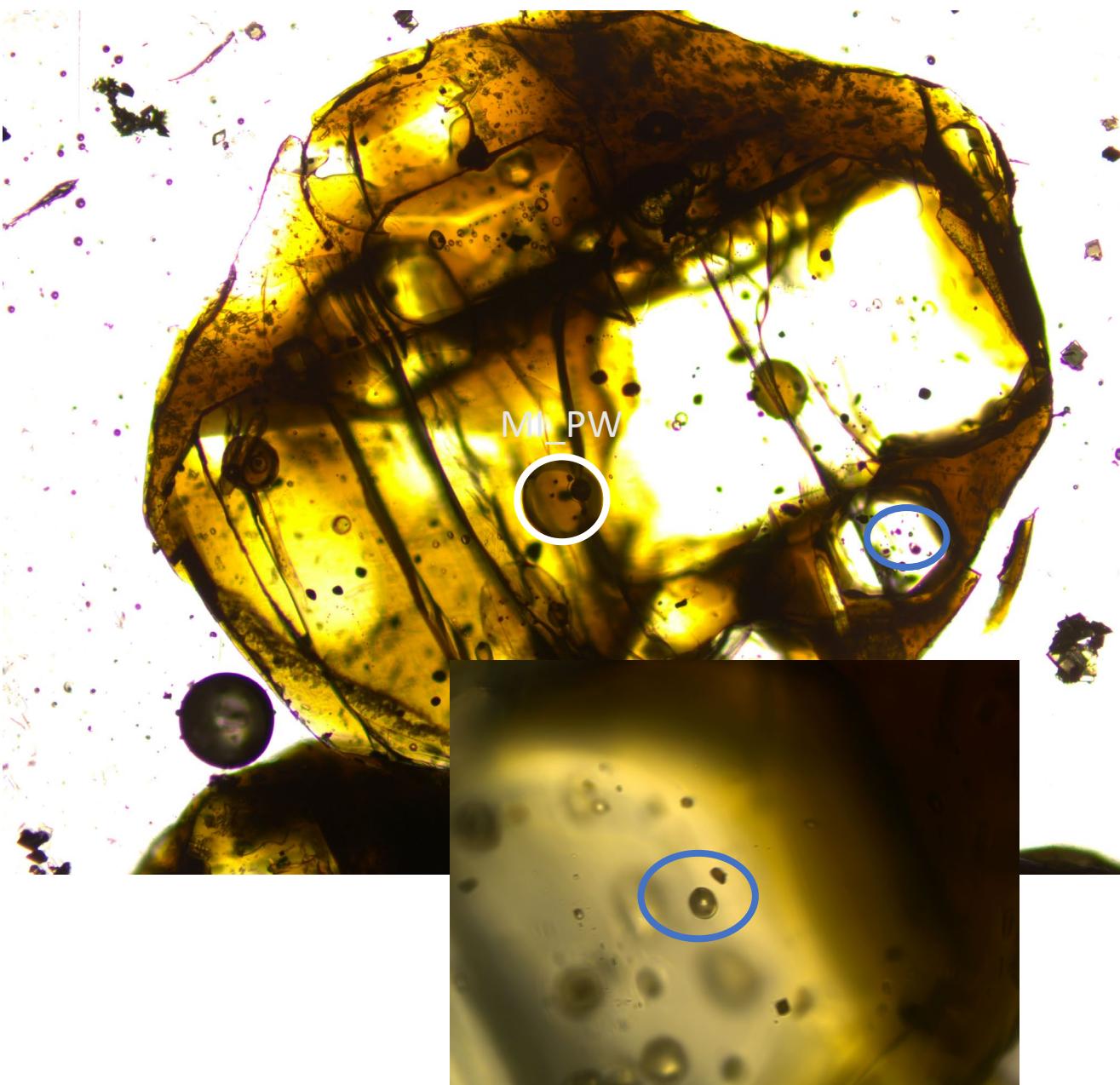


Separate xtal



UR

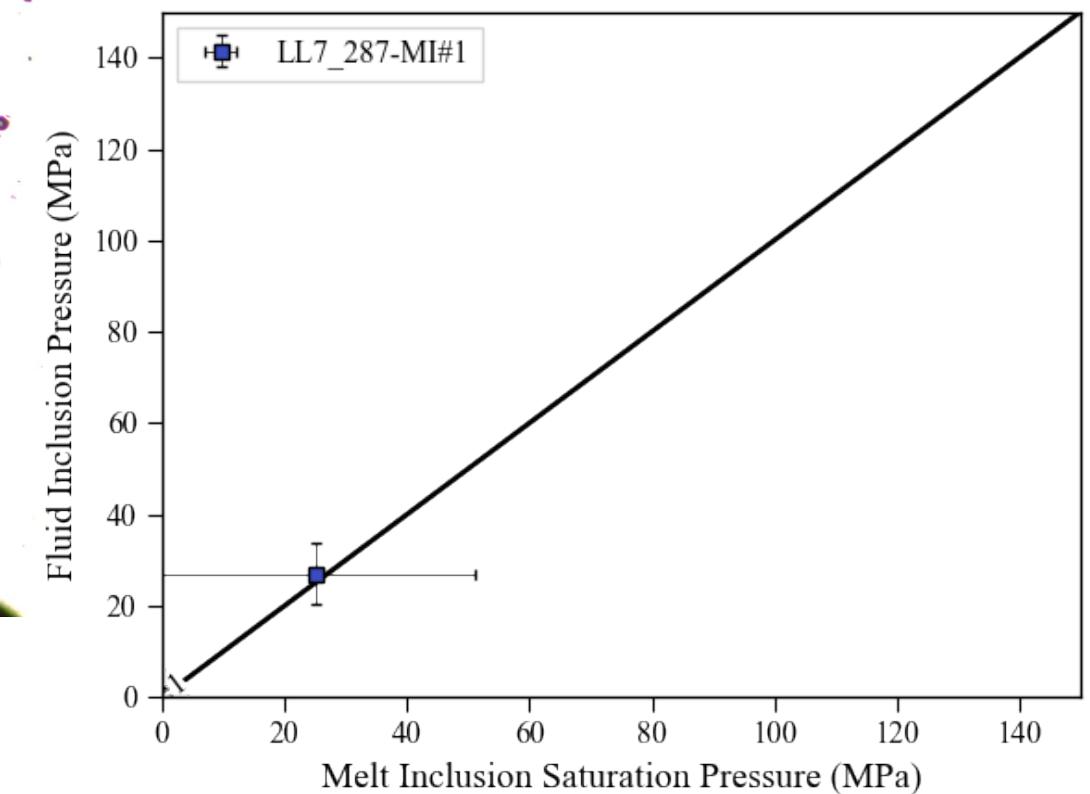
LL7_287, L



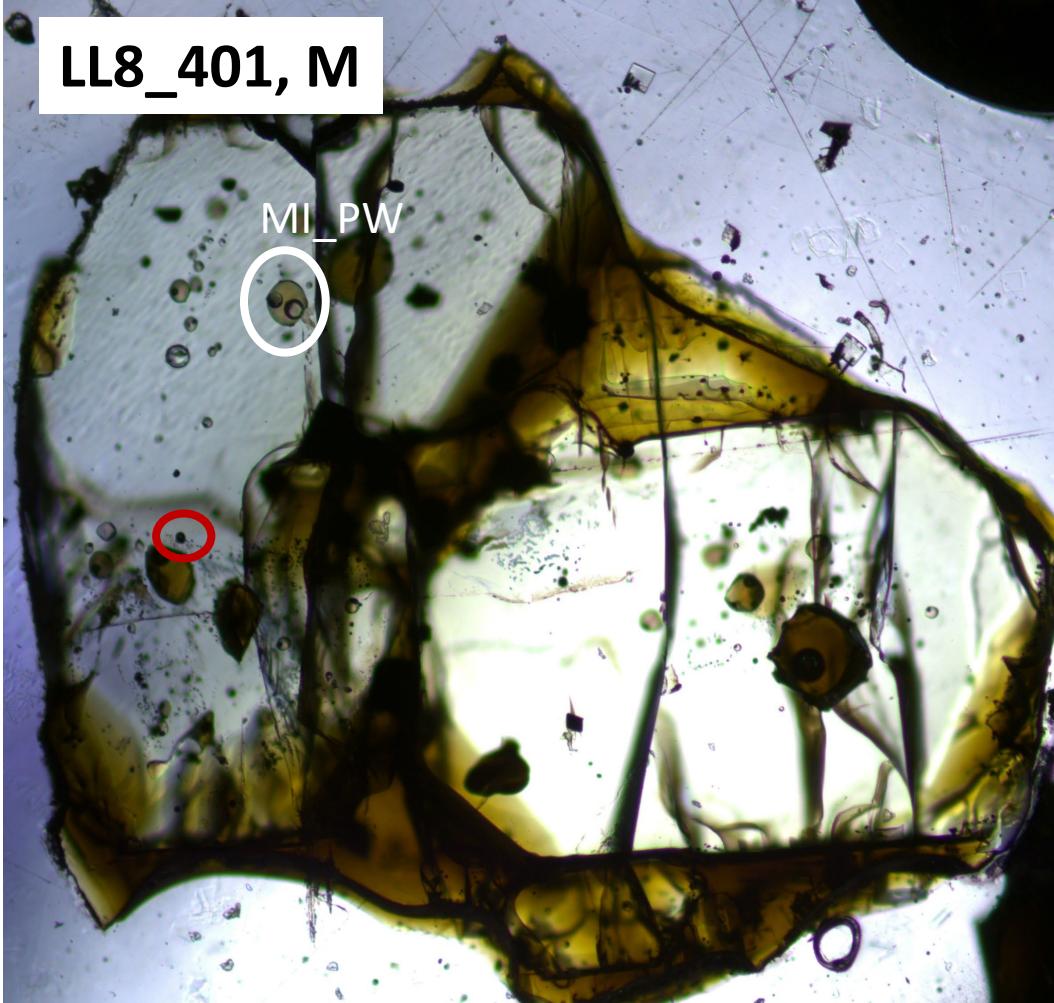
MI#1, in small Xtal, has teensy bit of melt

This one is the same, but
as in a subxtal it's
unrelated and not
comparable, it could be
the MI lost pressure at
the pressure at which
this one was trapped.

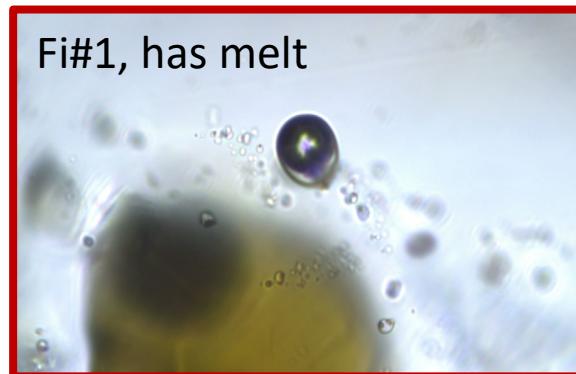
UR



LL8_401, M

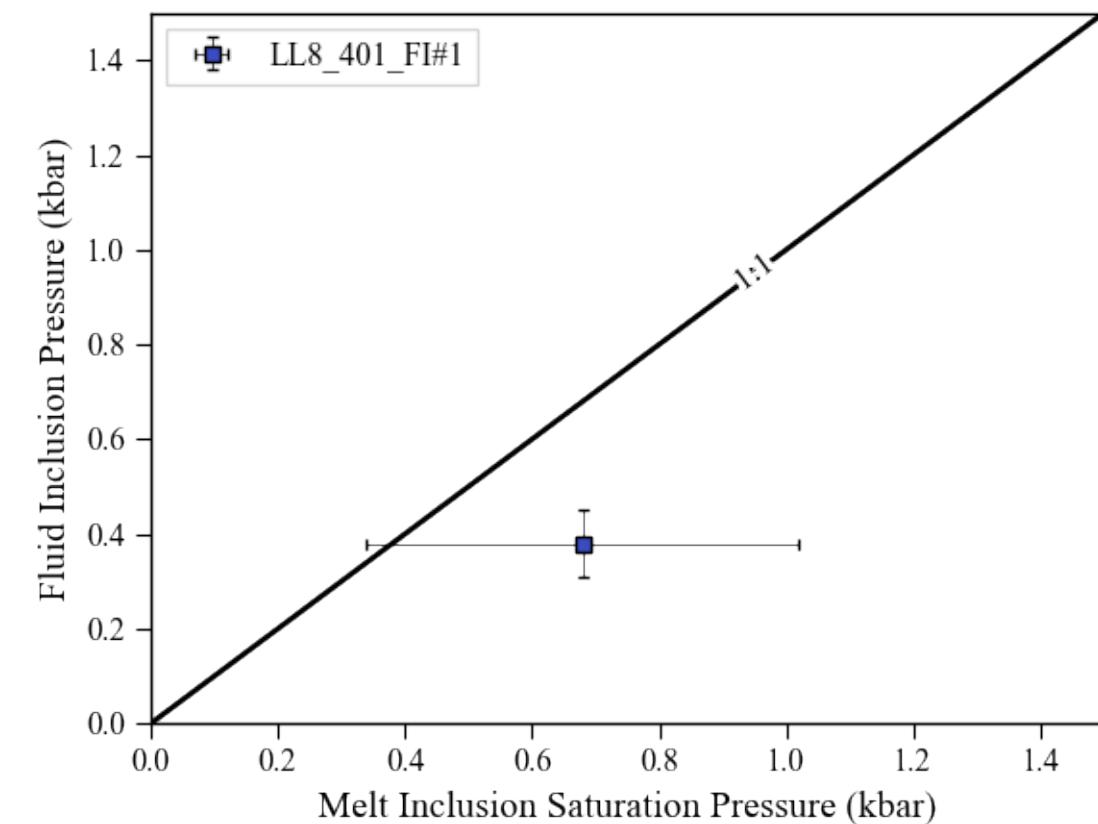


Fi#1, has melt



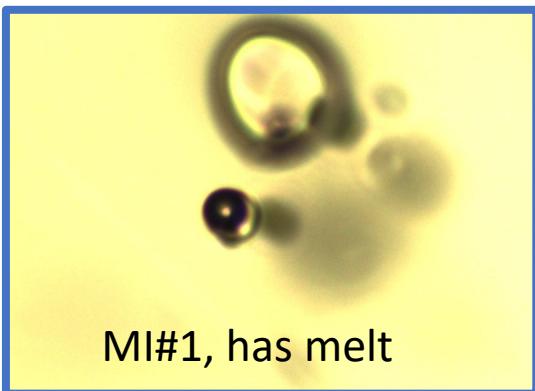
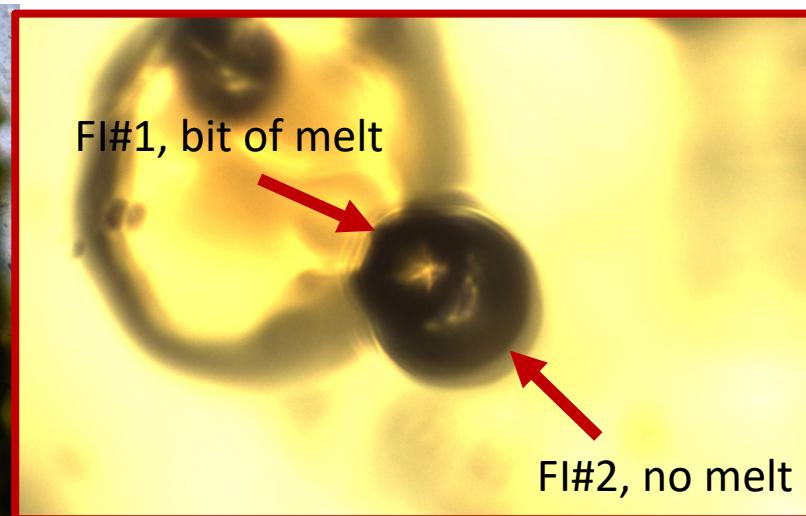
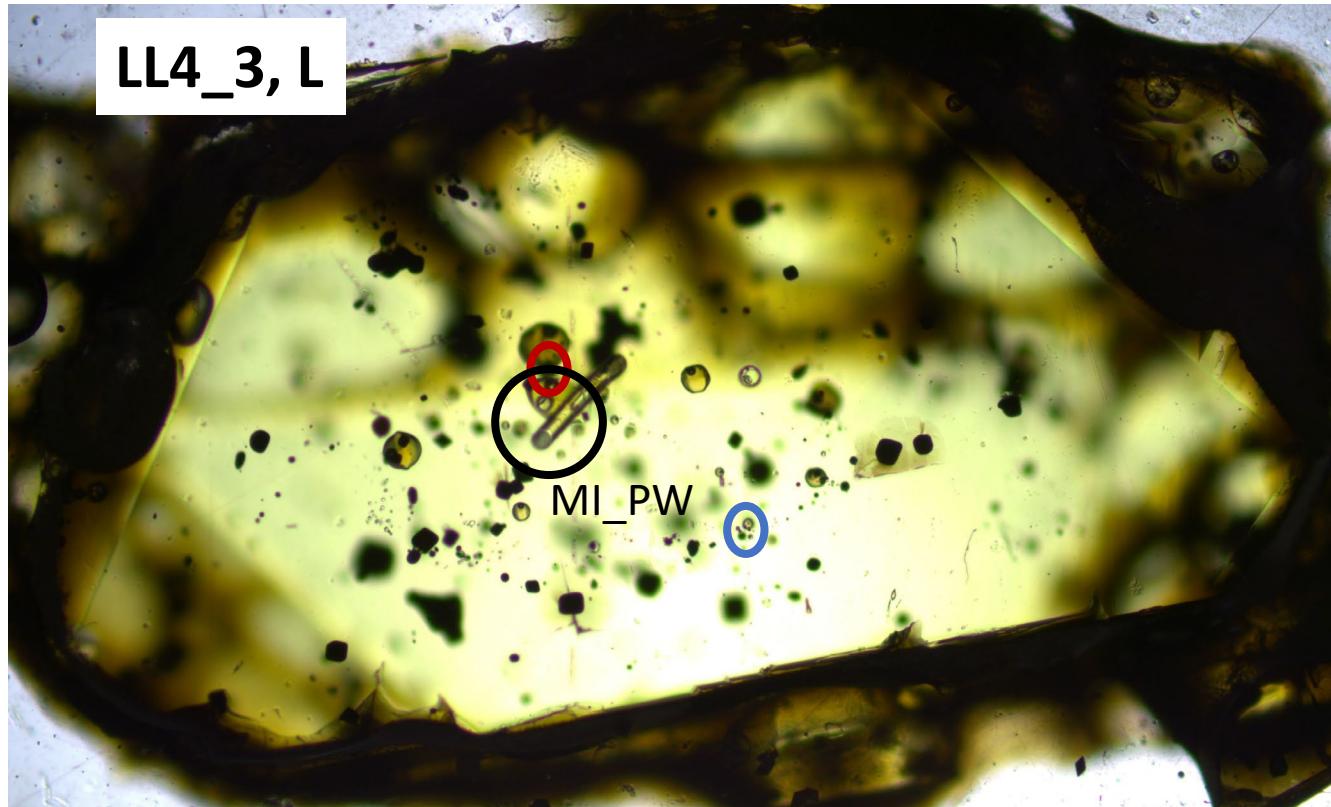
Unclear if it is in a bud or same crystal, may also be related to larger MI around it. Has teensy bit of melt

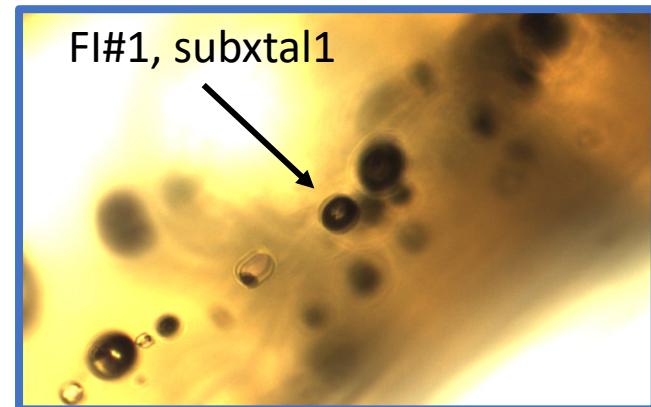
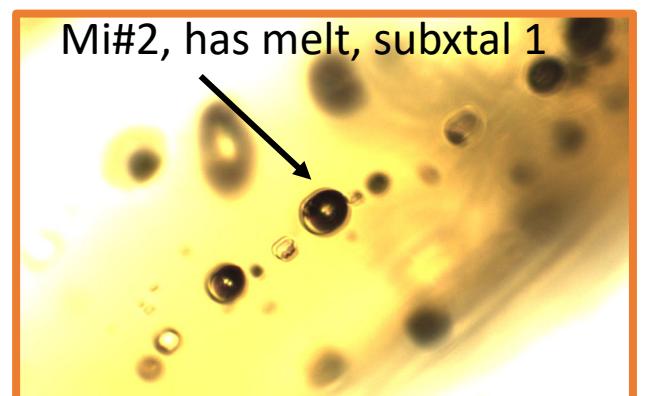
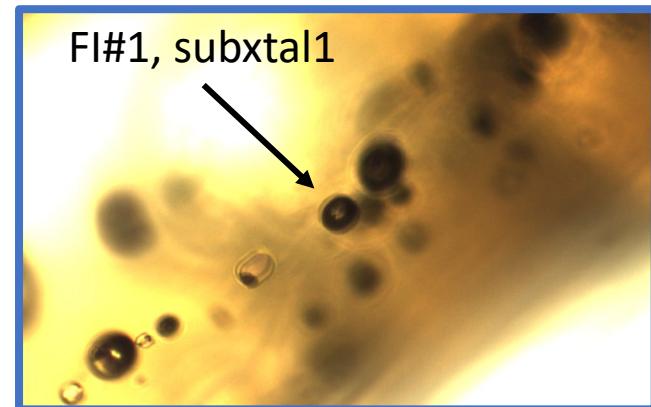
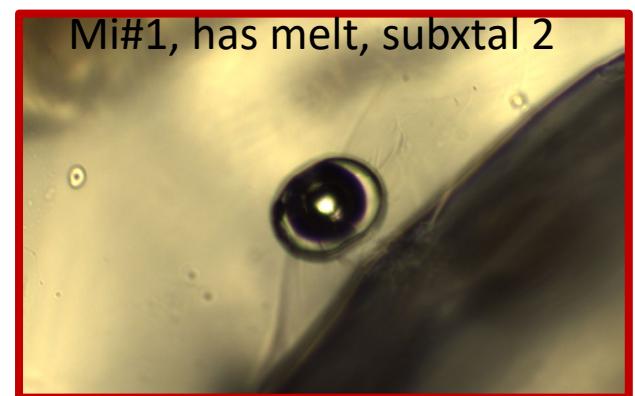
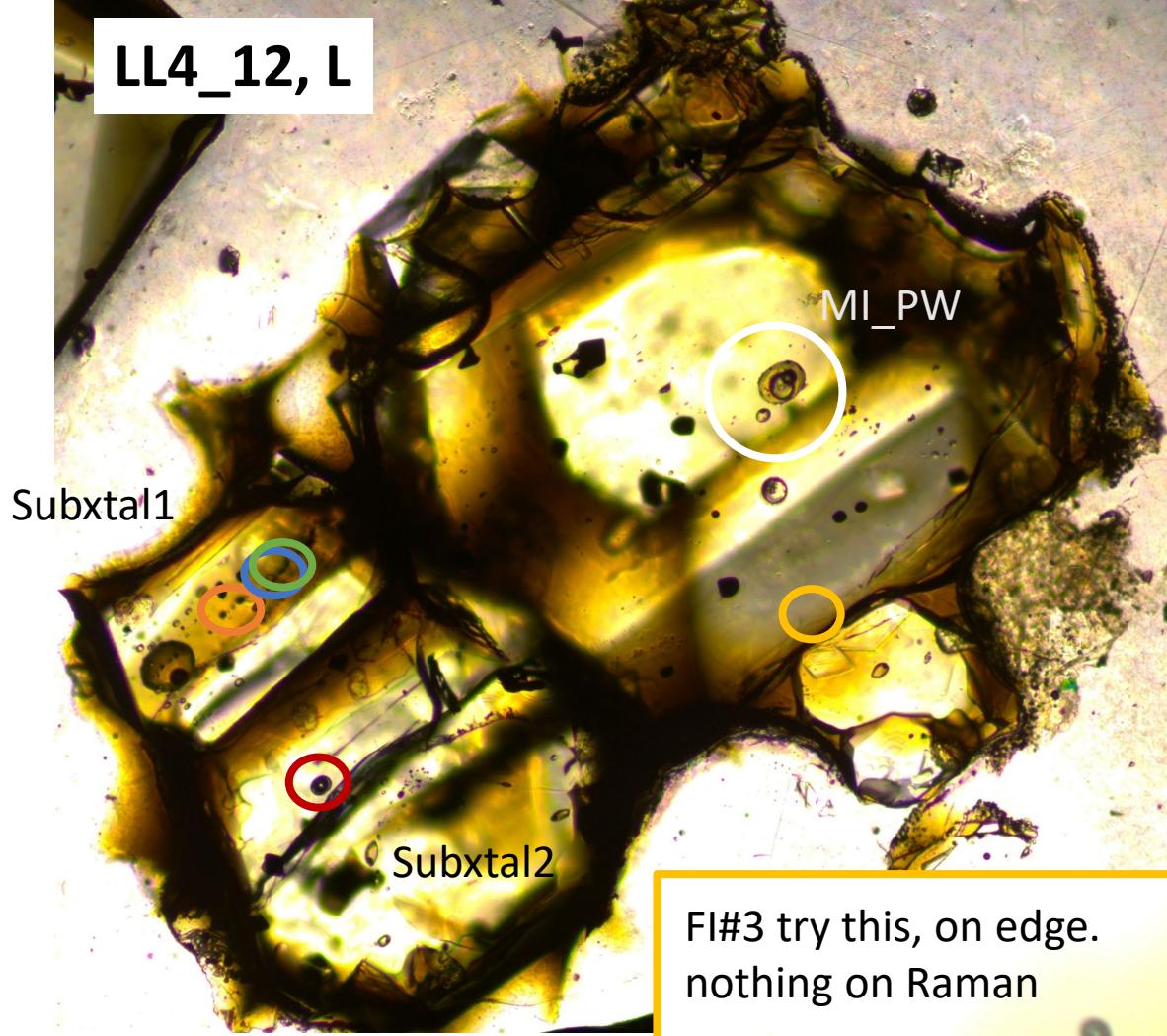
UR



**This section depicts fluid inclusions with variable amounts of silicate melt attached,
For more information consult the supplementary information section 4.**

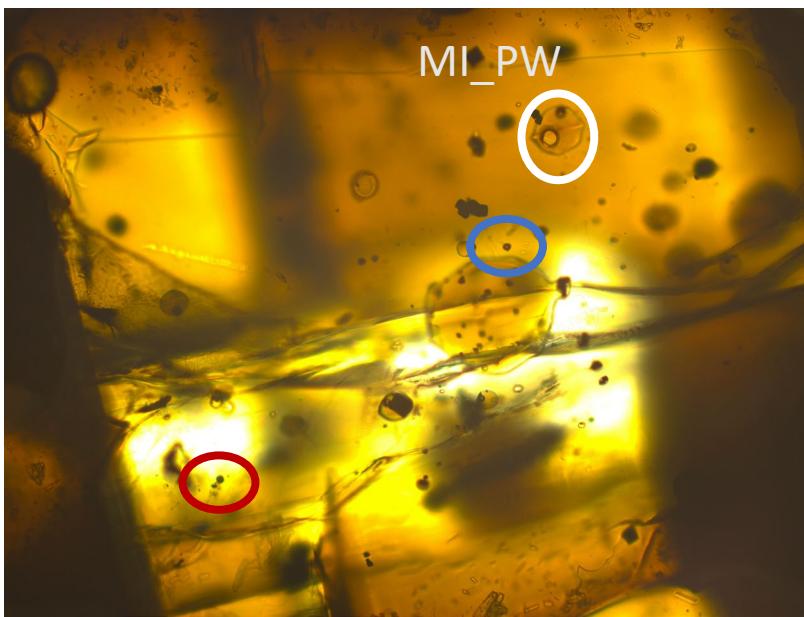
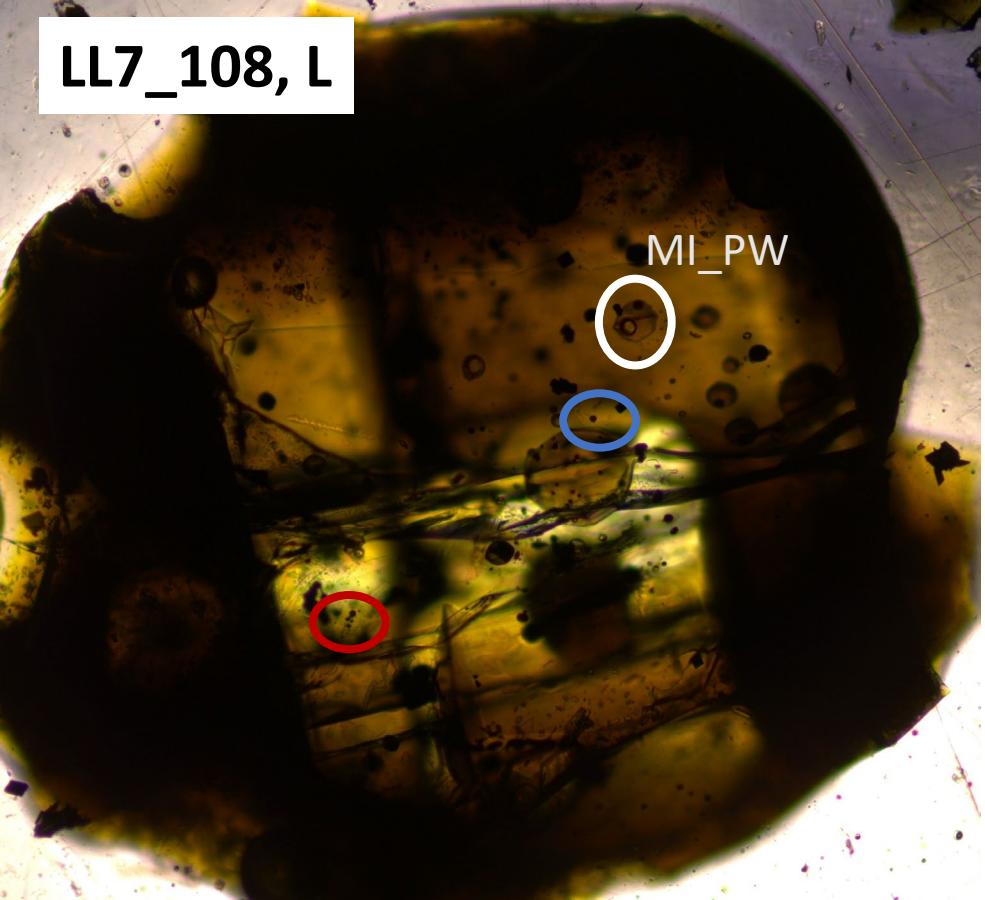
LL4_3, L



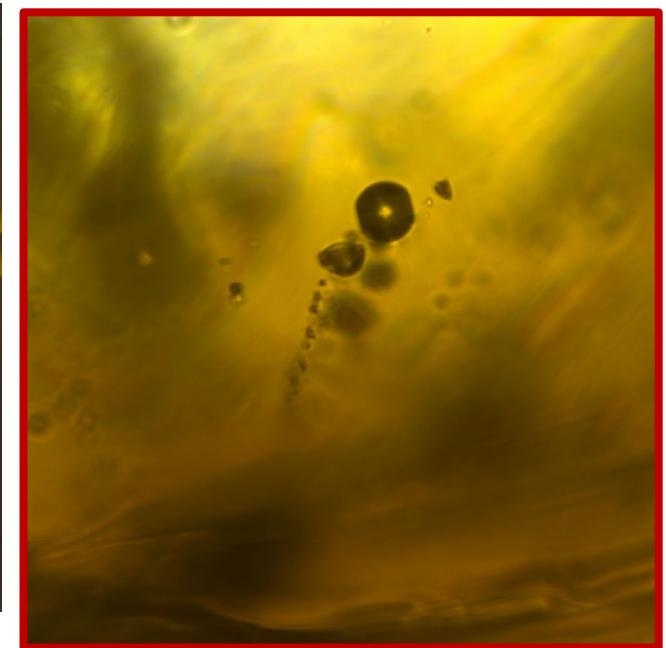


Fl#3 try this, on edge.
nothing on Raman

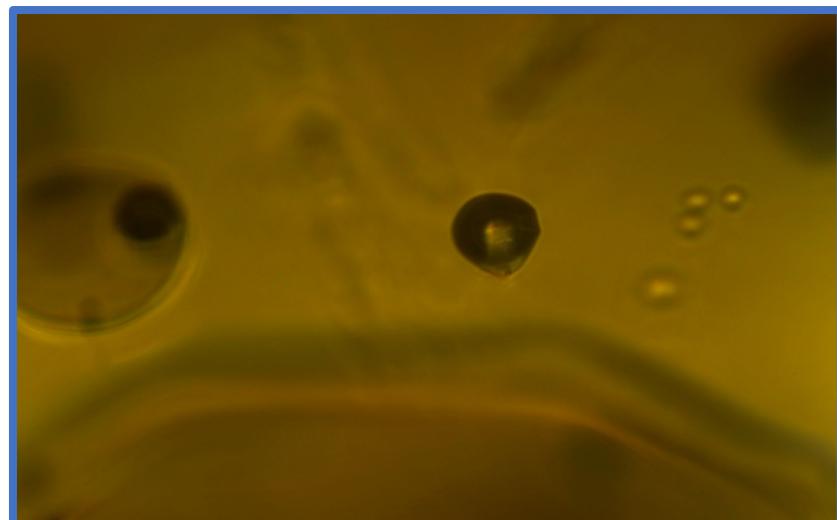
LL7_108, L



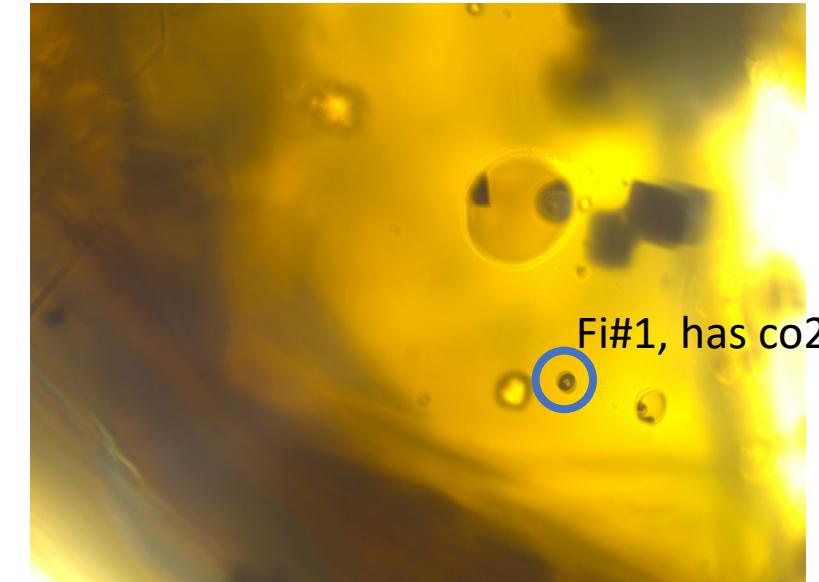
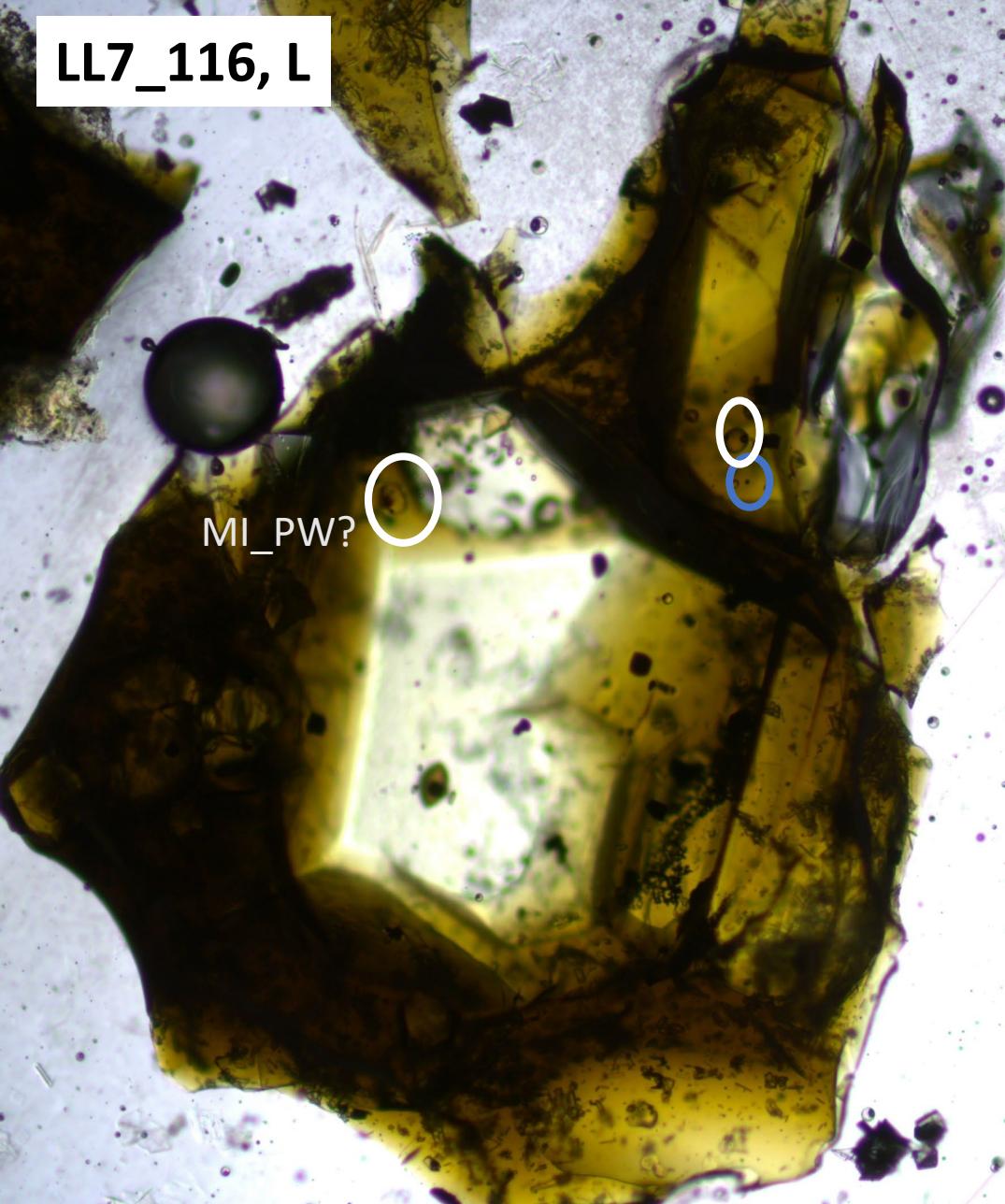
Fi#1, on a trail PS?



Fi#2, Same xtal, on edge

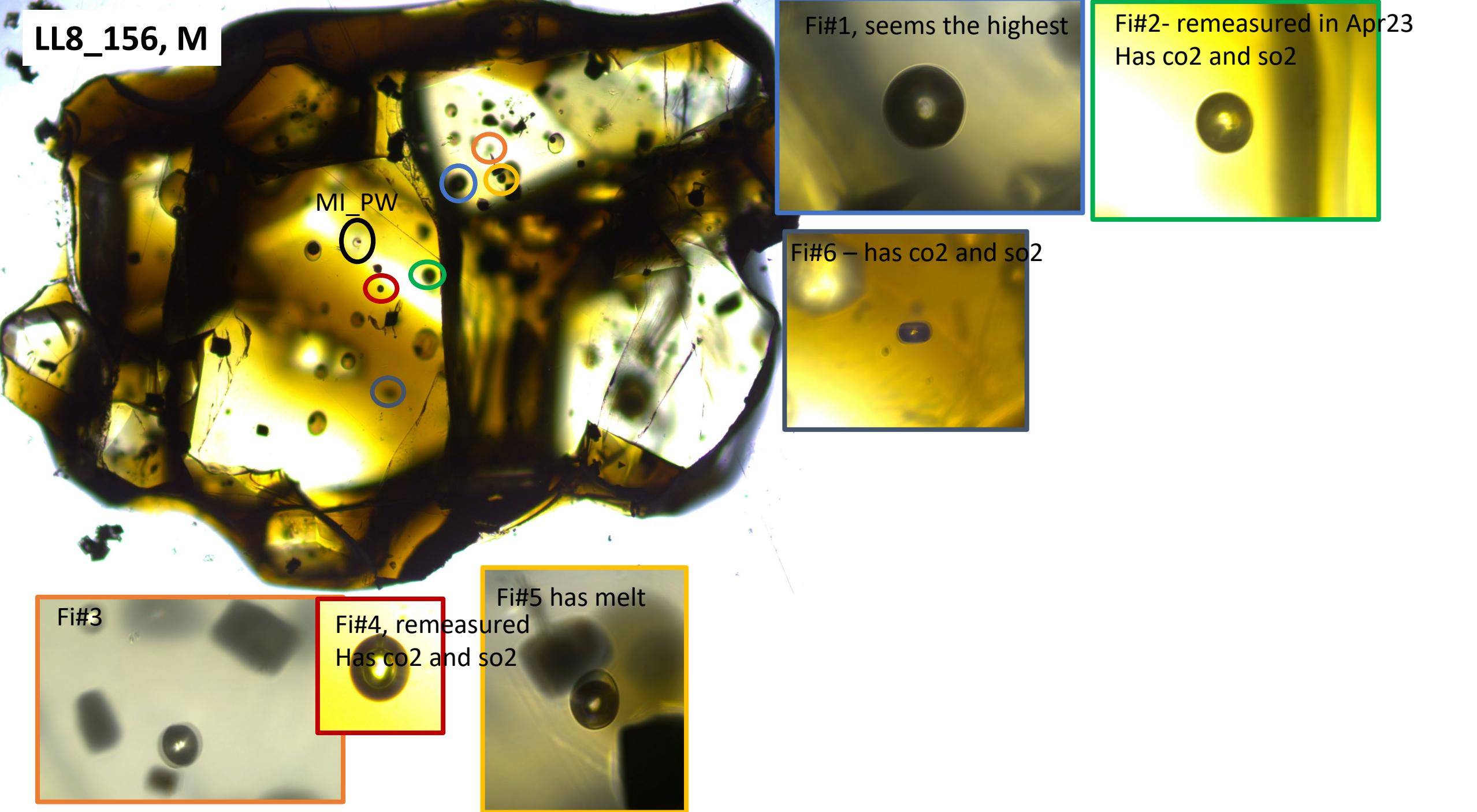


LL7_116, L

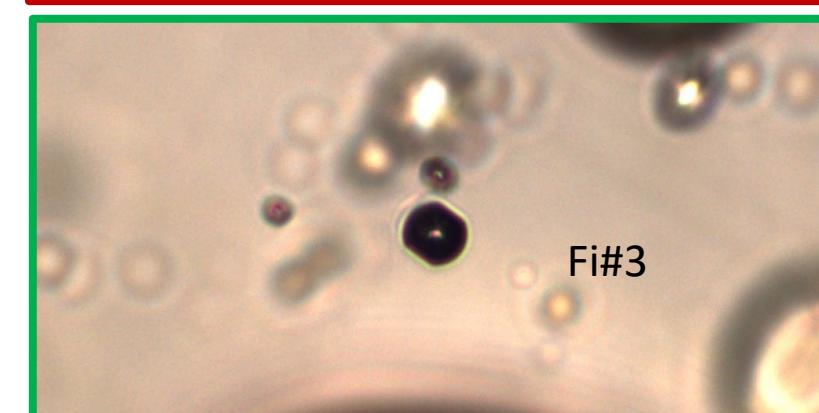
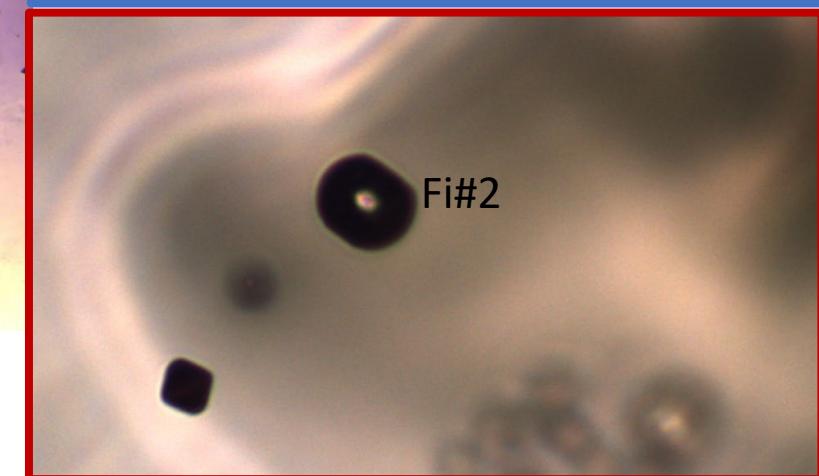
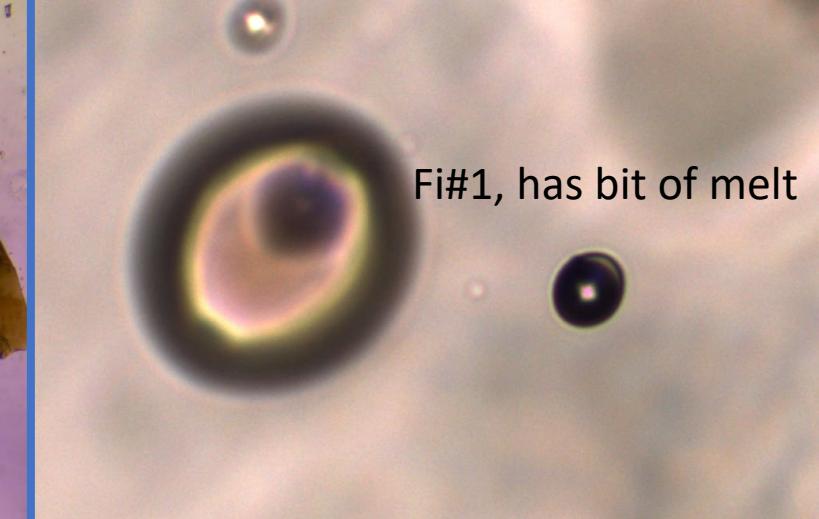
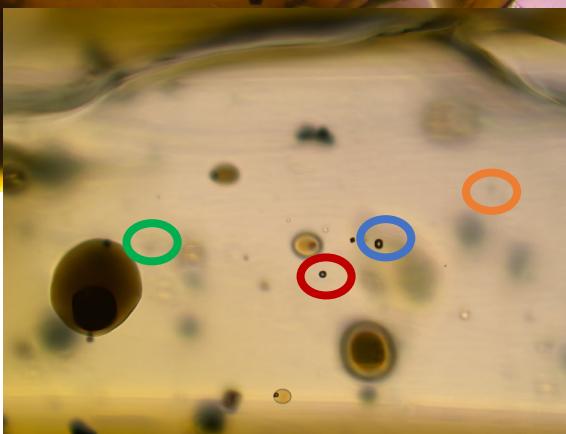
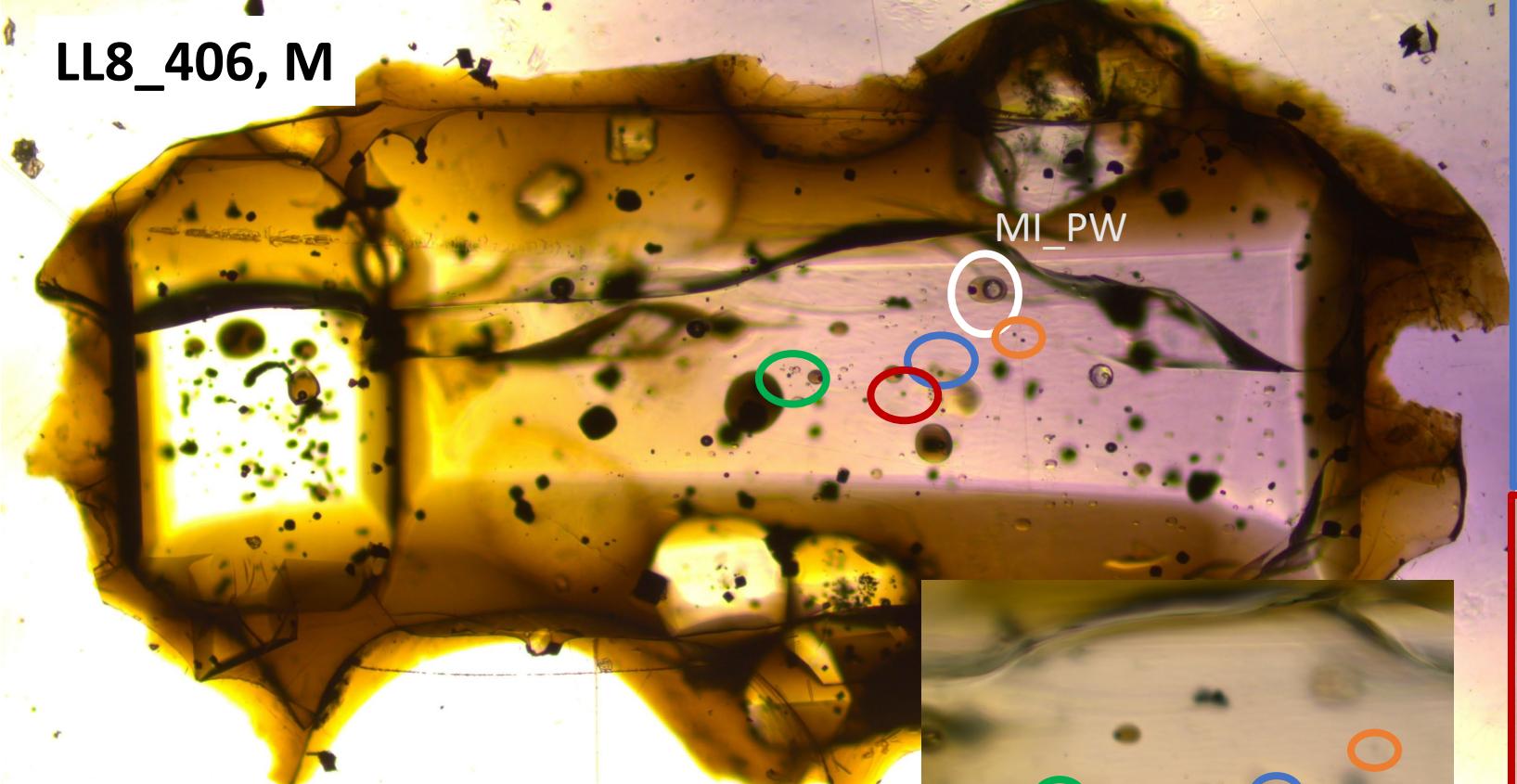


Separate xtal, but the FI and MI in same crystal, so could try the PEC thing

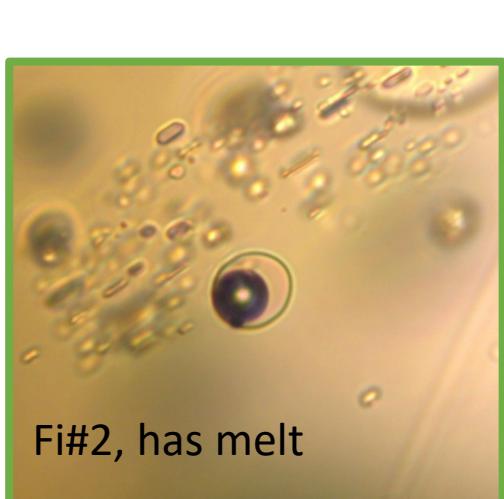
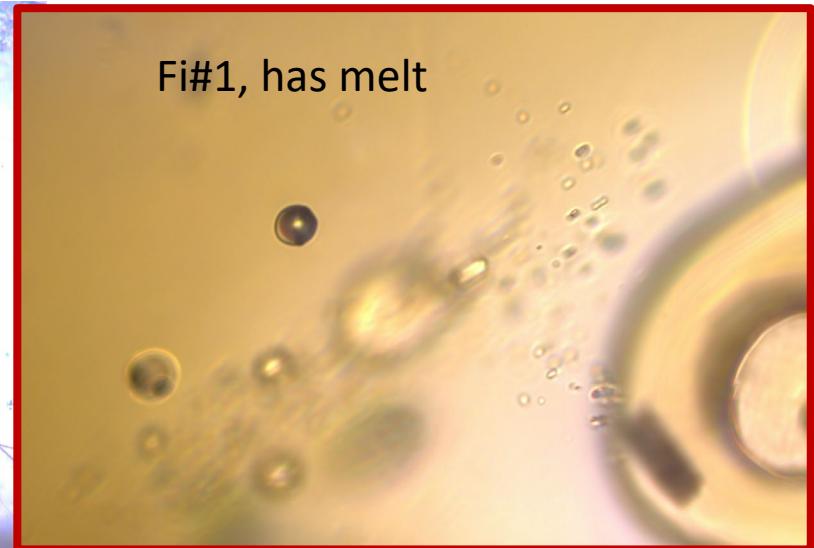
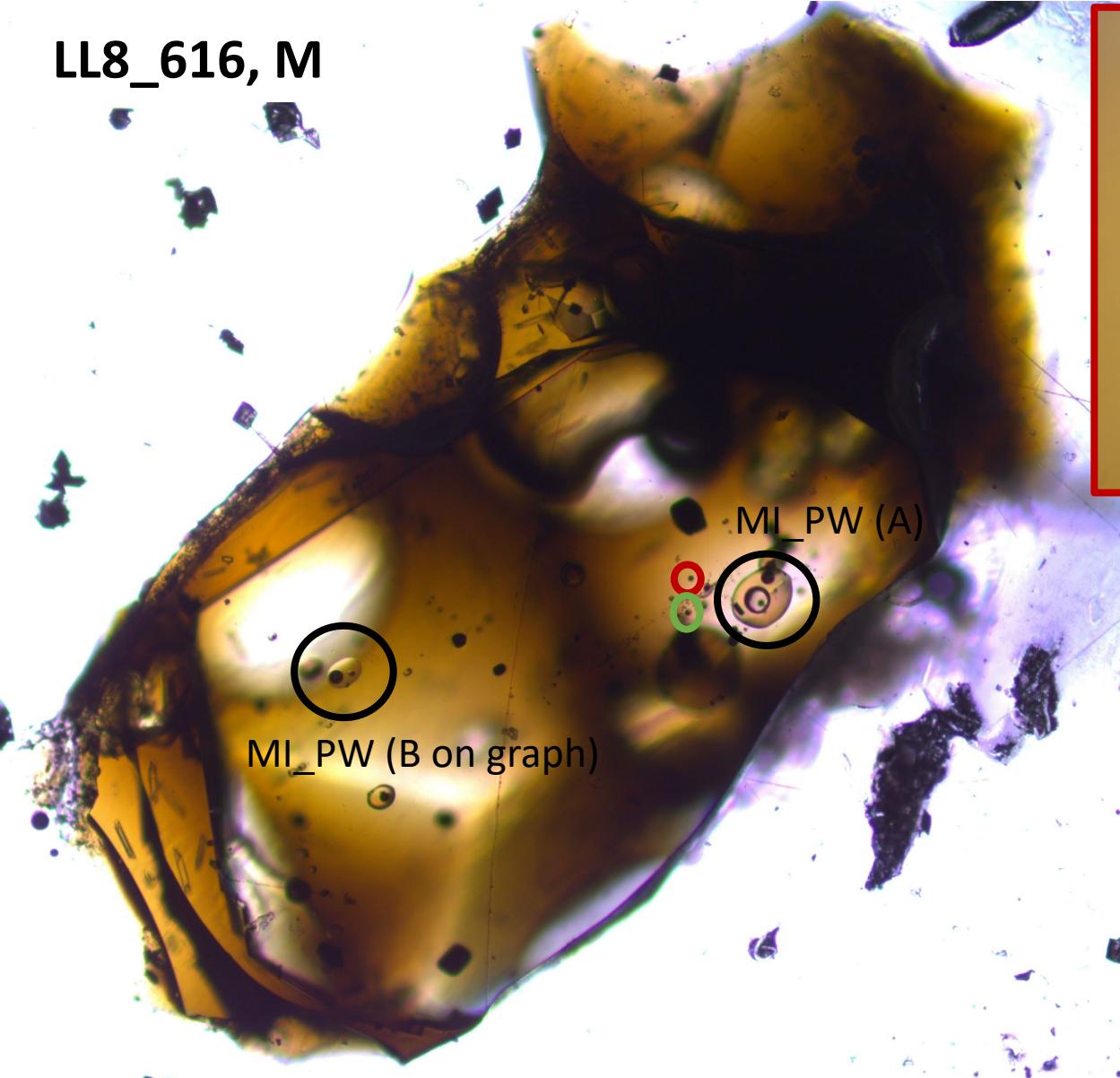
LL8_156, M



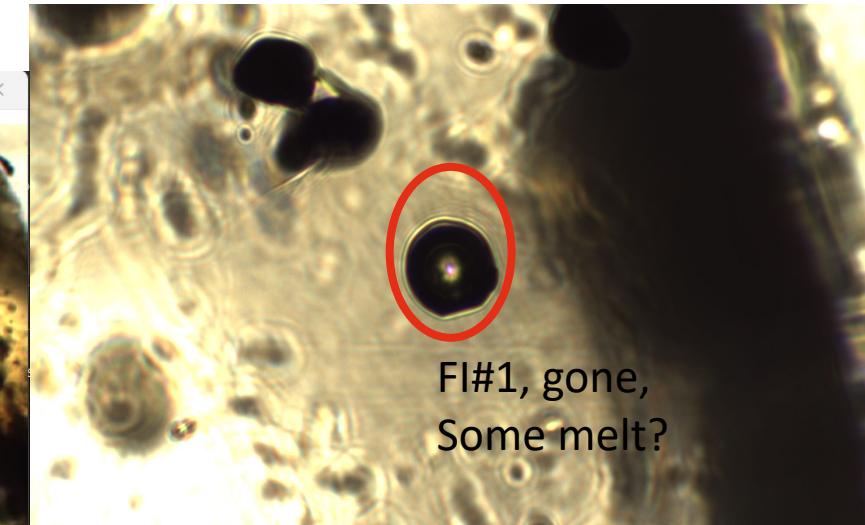
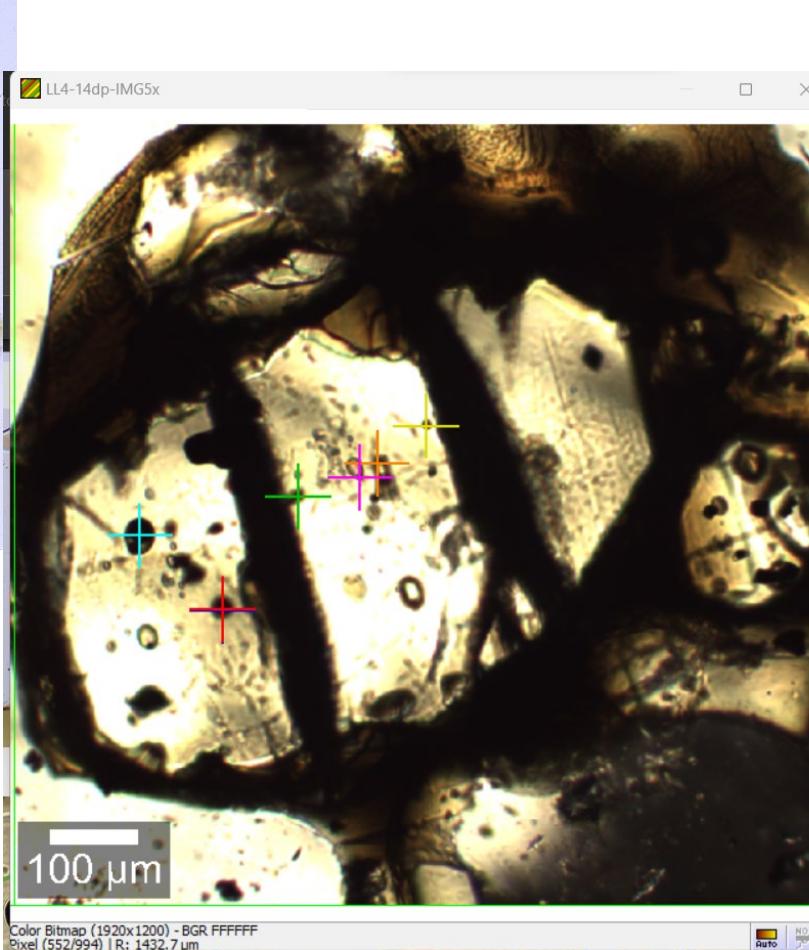
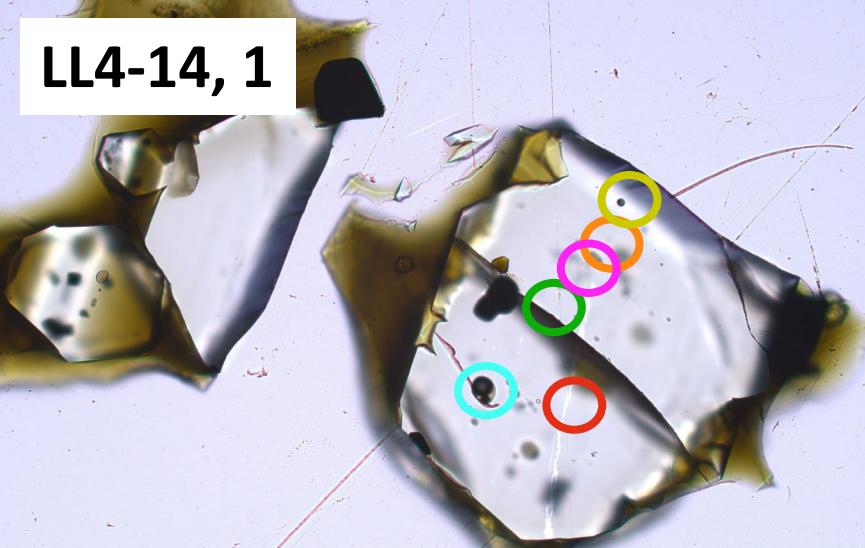
LL8_406, M



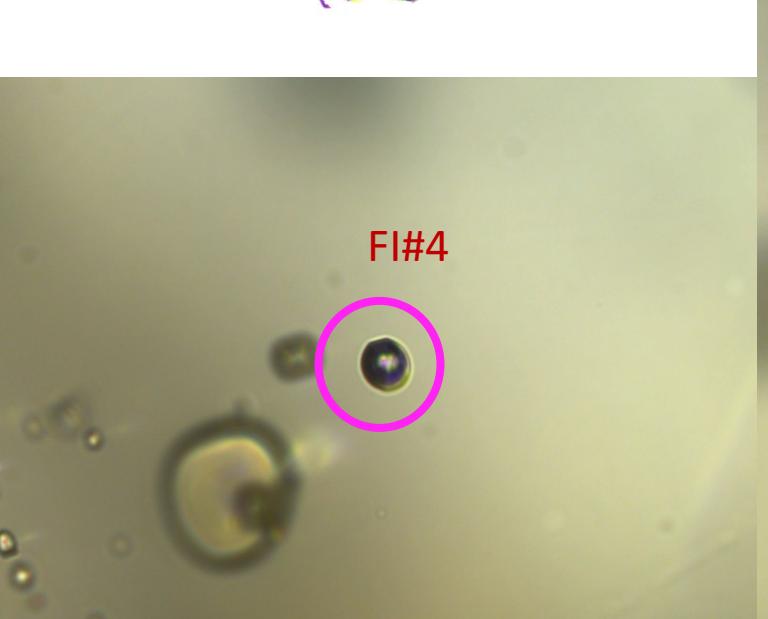
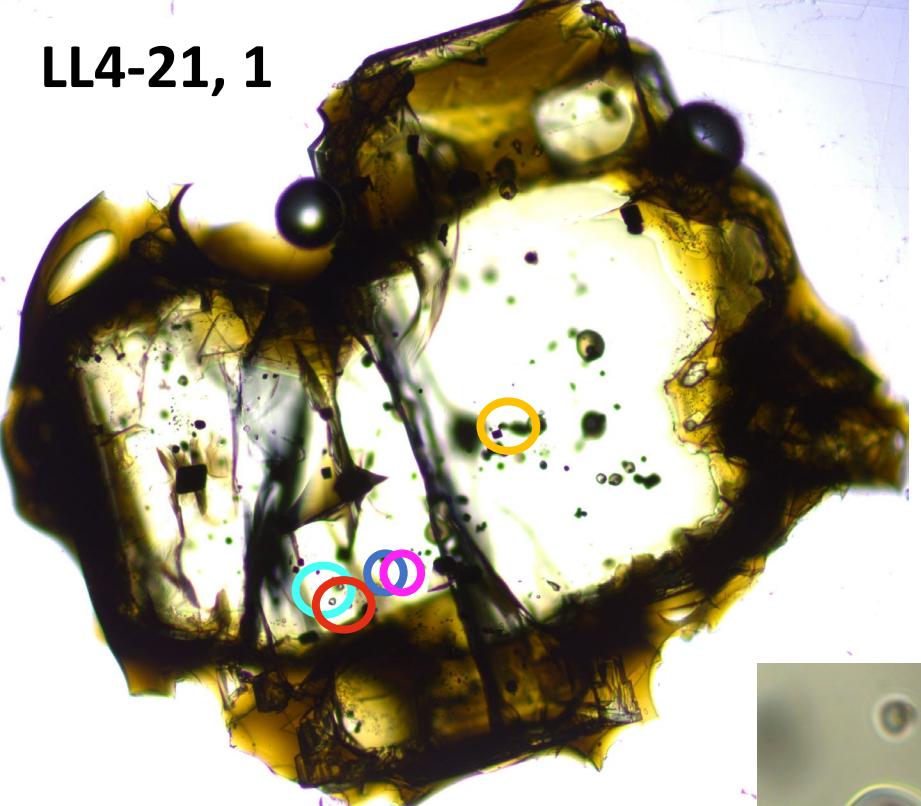
LL8_616, M



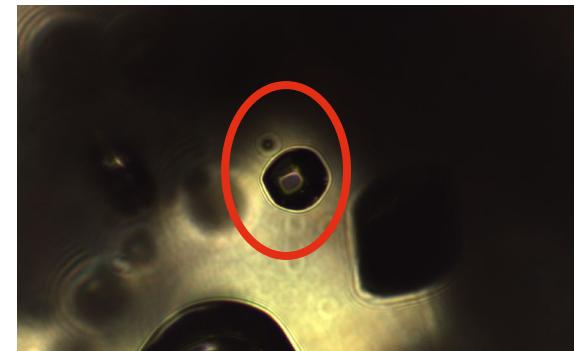
LL4-14, 1



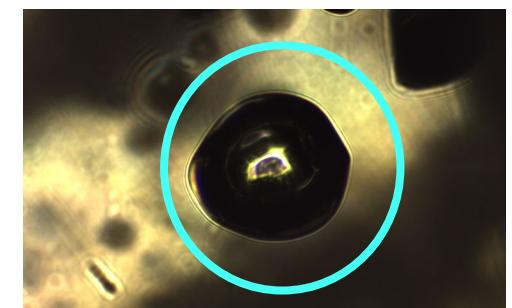
LL4-21, 1



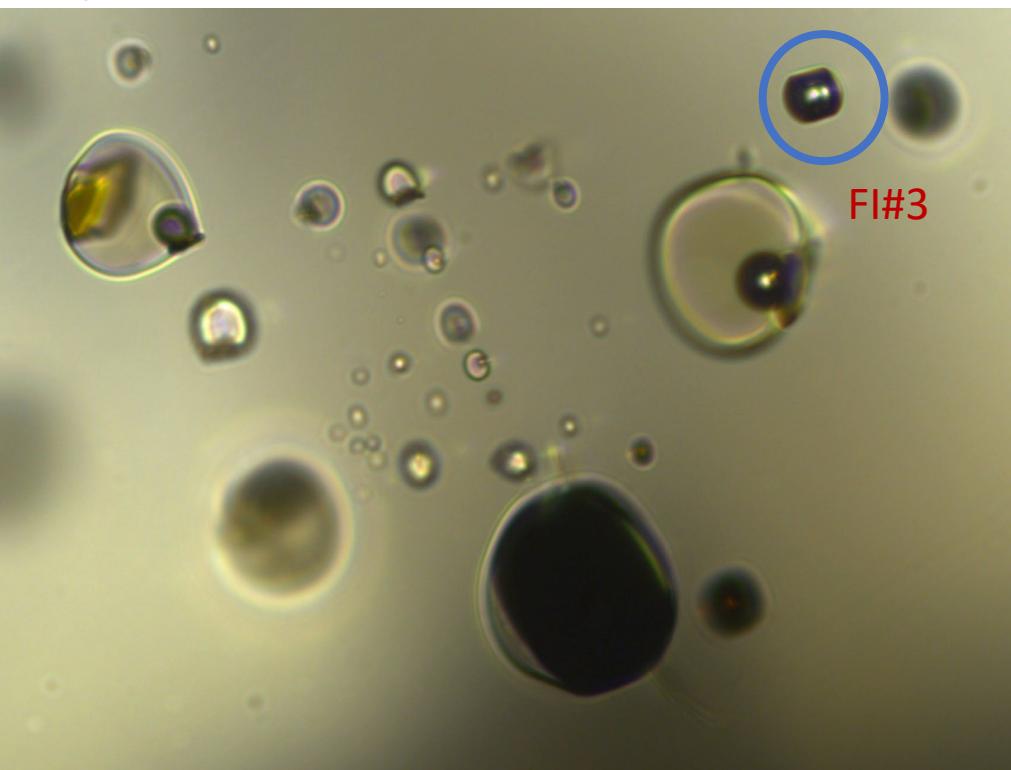
FI#2, gone



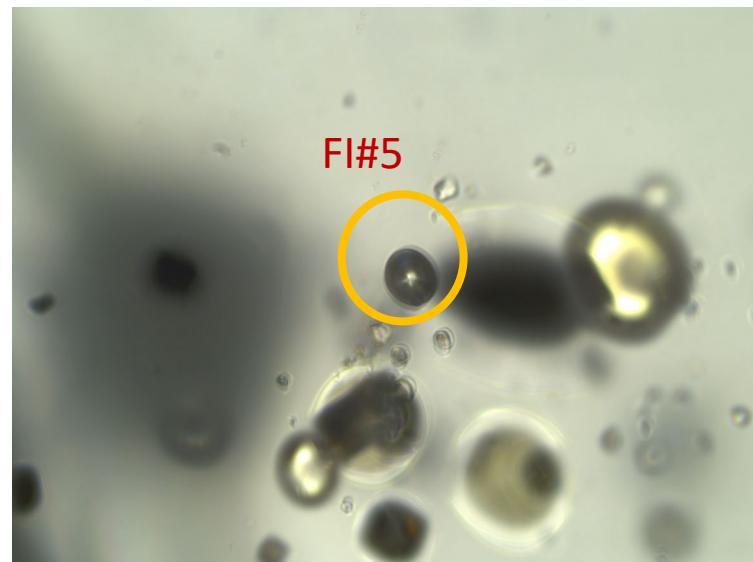
FI#1, gone,
Some melt



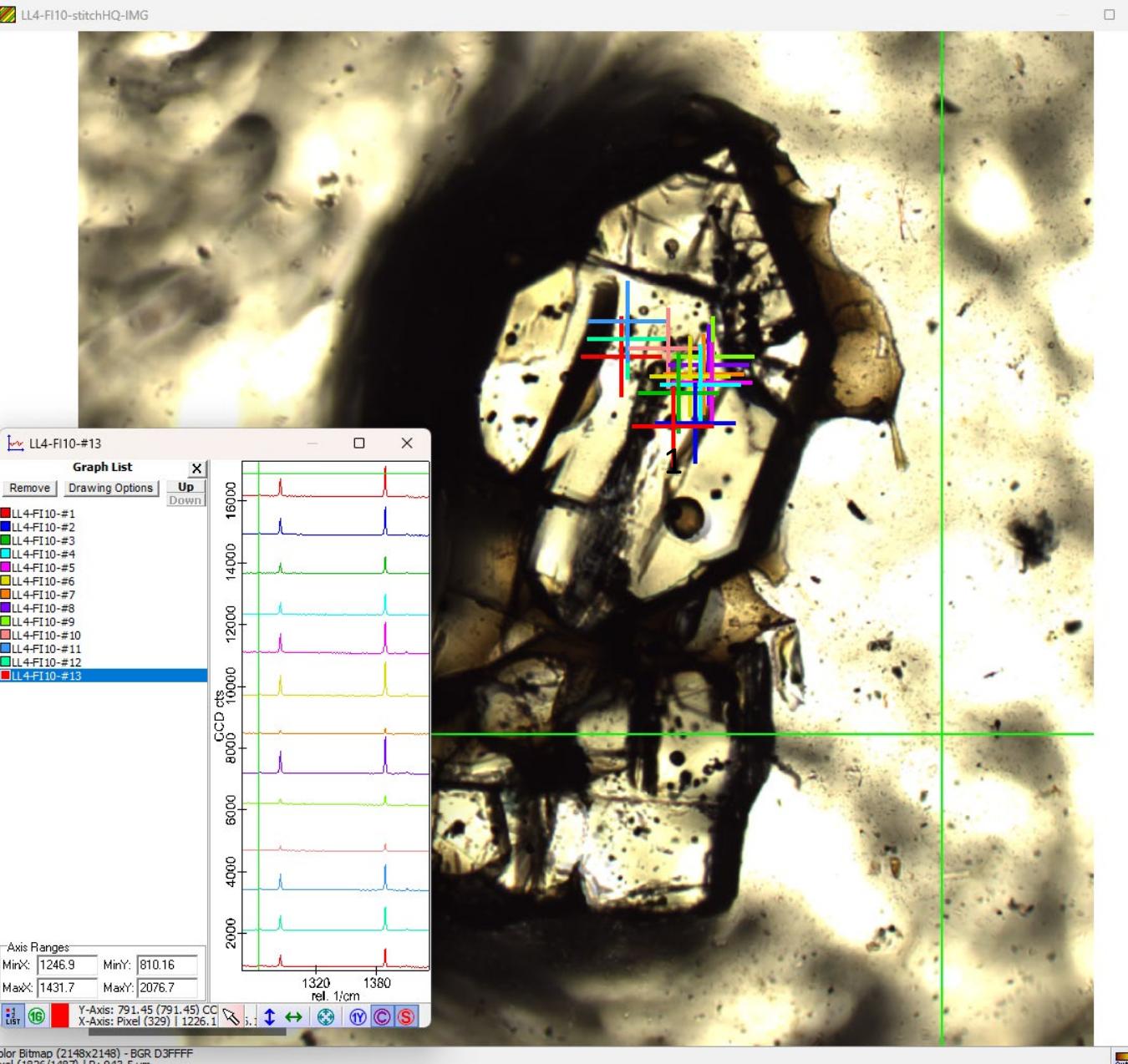
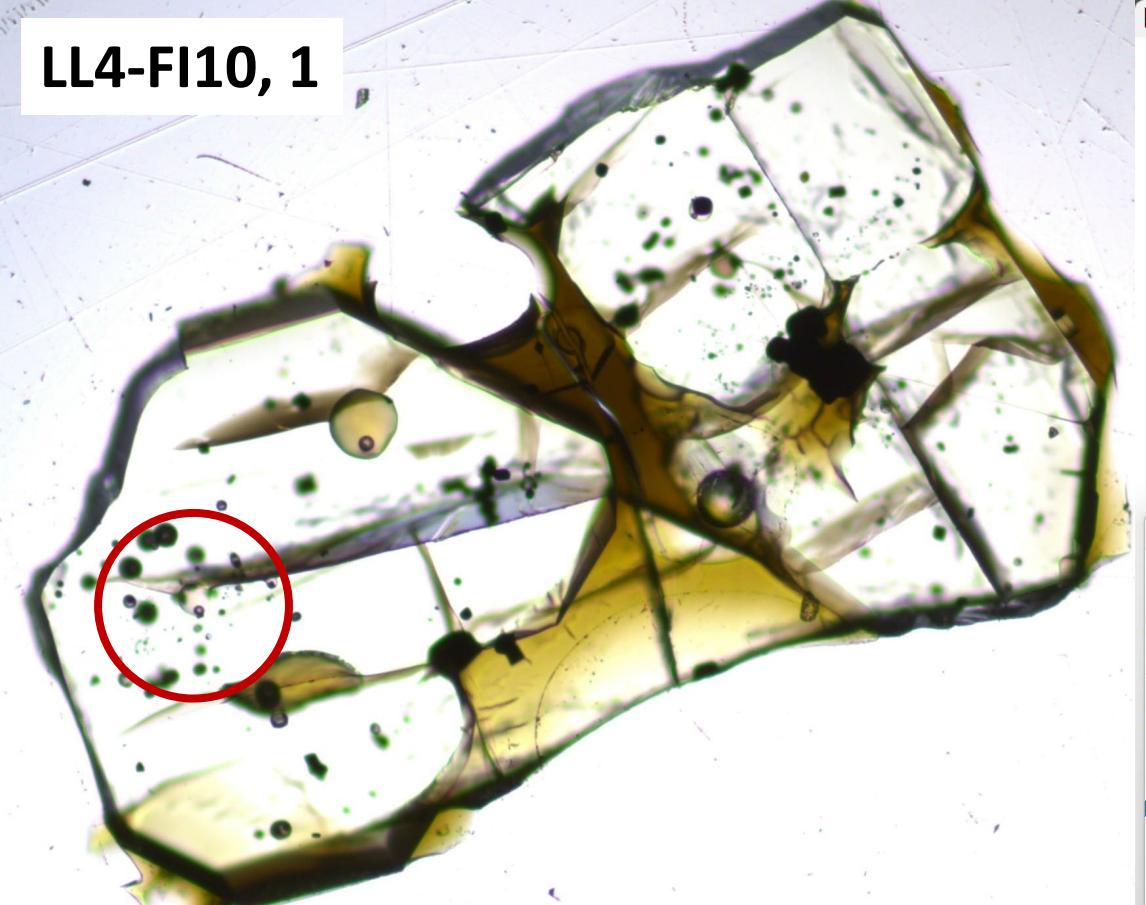
FI#3



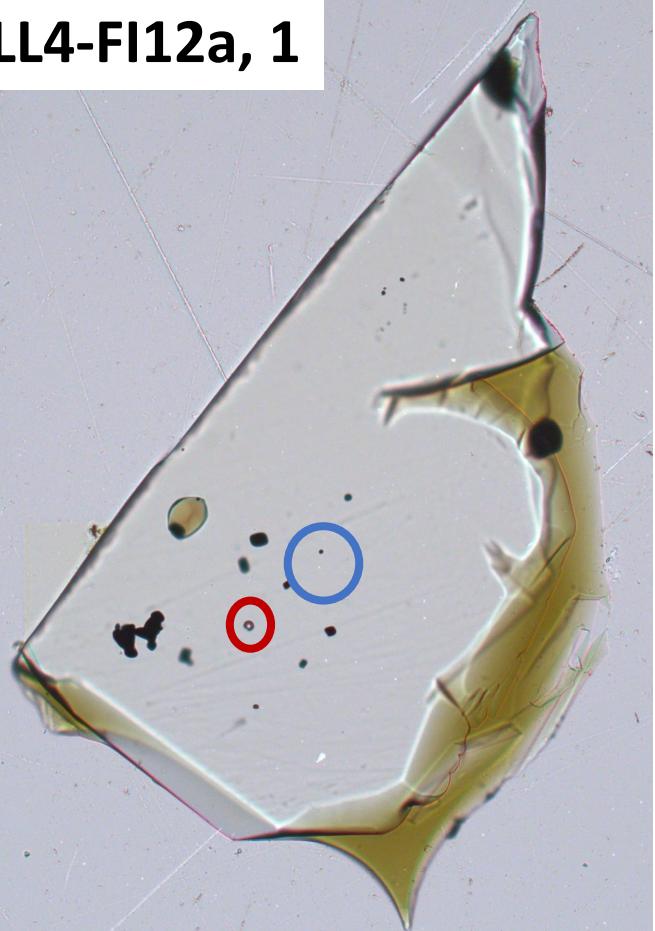
FI#5



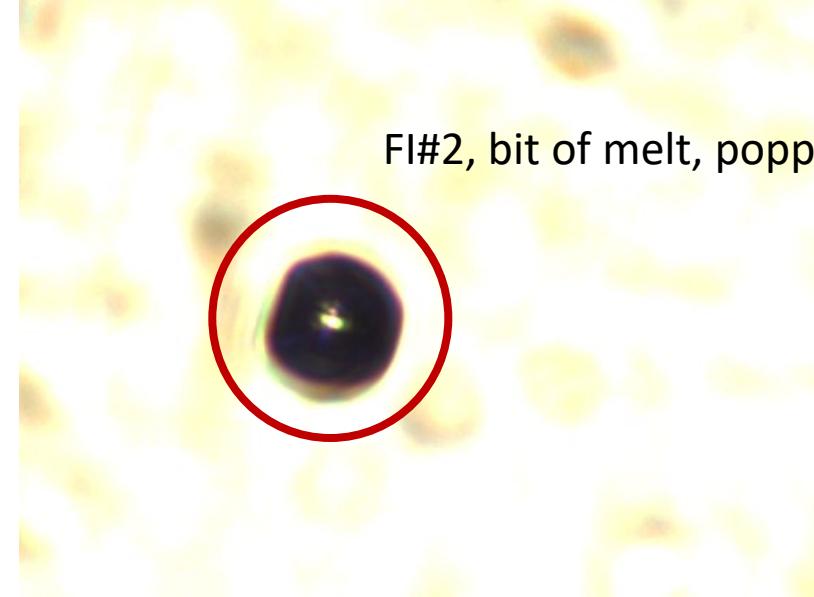
LL4-FI10, 1



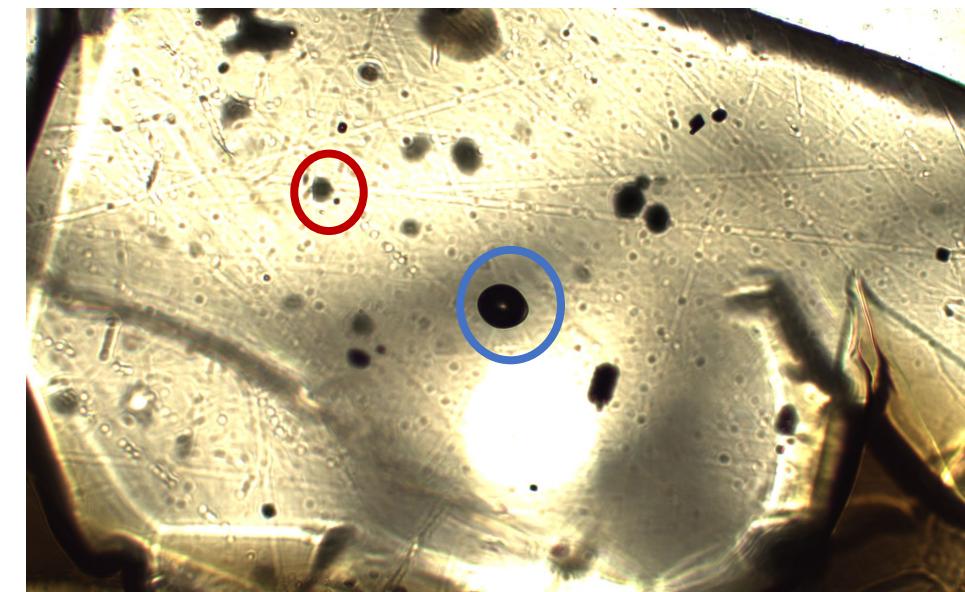
LL4-FI12a, 1



I labeled this crystal 12 in the early raman data.

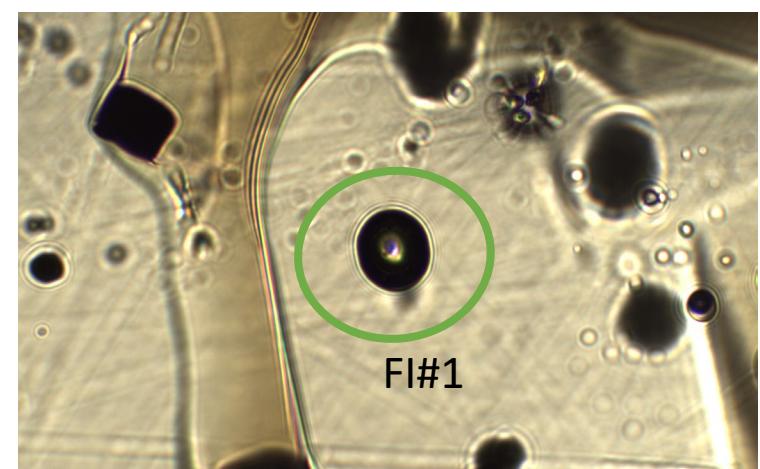
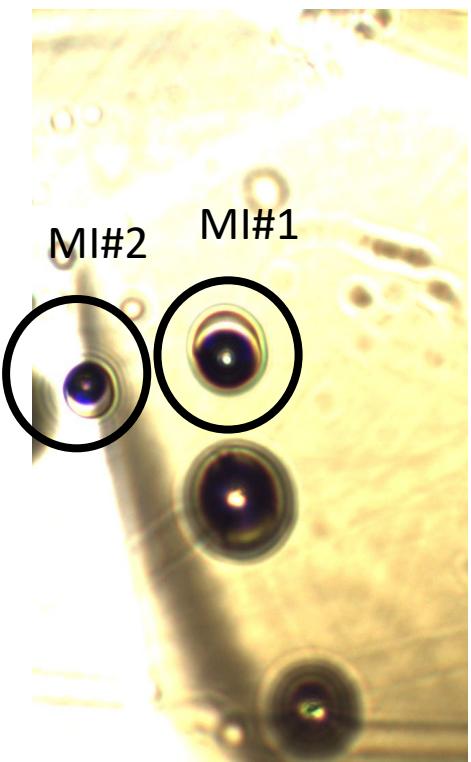
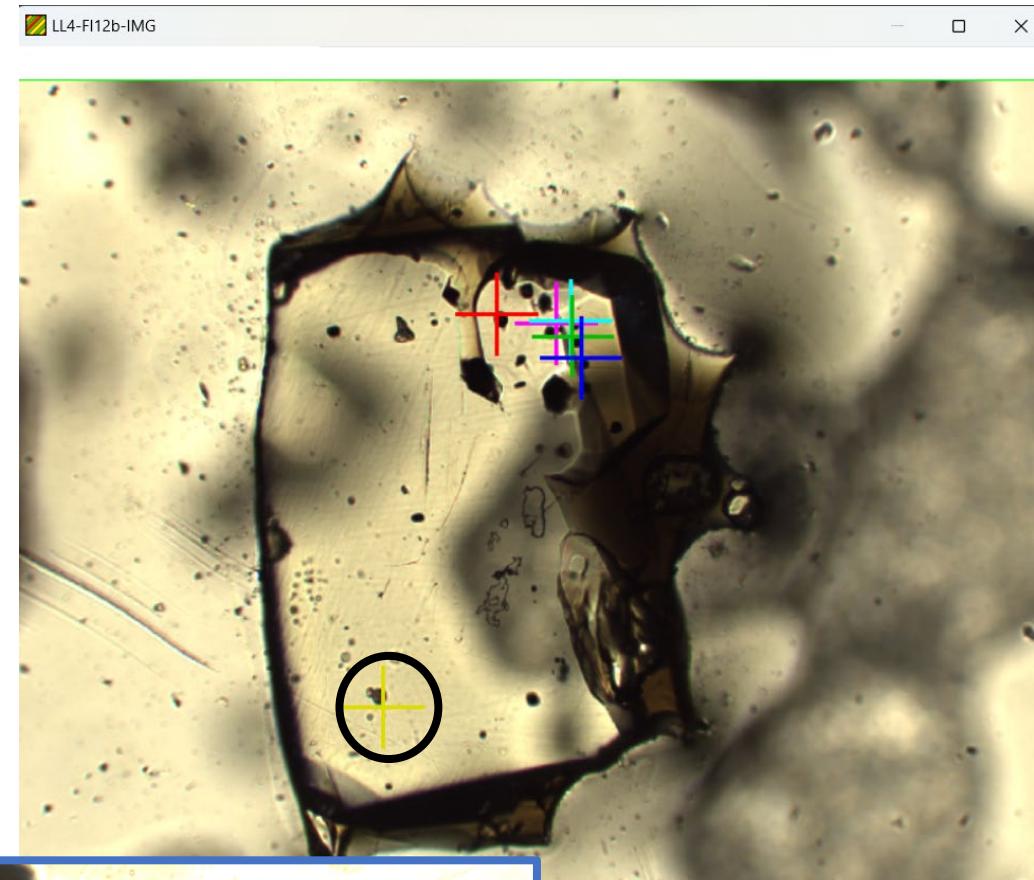
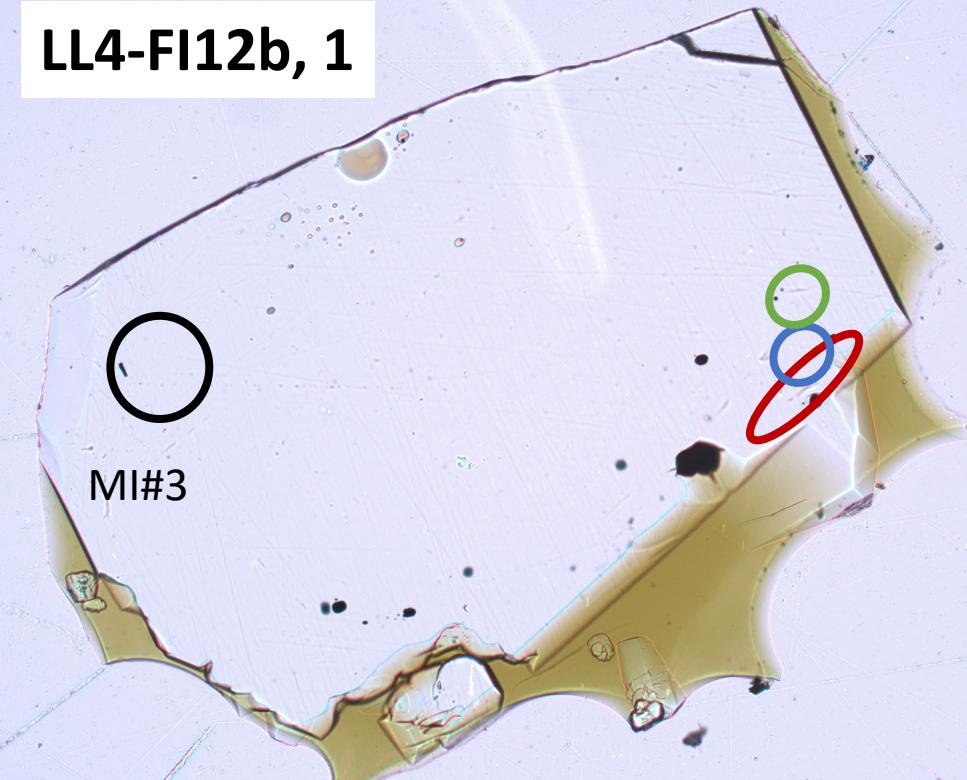


FI#2, bit of melt, popped now

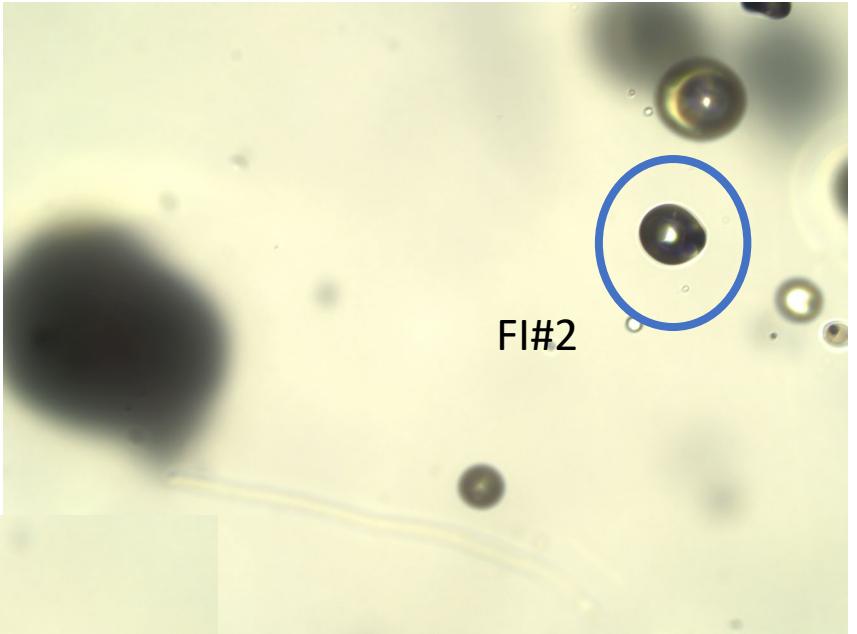
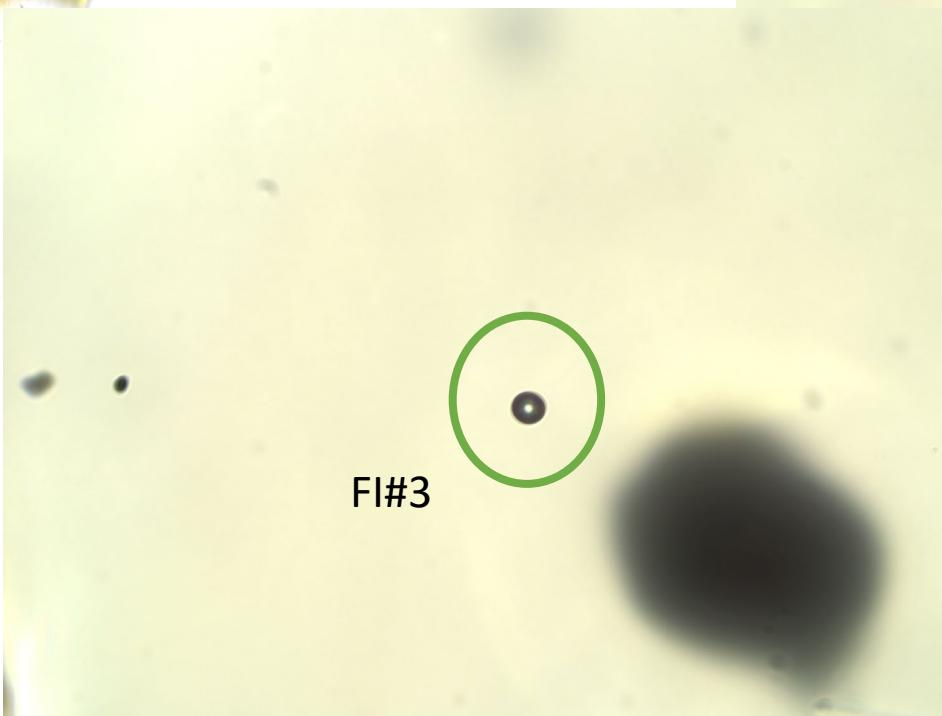
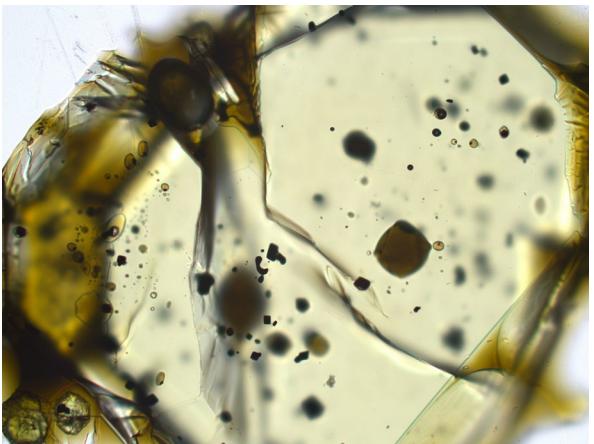
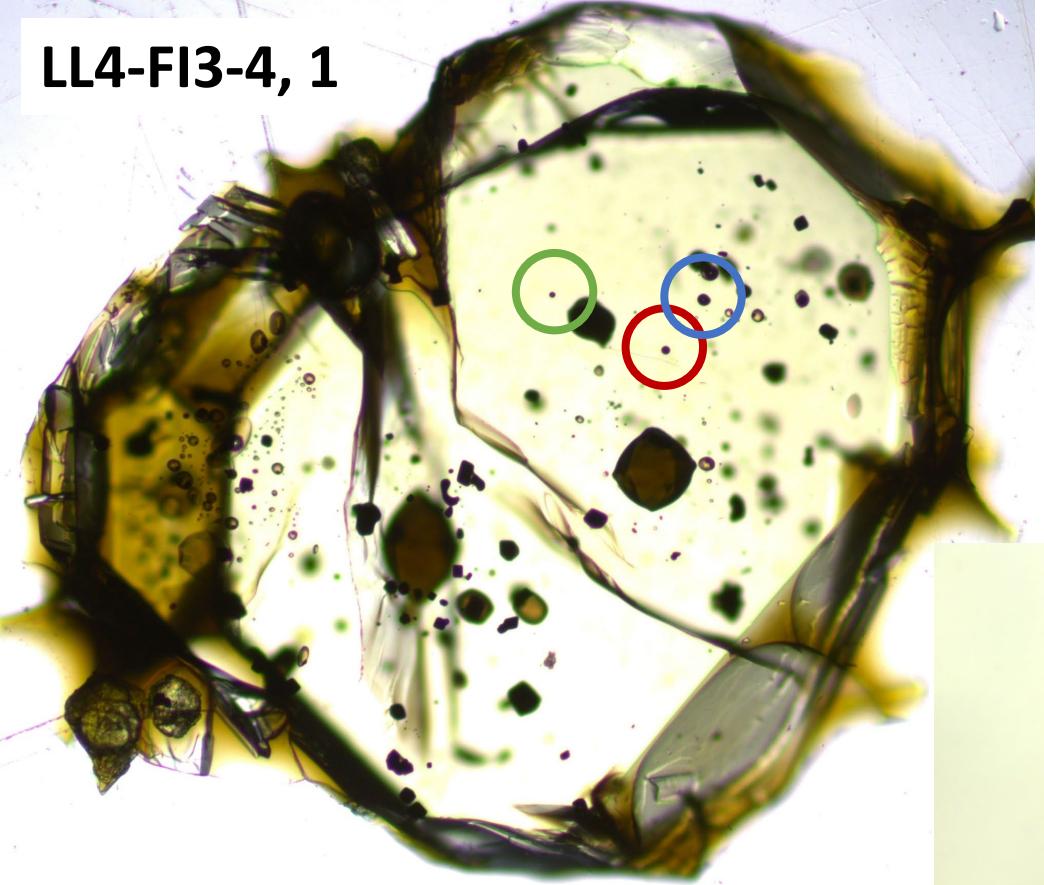


FI # 1 has melt, was polished off

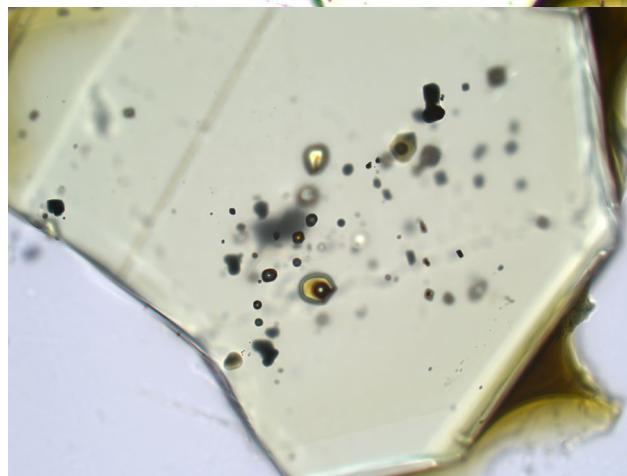
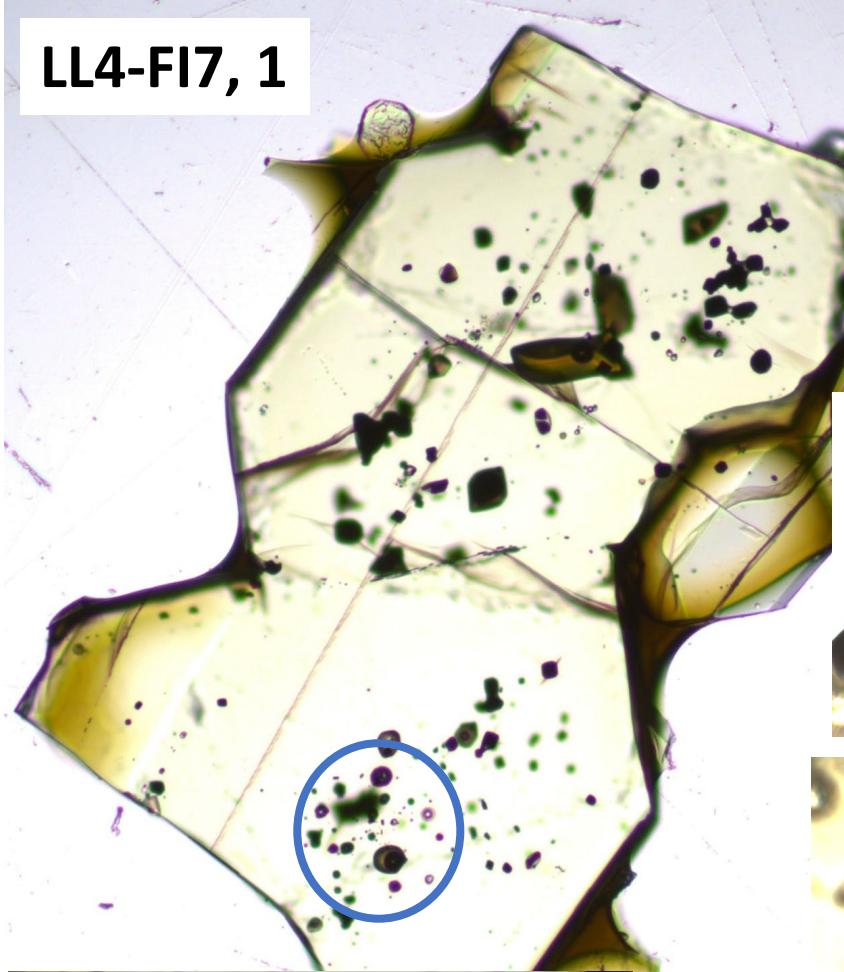
LL4-FI12b, 1



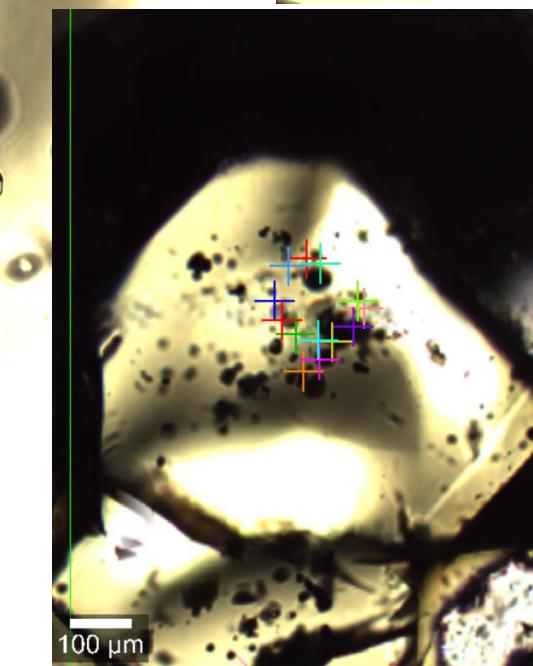
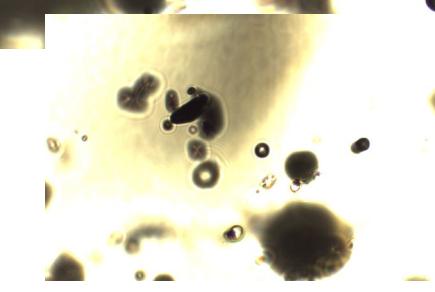
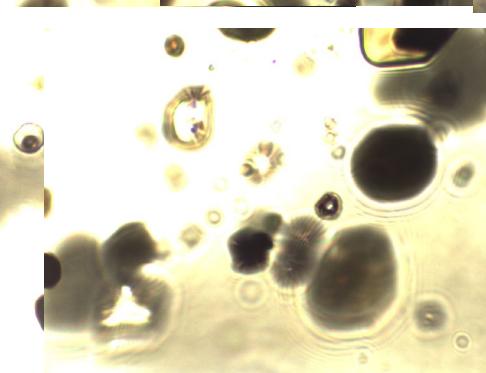
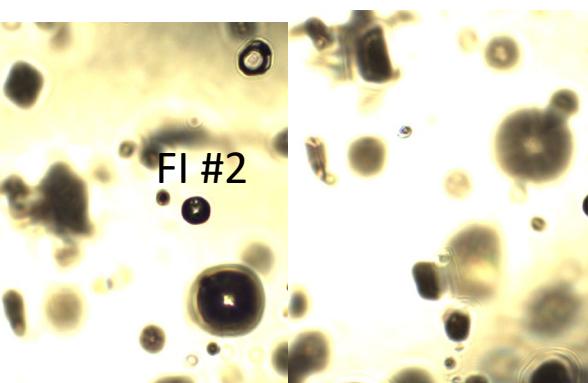
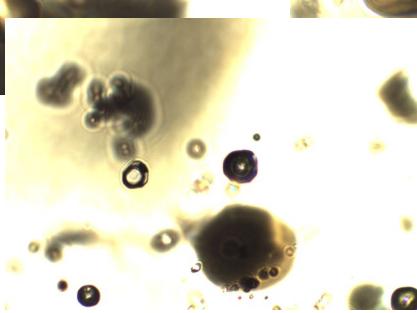
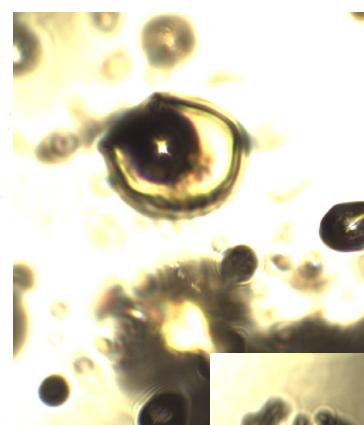
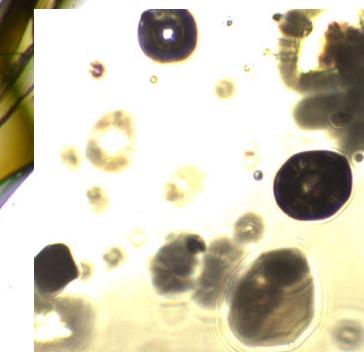
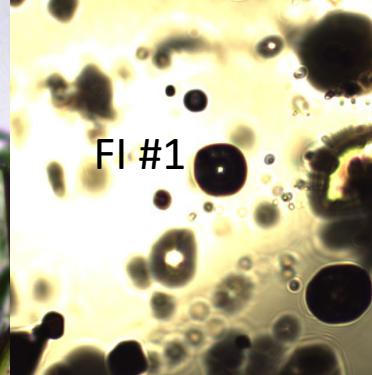
LL4-FI3-4, 1



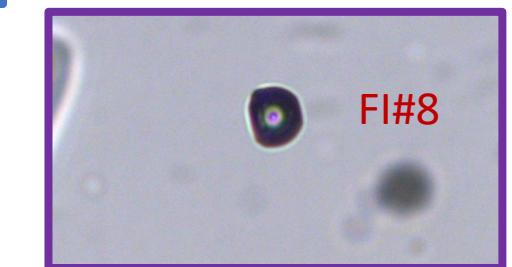
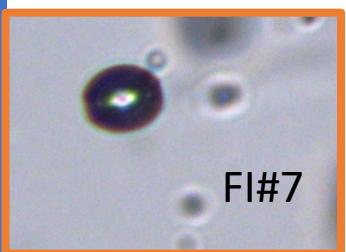
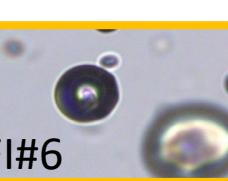
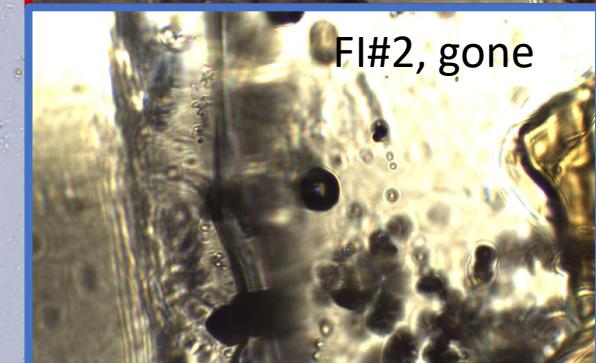
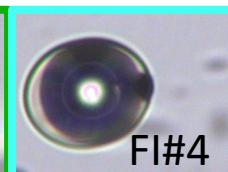
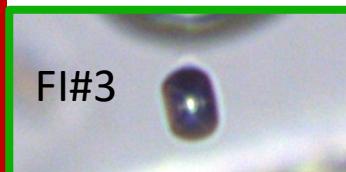
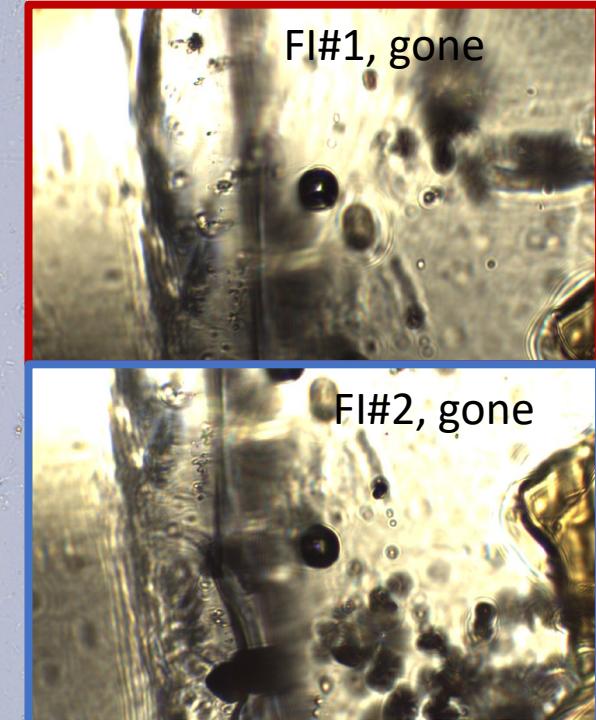
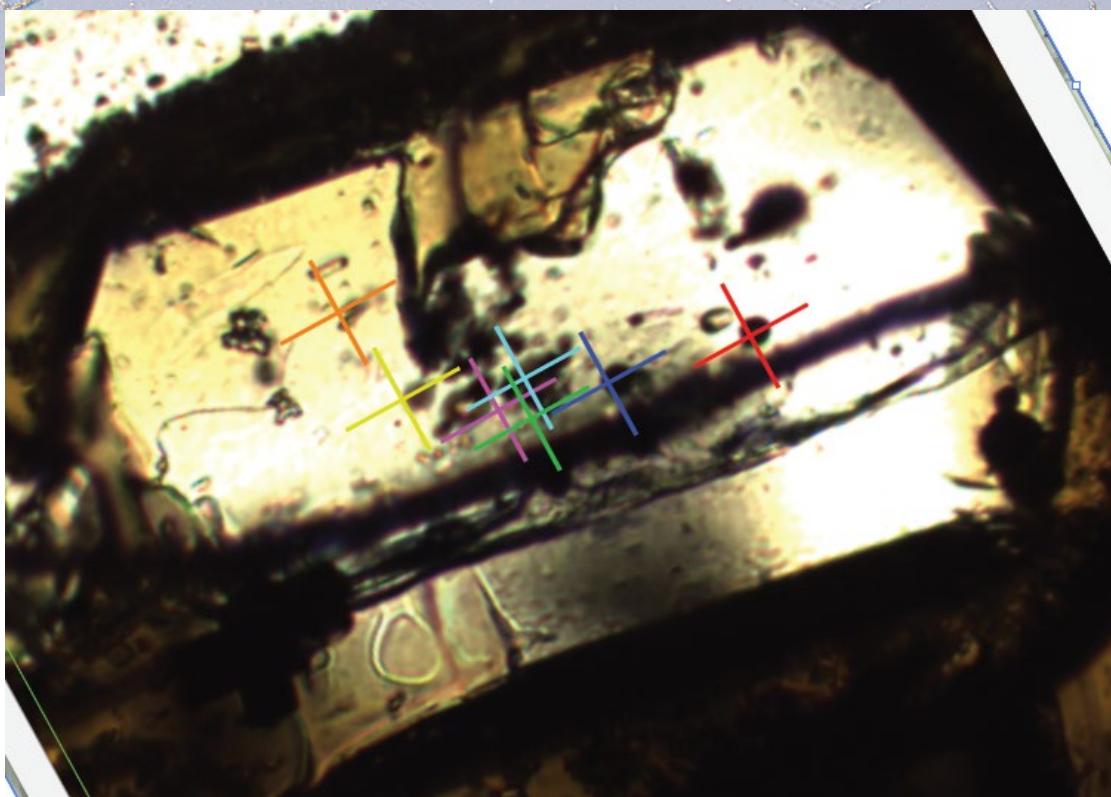
LL4-FI7, 1



A lot gone



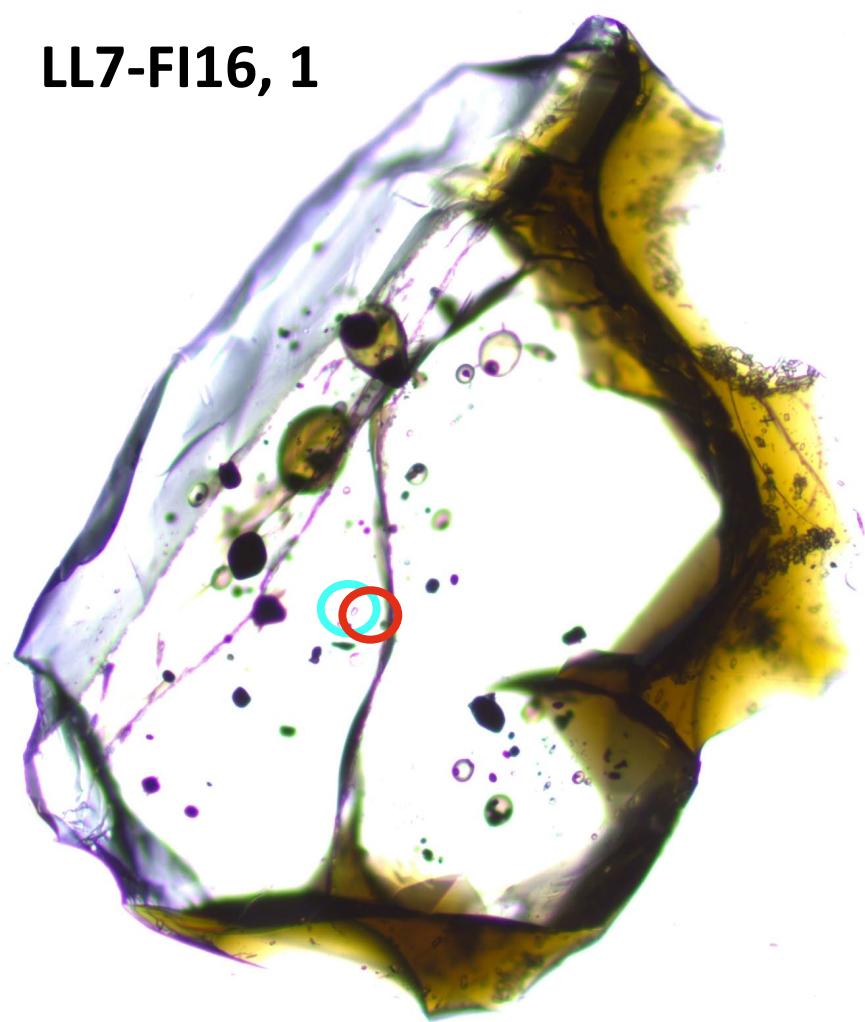
LL7-19dp, 1



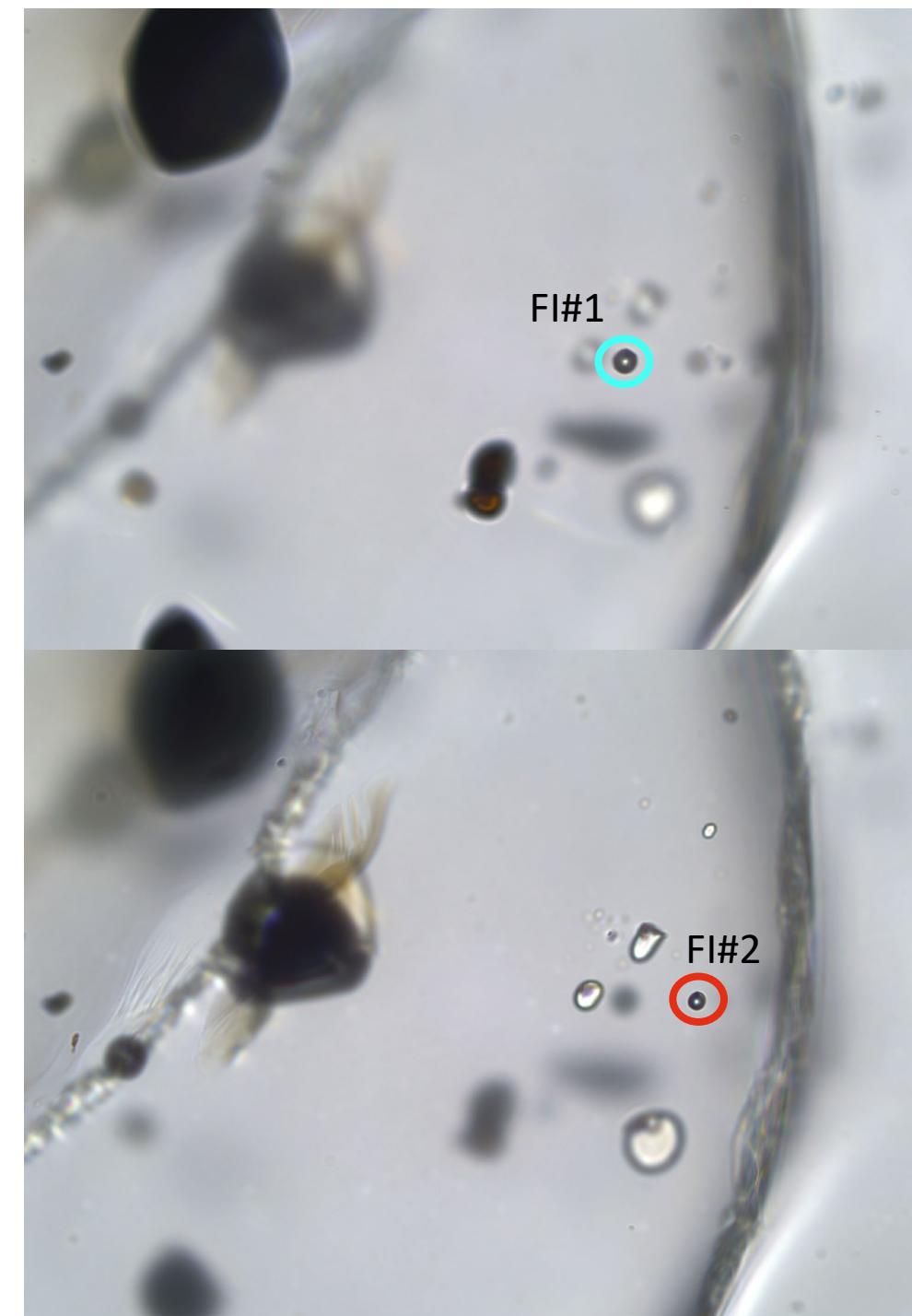
If I didn't specify probe spots here it's because it's the same order of the FI.

This one has a 19-1 spot from Oct10 22 (dark blue), but ignore it because I don't have probe spot for it.

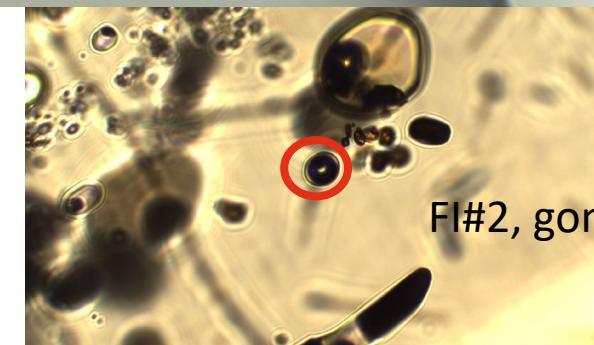
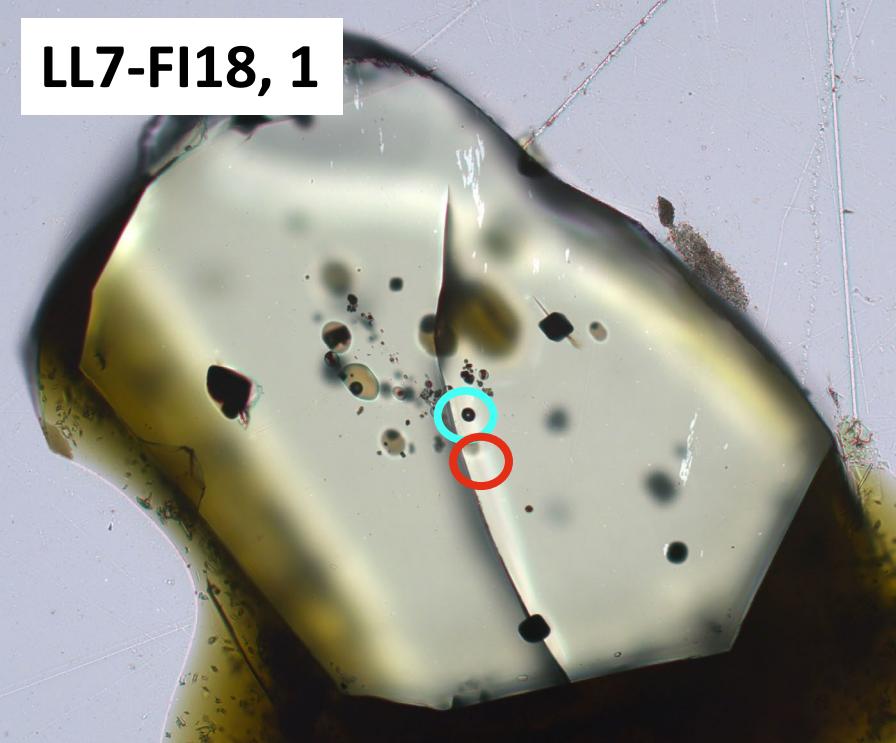
LL7-FI16, 1



No diad (raman data)

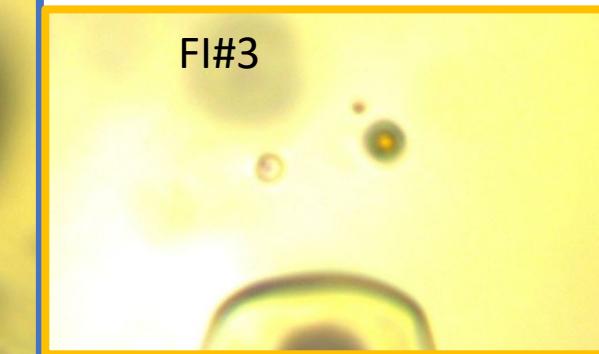
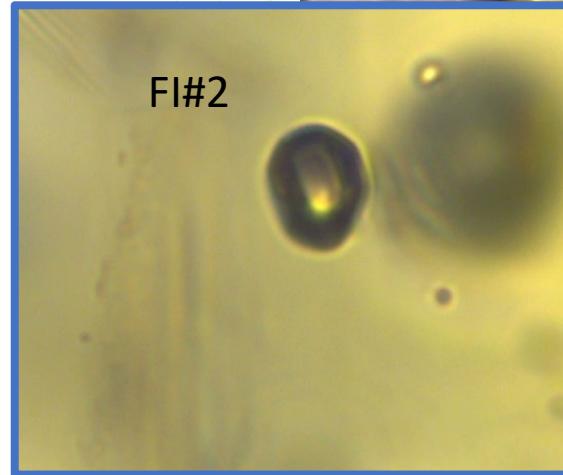
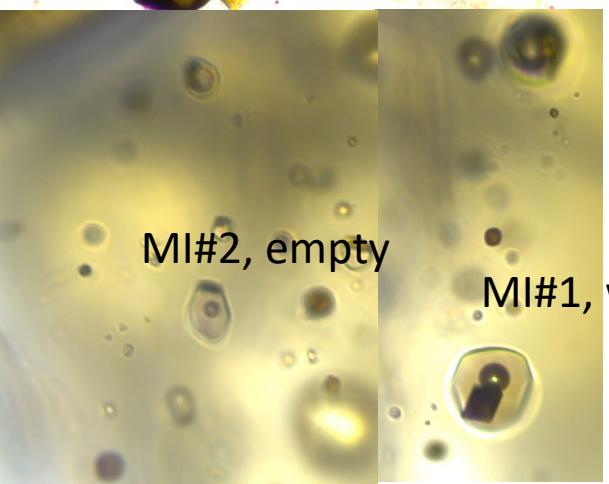
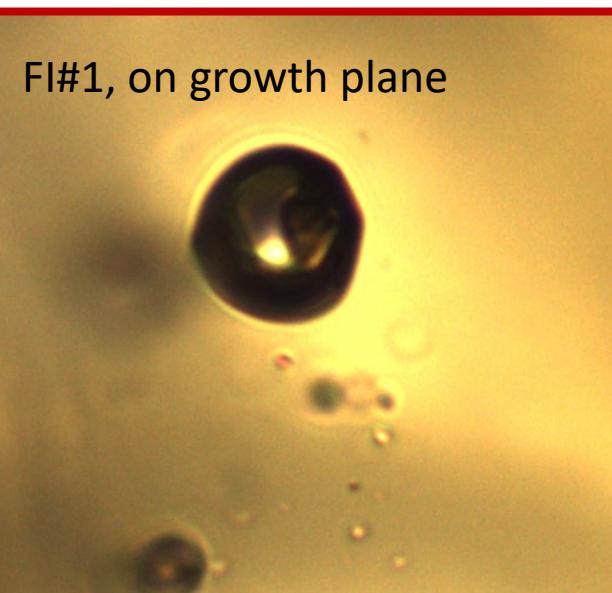
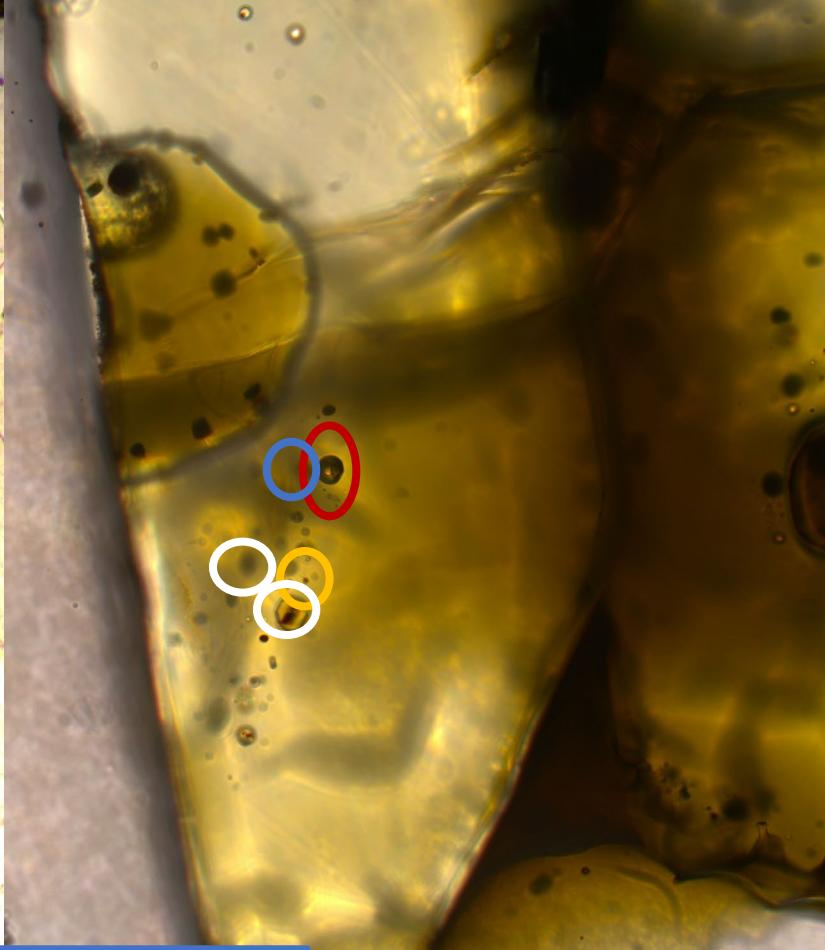
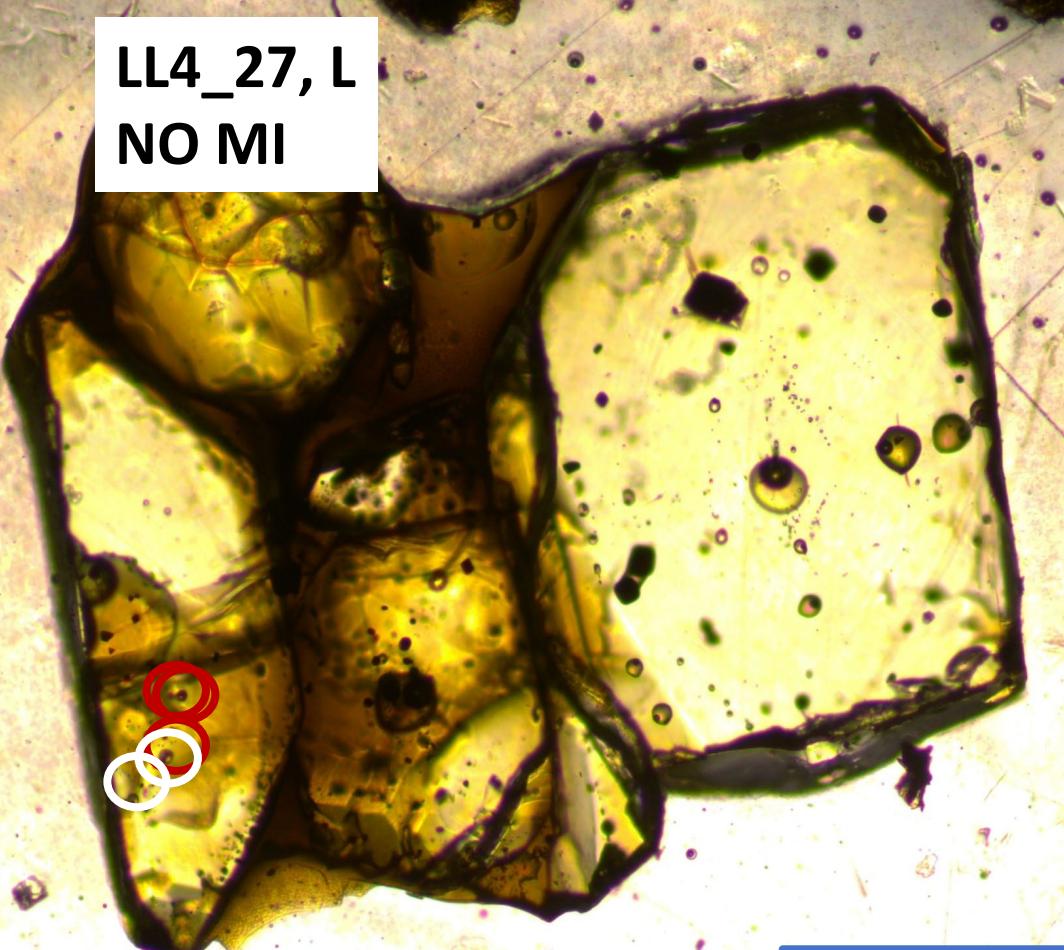


LL7-FI18, 1

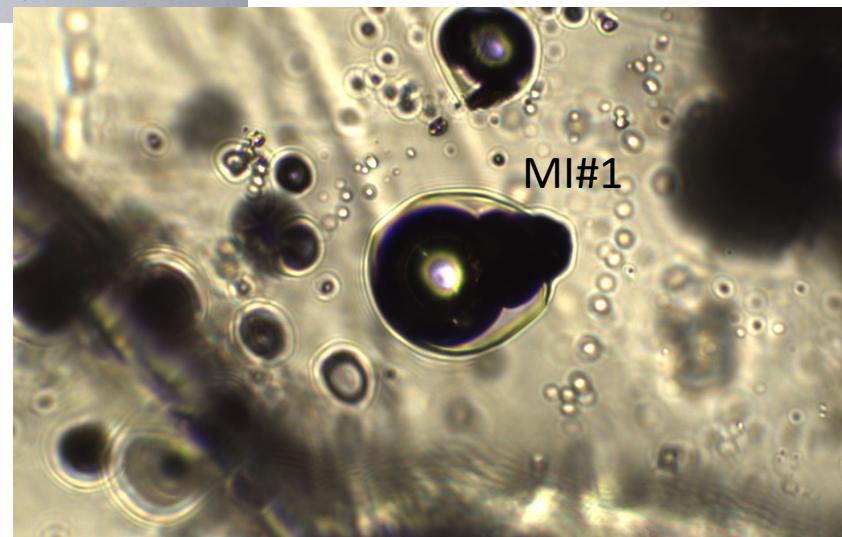


This crystal was flipped weird, hard to know for sure if the FI are just gone

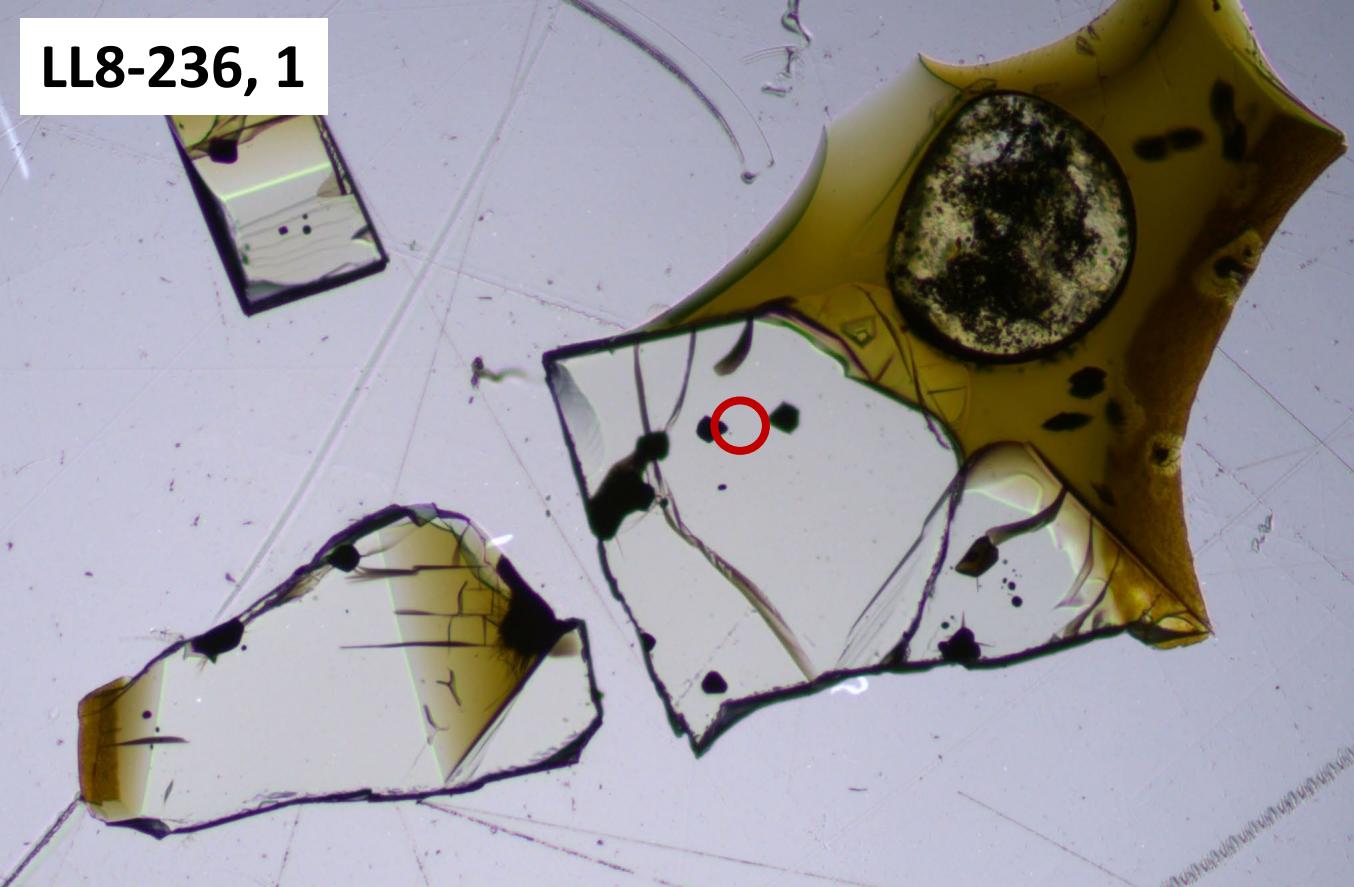
LL4_27, L
NO MI



LL8-C15, 3



LL8-236, 1

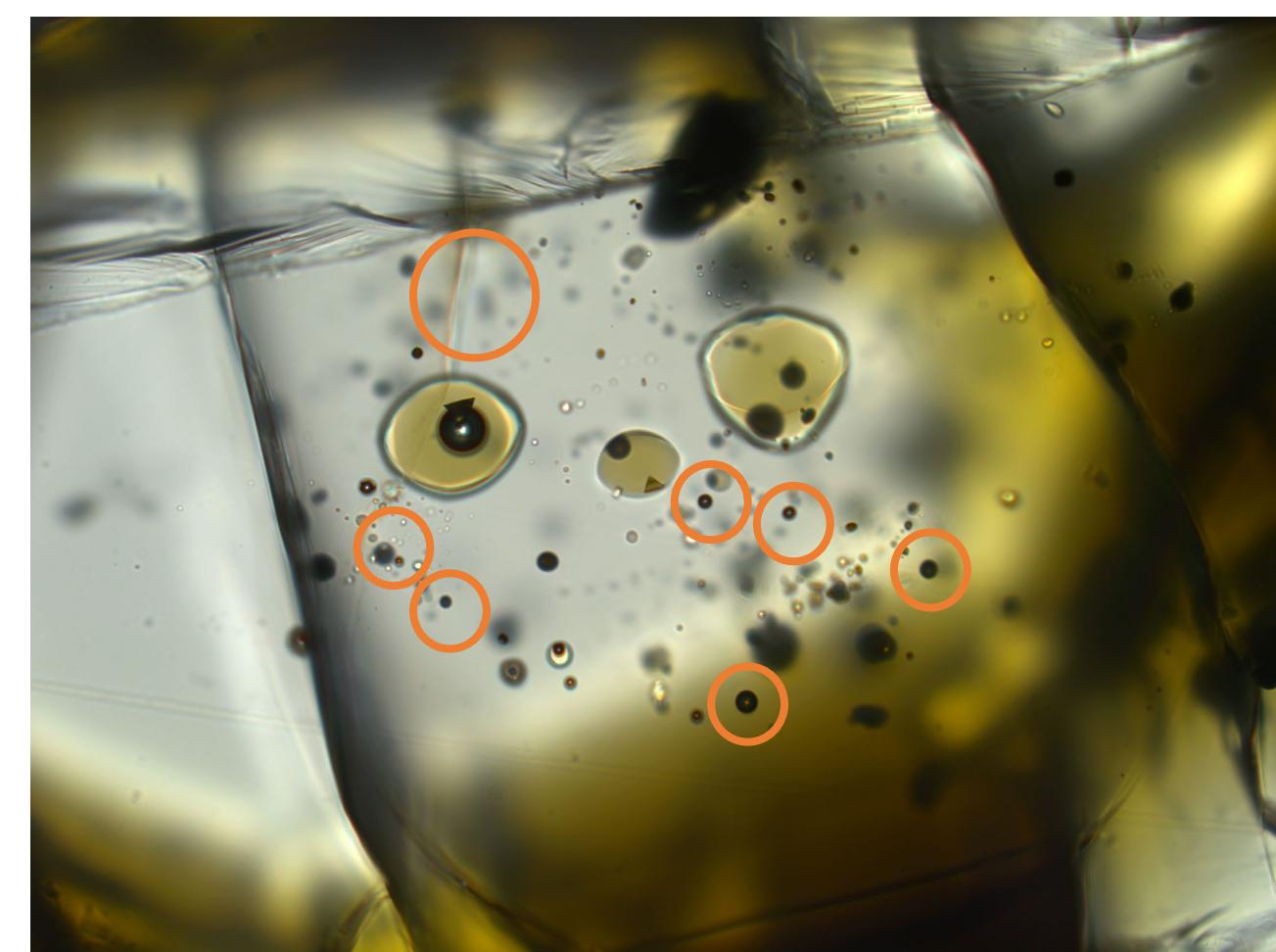
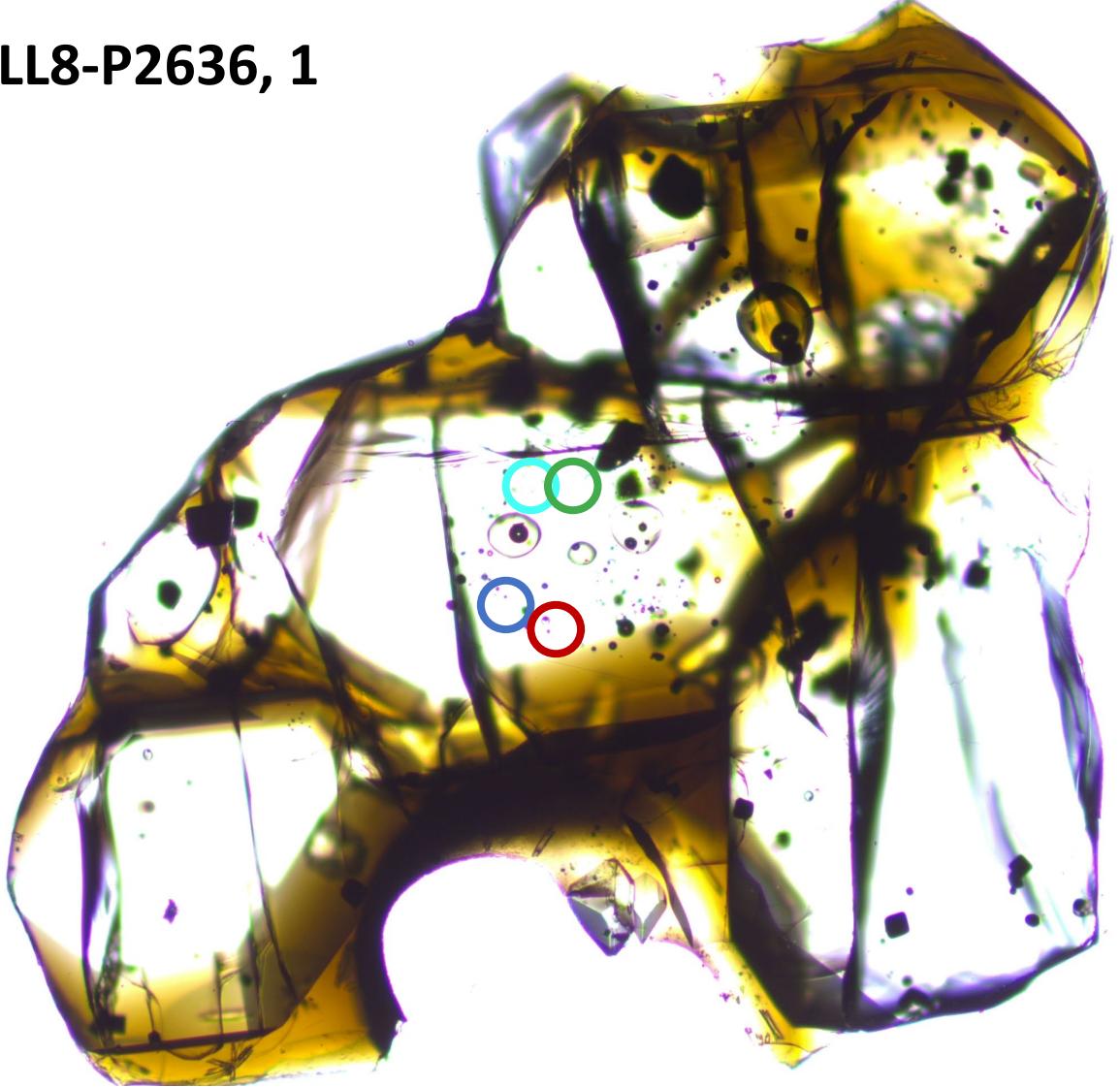


FI#1 and 2 were lost (a piece that broke off but
Those two spinels are in a similar growth zone
As they would have been)



Color Bitmap (1920x1200) - BGR 09070B
Pixel (794/0) | R: 545.14 µm

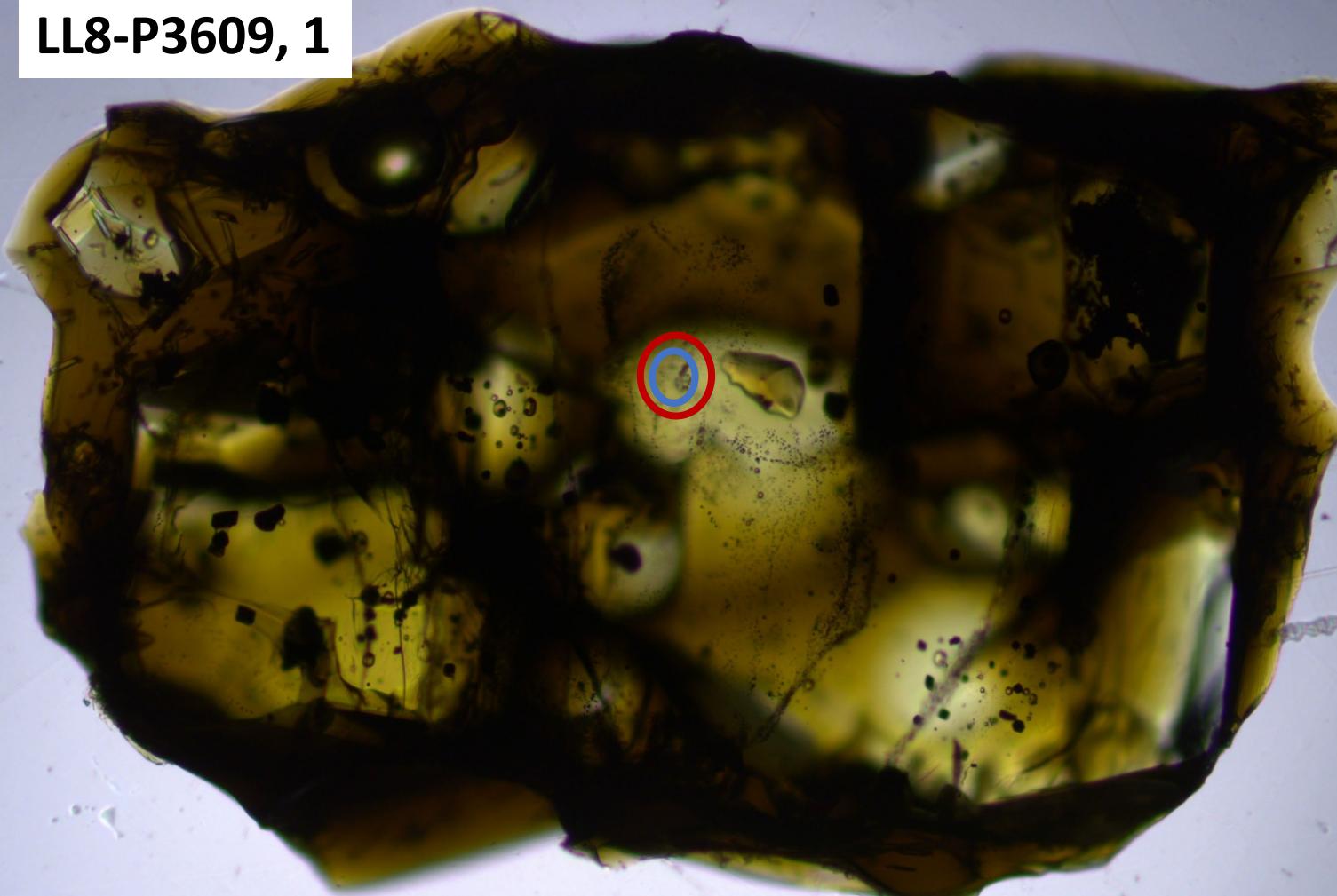
LL8-P2636, 1



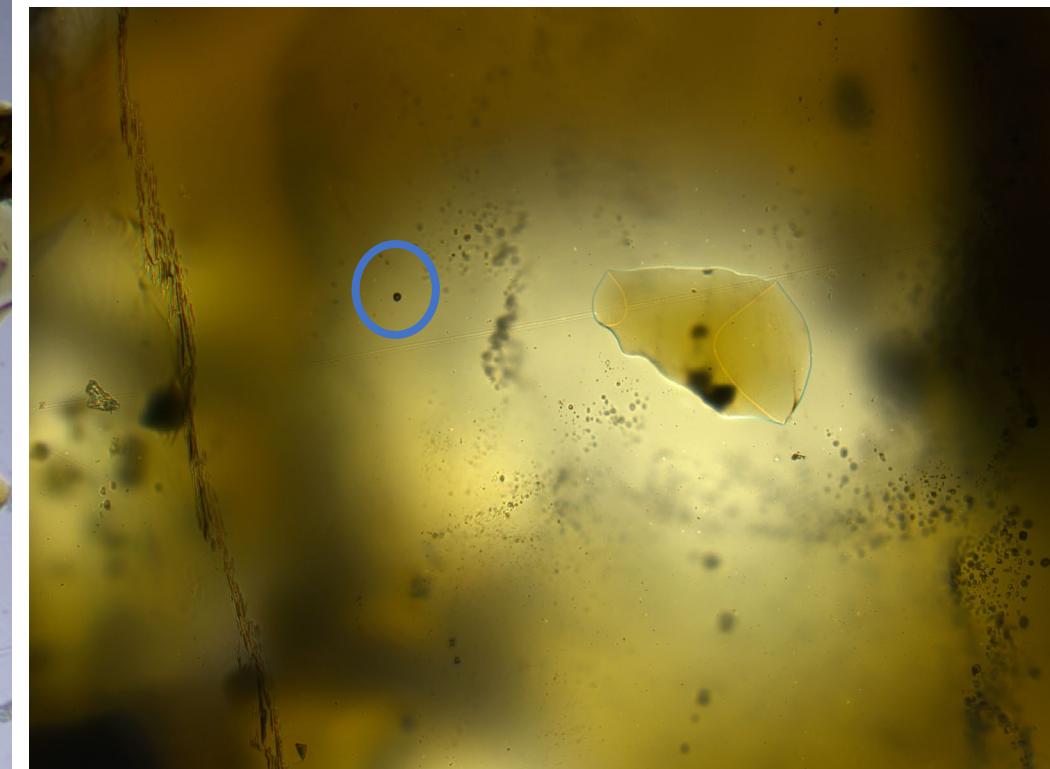
New visible FI, plenty to raman on GZ

Hard to figure out which are the original ones, but that was general location
(1 red, 2 blue, 3 green, 4 cyan)

LL8-P3609, 1



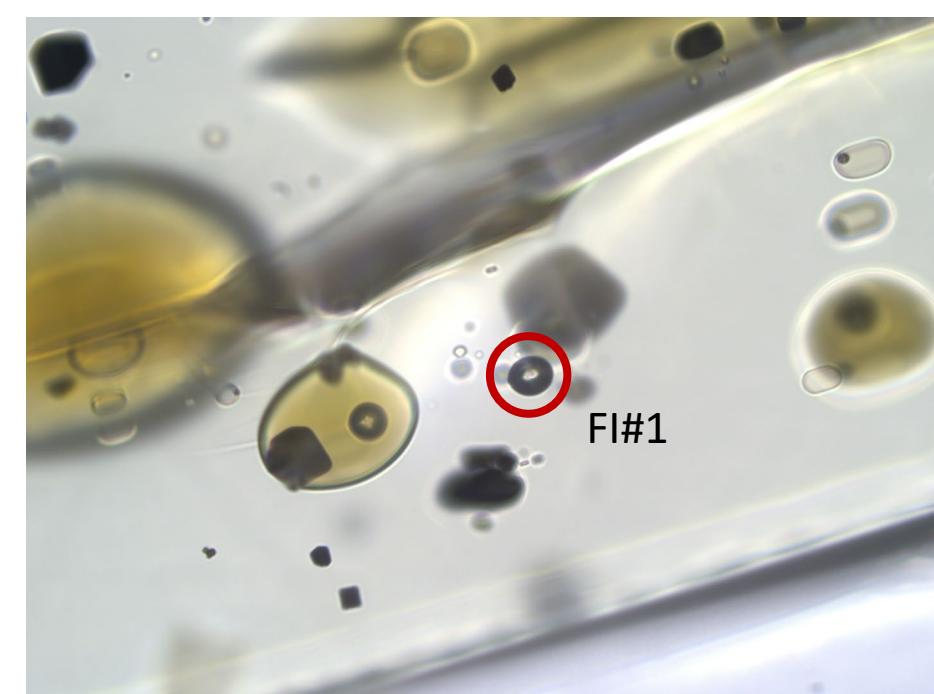
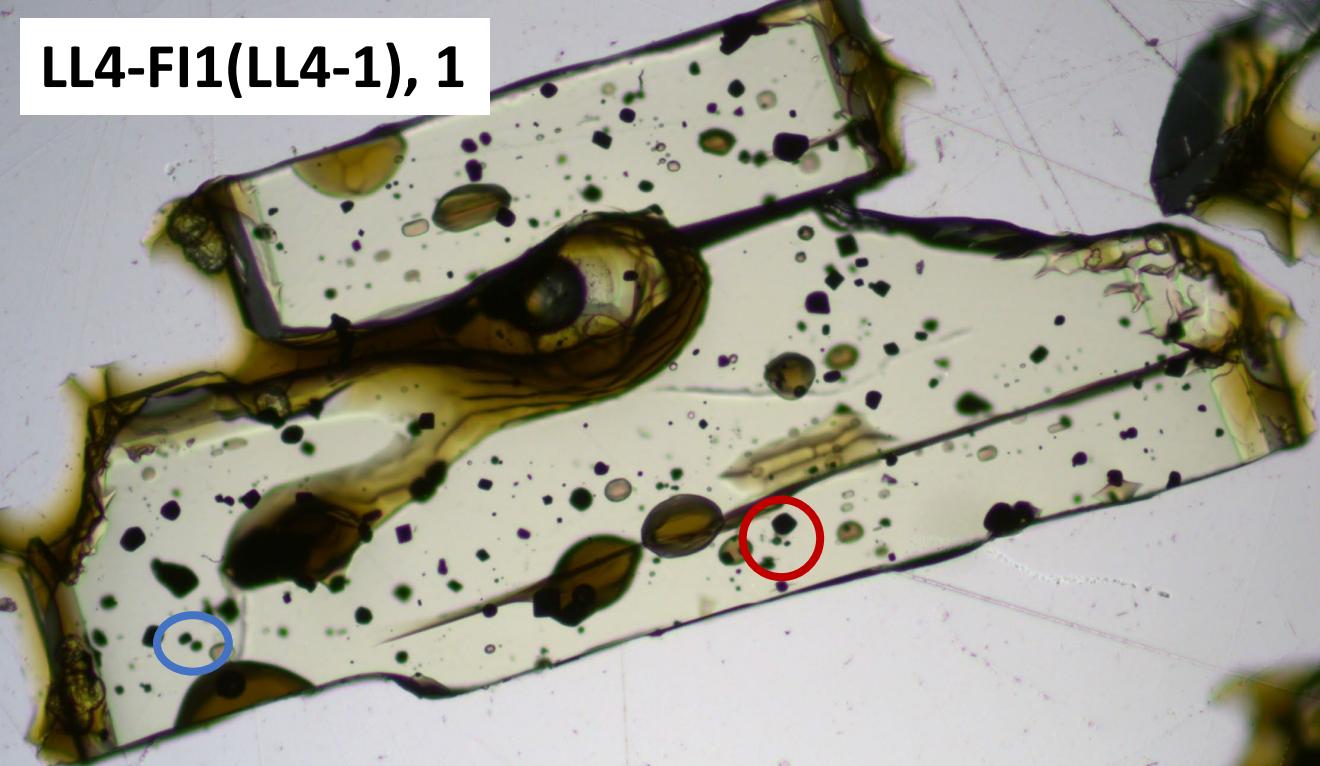
FI#1,2,3 polished out



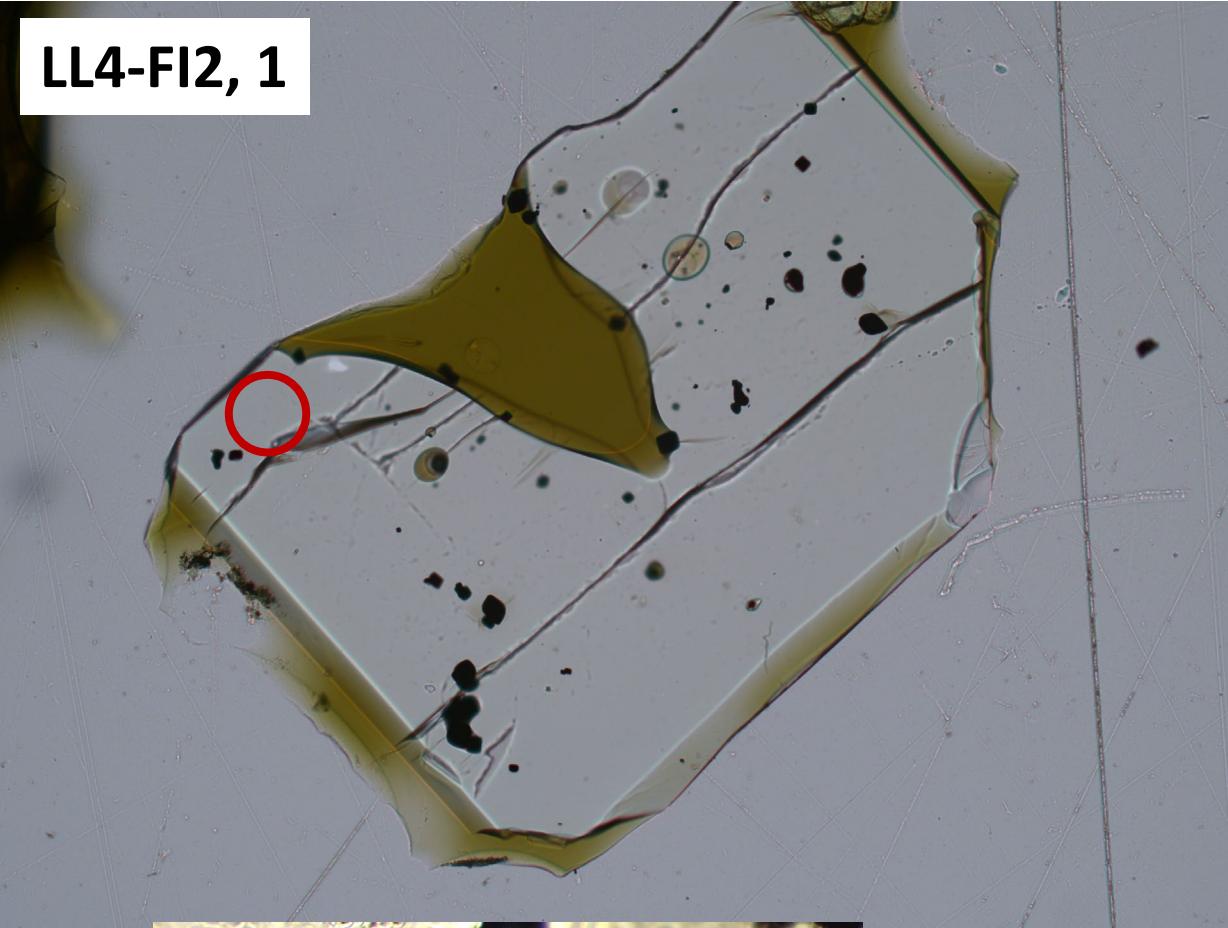
FI# 4,

This section has all the other FI in this study

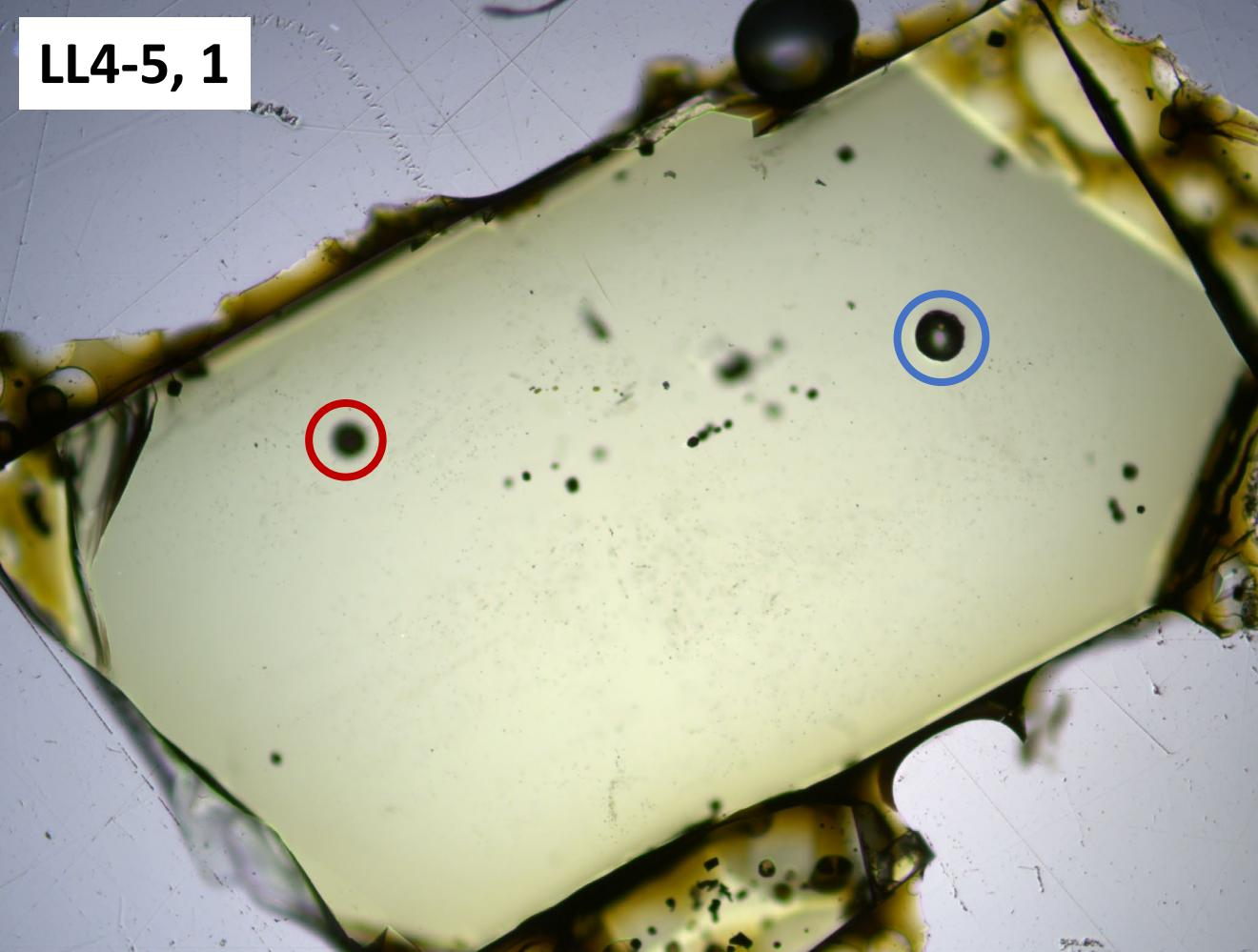
LL4-FI1(LL4-1), 1



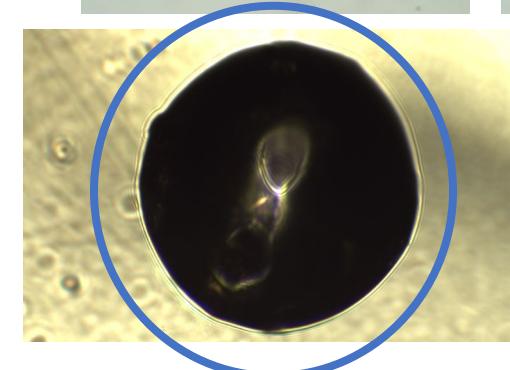
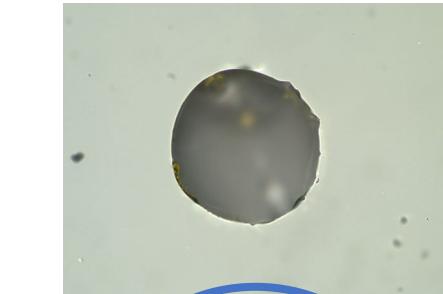
LL4-FI2, 1



LL4-5, 1



3 probe spots near 1

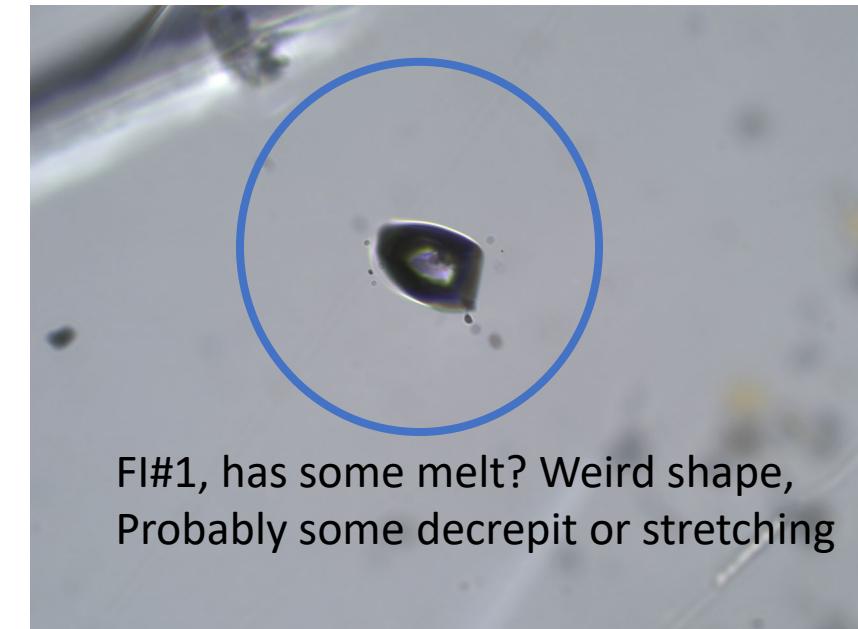
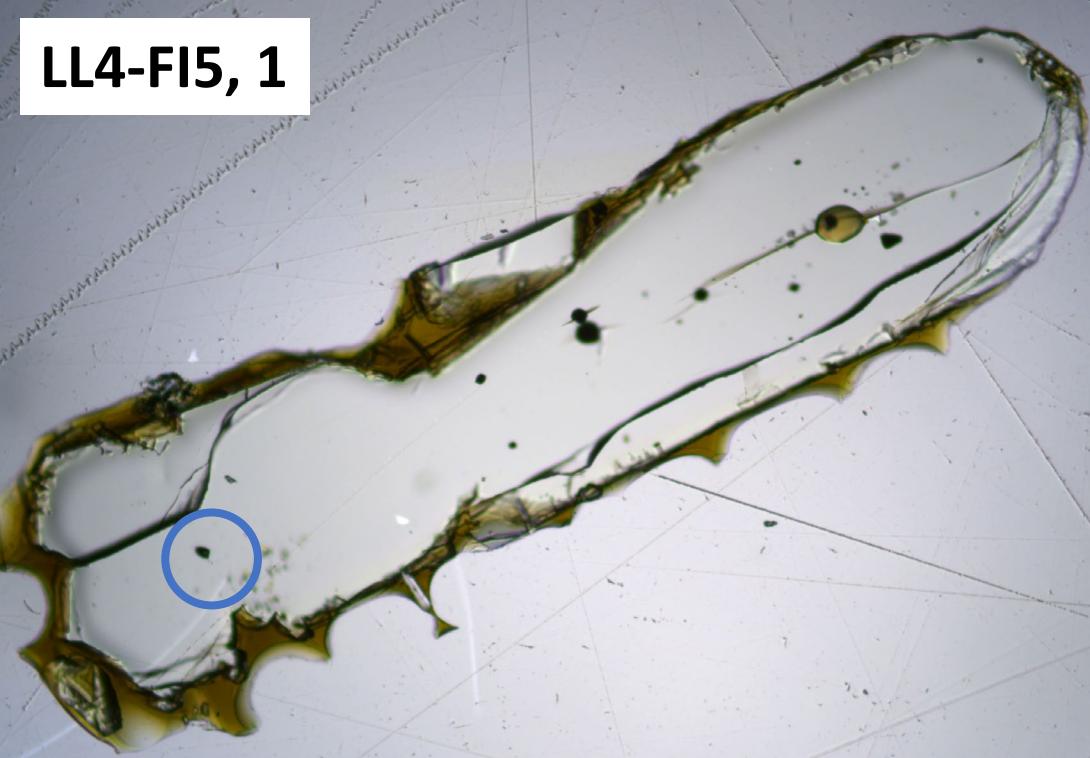


FI#1

FI#2

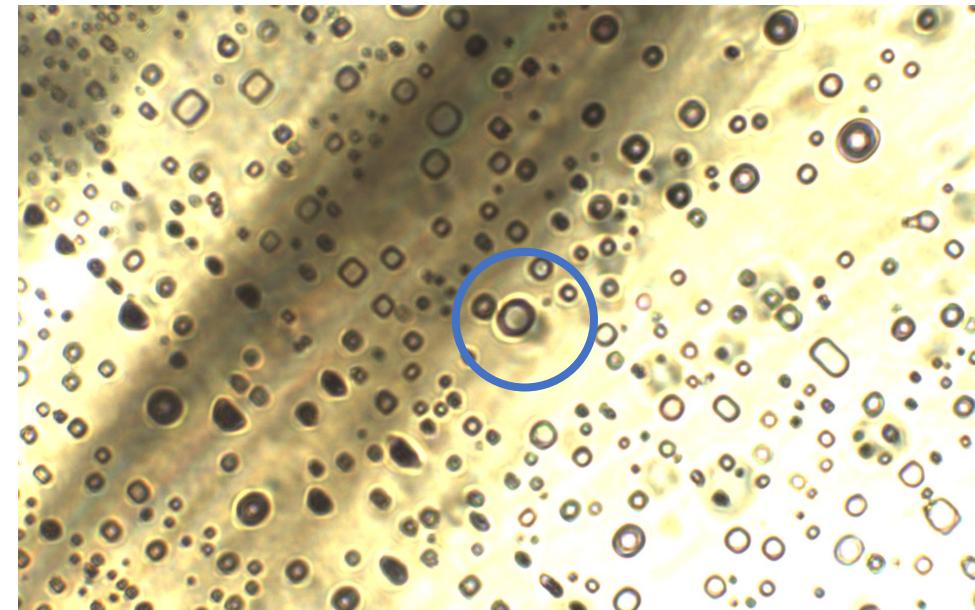
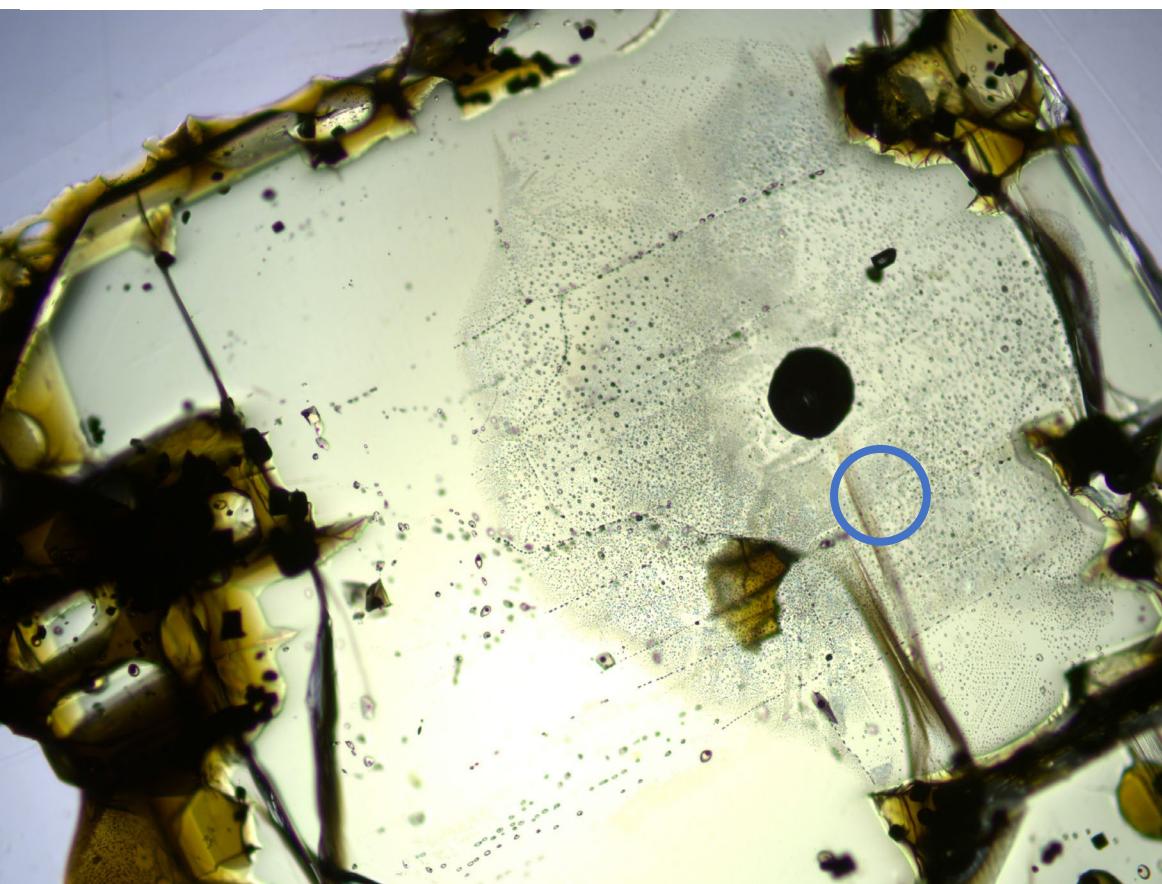


LL4-FI5, 1



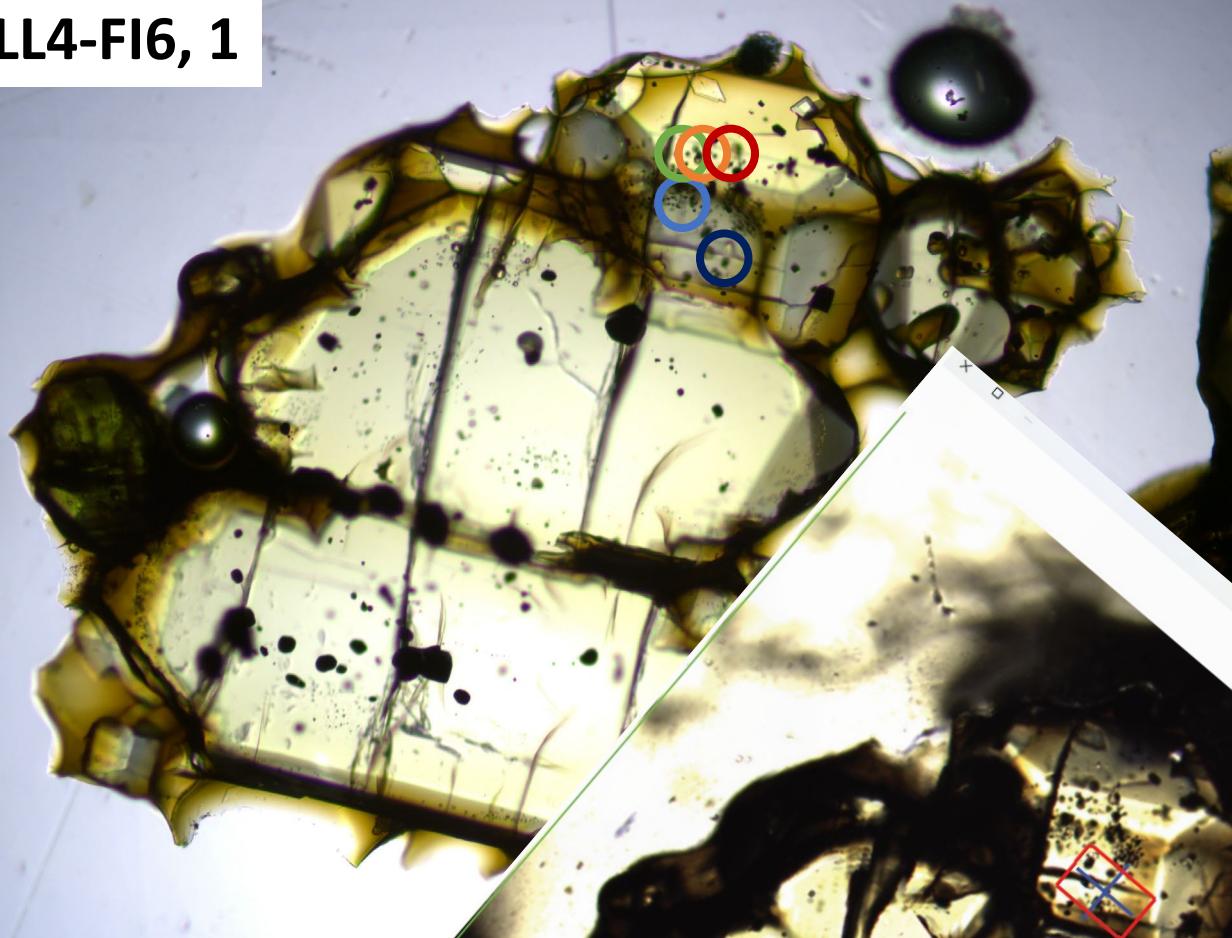
FI#1, has some melt? Weird shape,
Probably some decrepit or stretching

LL4-6, 1

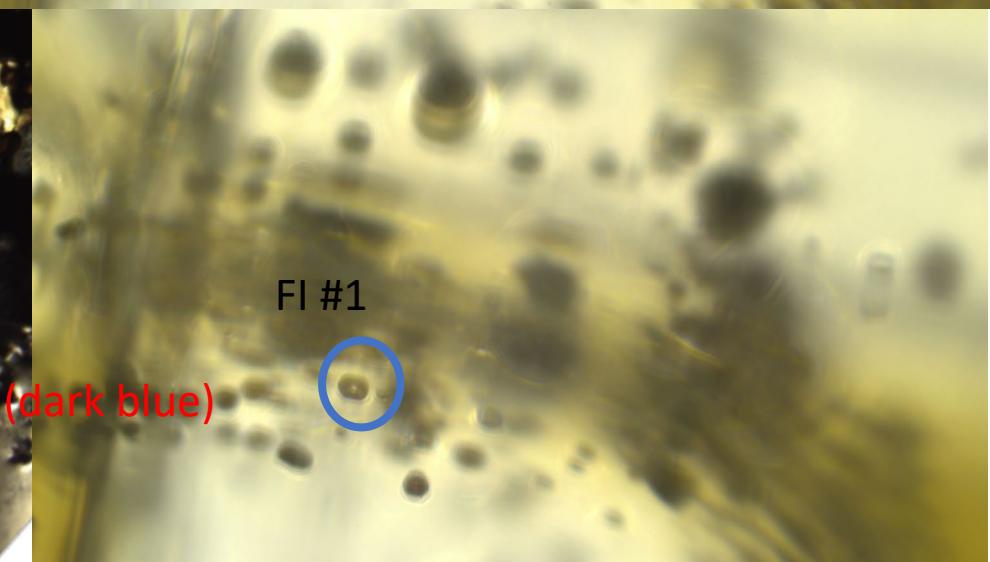
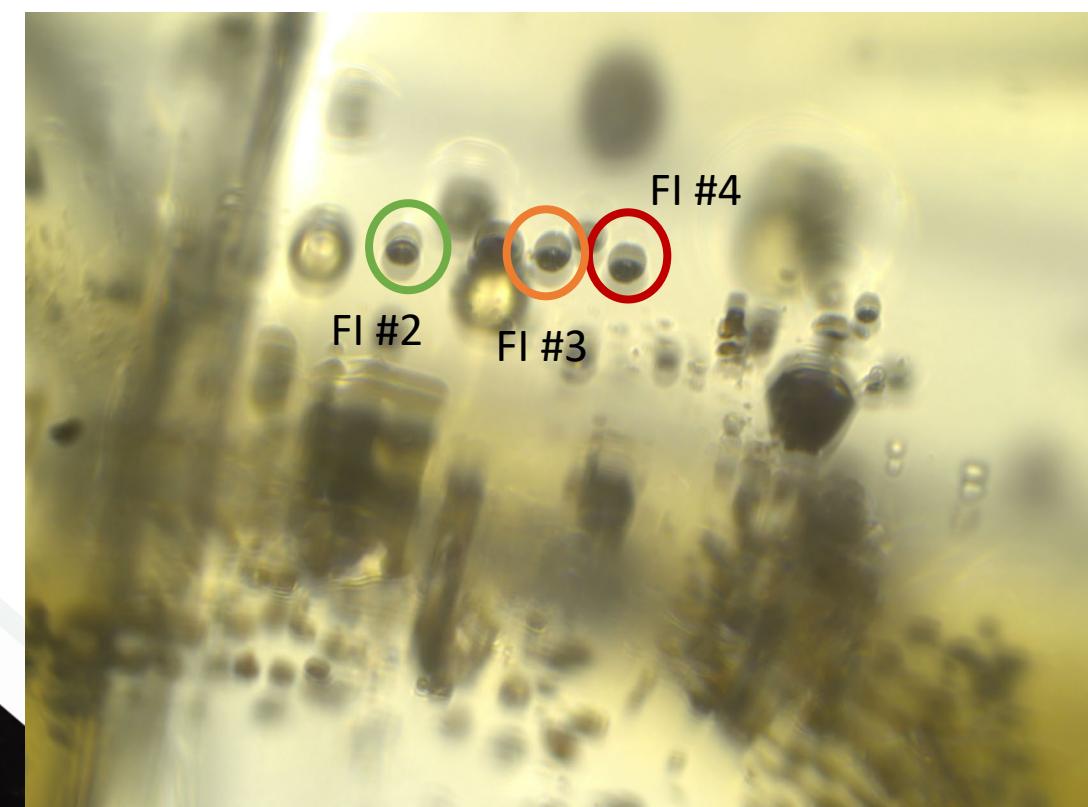
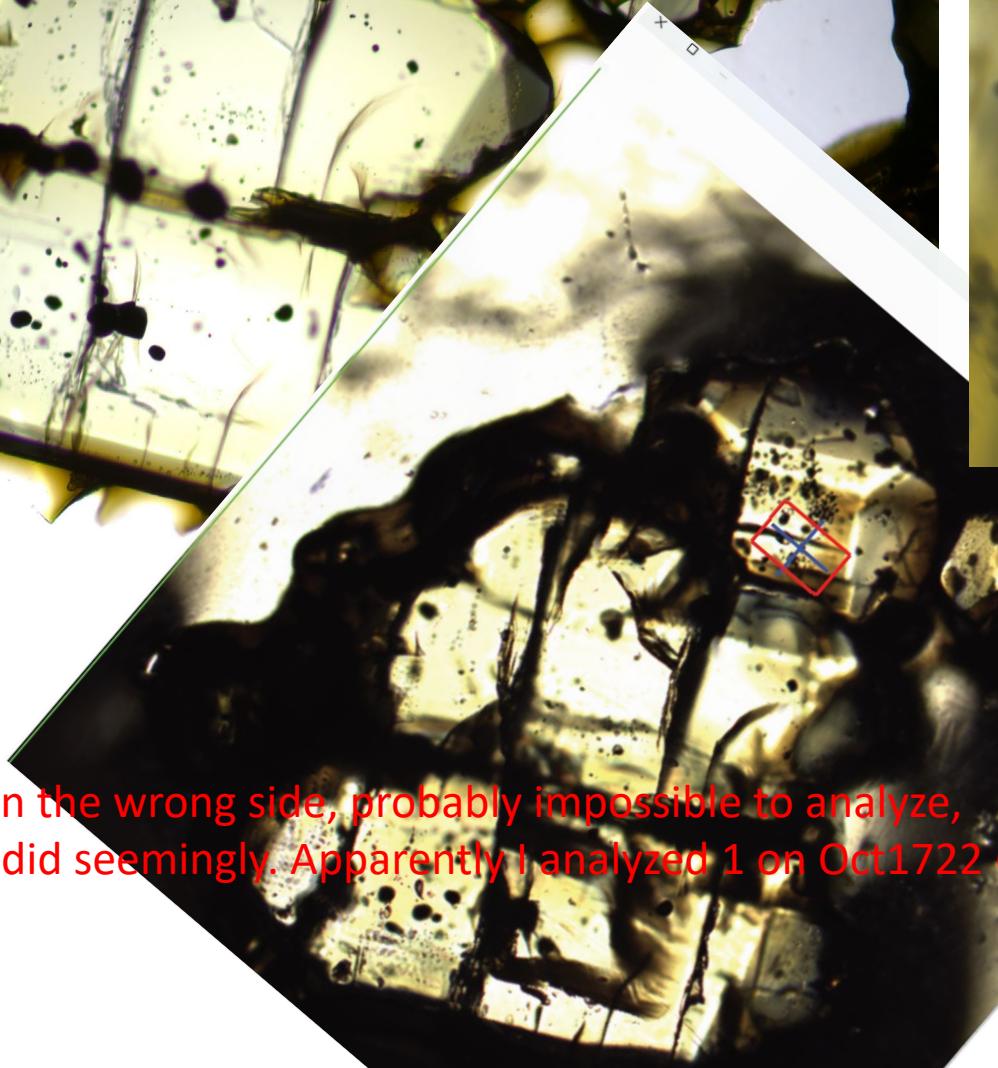


FI#1, They are probably result of decrepitation of the big one.
Cloud of FI around the big decrepit one. Cross cut by many
Secondary planes.

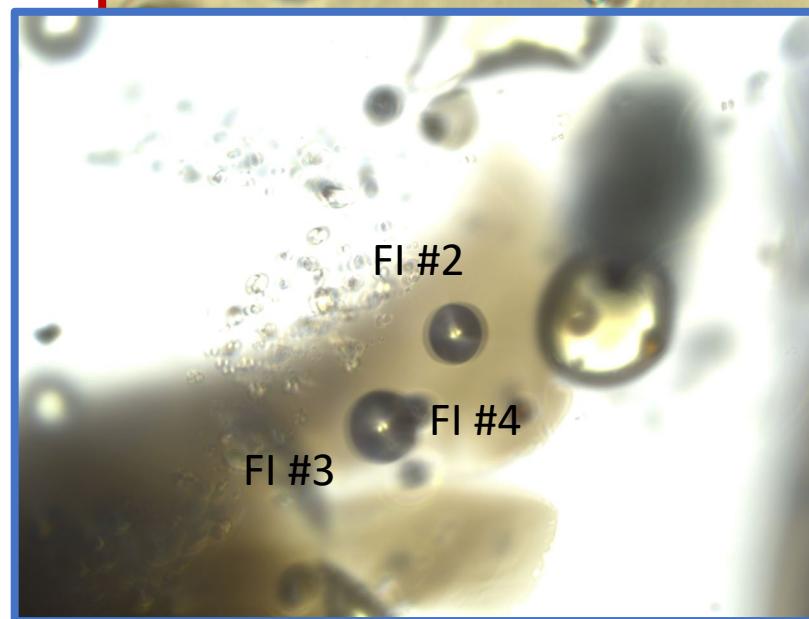
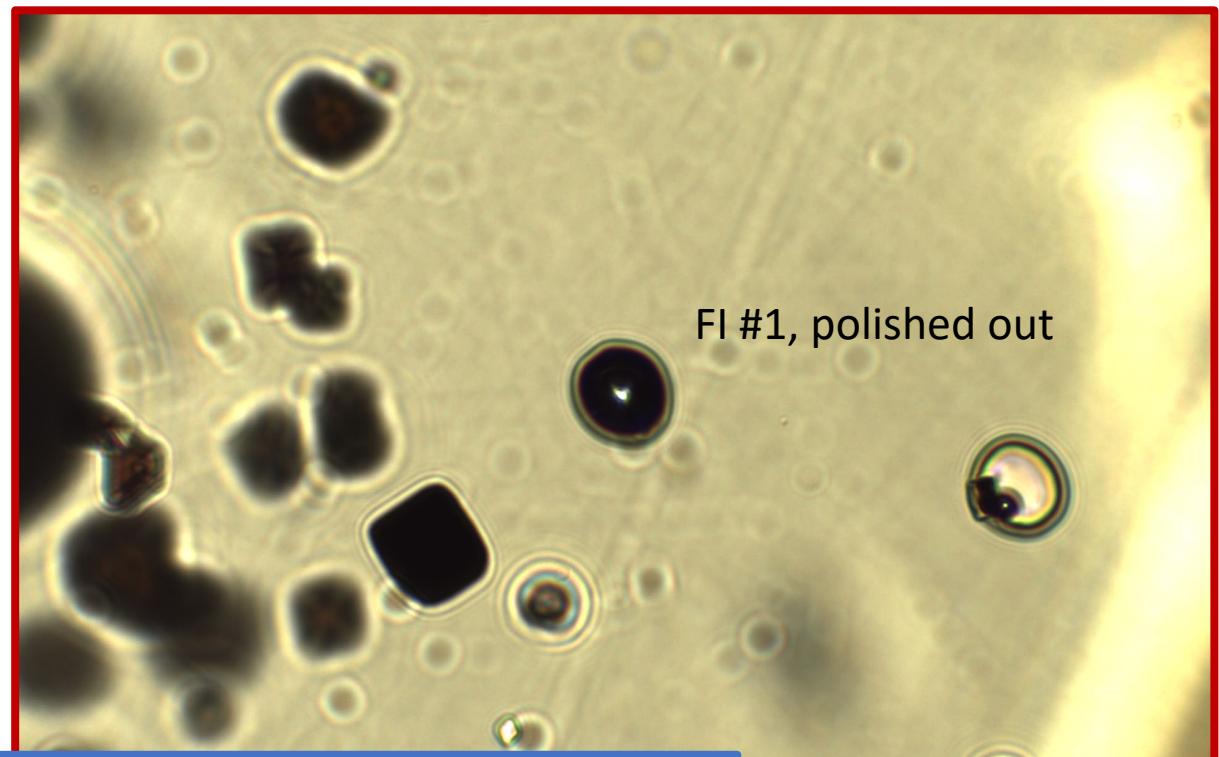
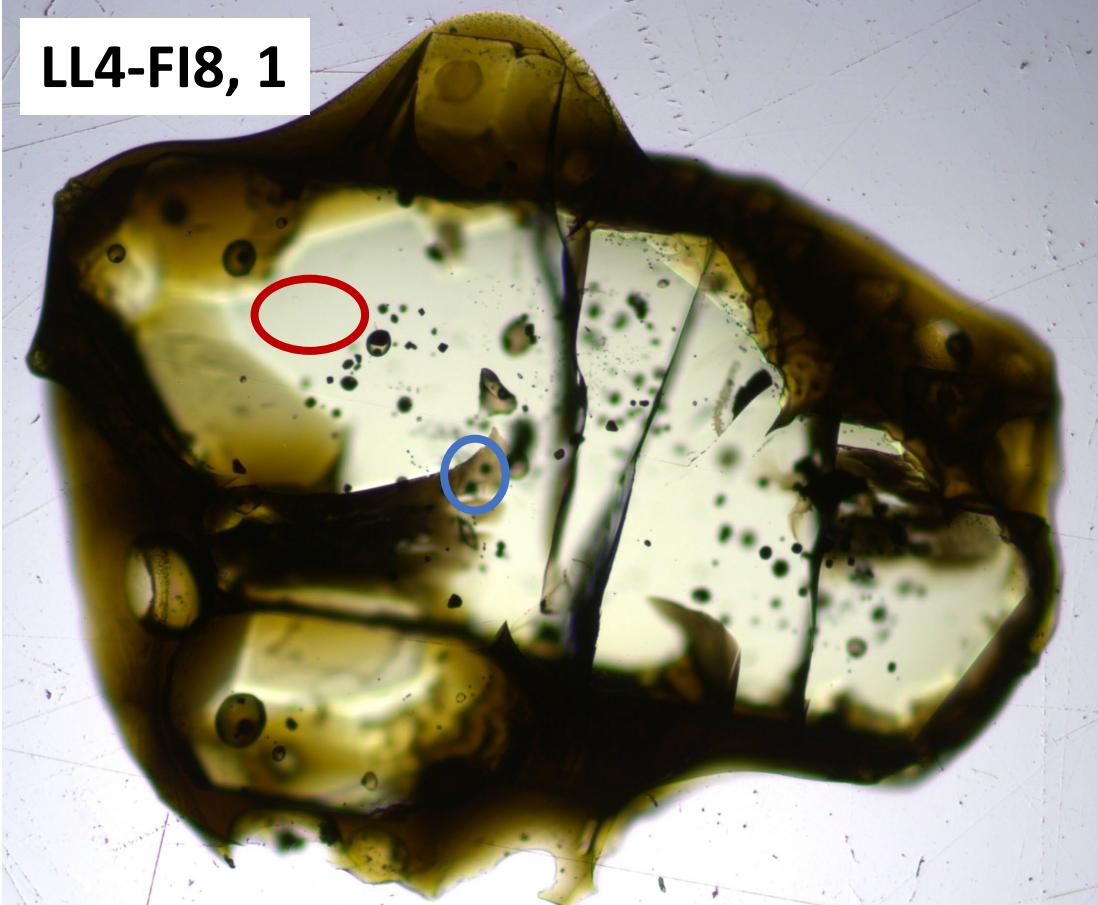
LL4-FI6, 1



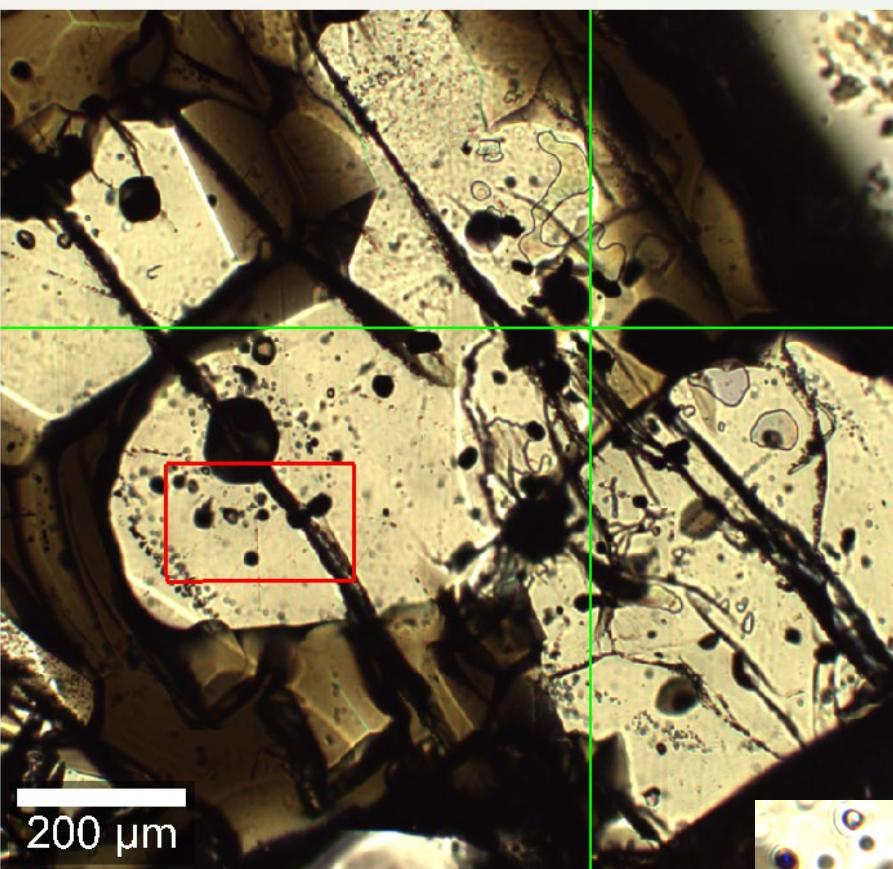
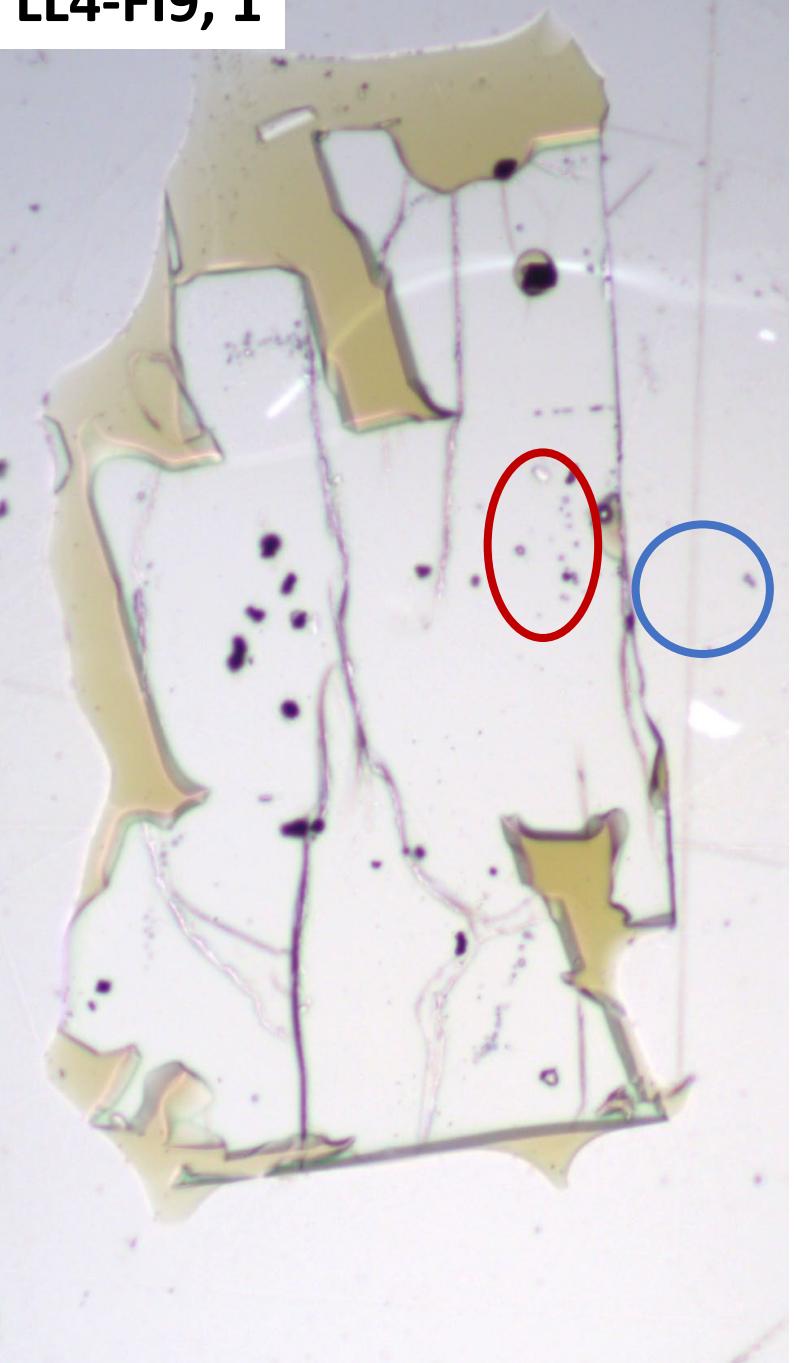
FI are on the wrong side, probably impossible to analyze,
I never did seemingly. Apparently I analyzed 1 on Oct1722 (dark blue)



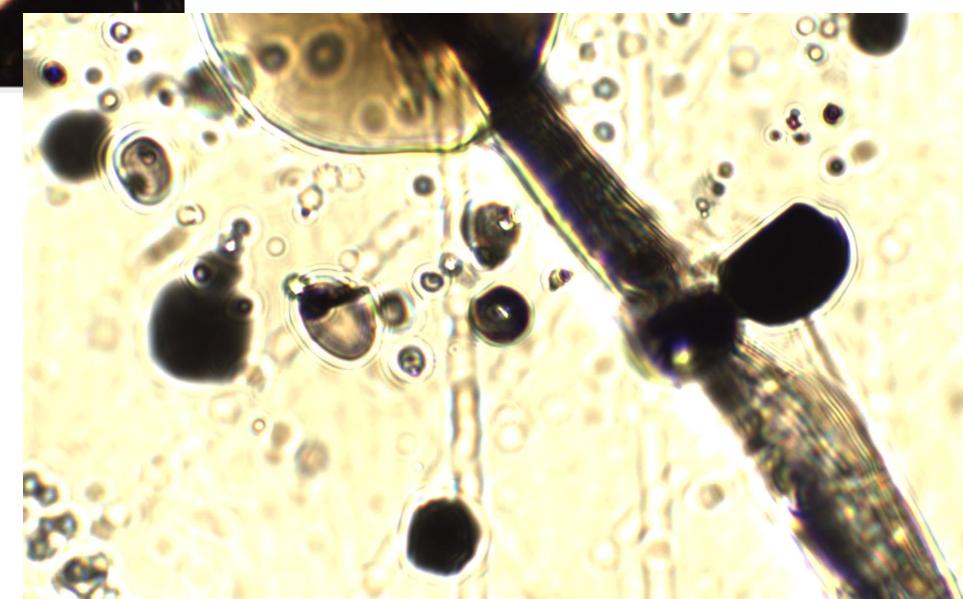
LL4-FI8, 1



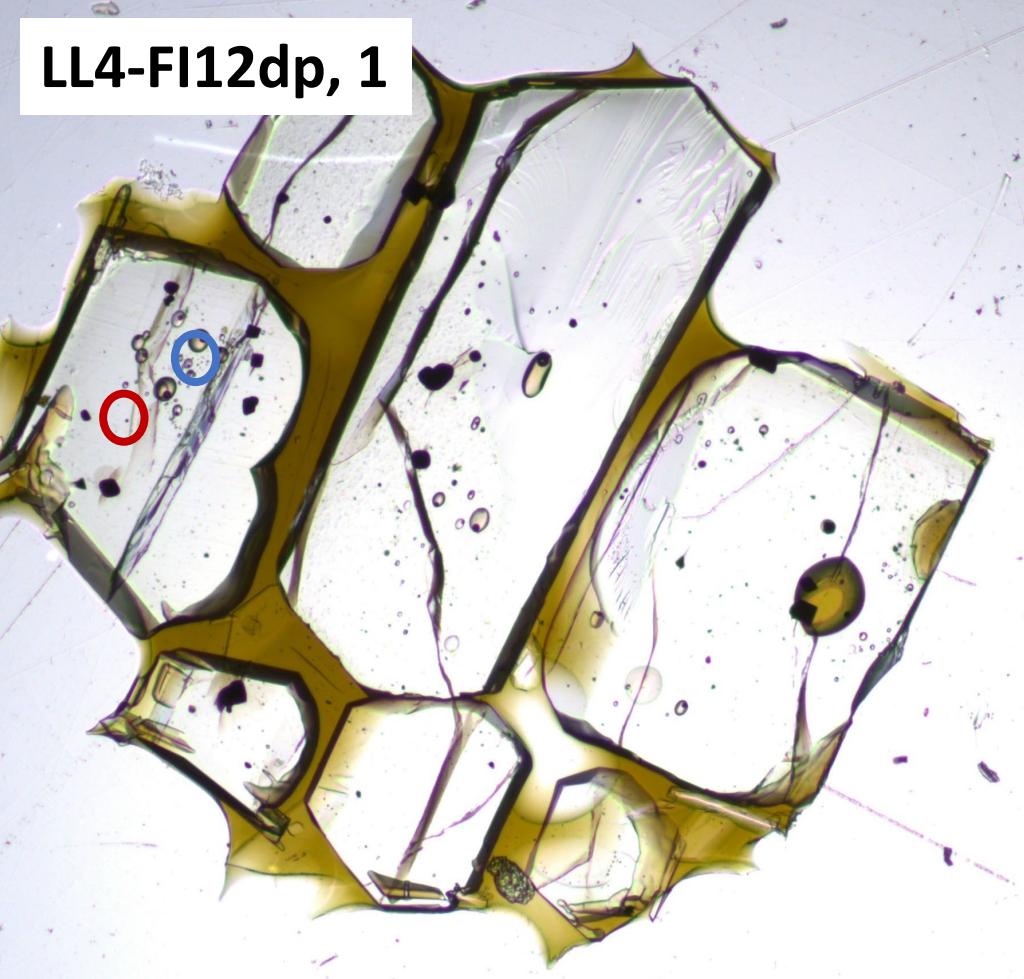
LL4-FI9, 1



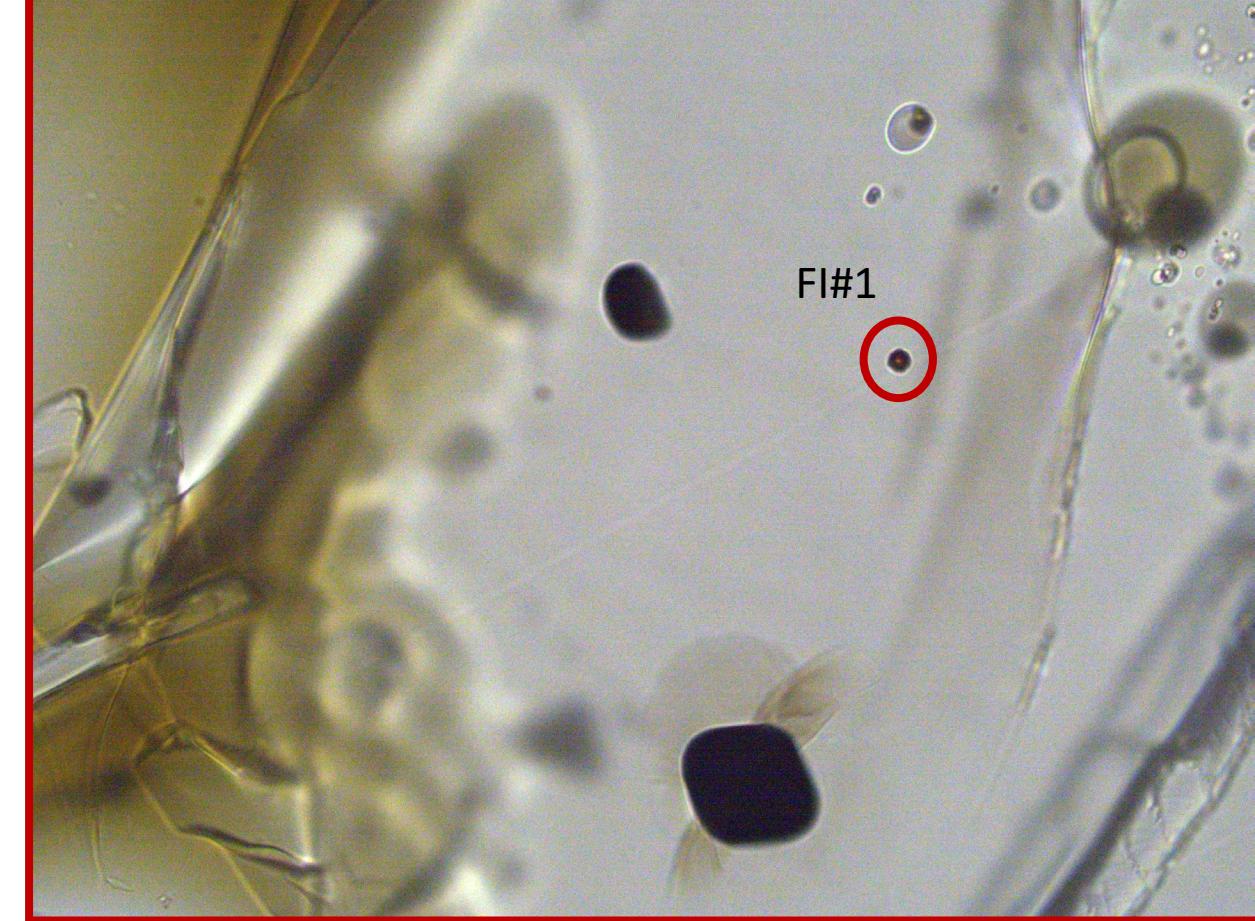
FI #1,broken off, would have been
Near the blue, but if I analyse
In the red area it should be good.



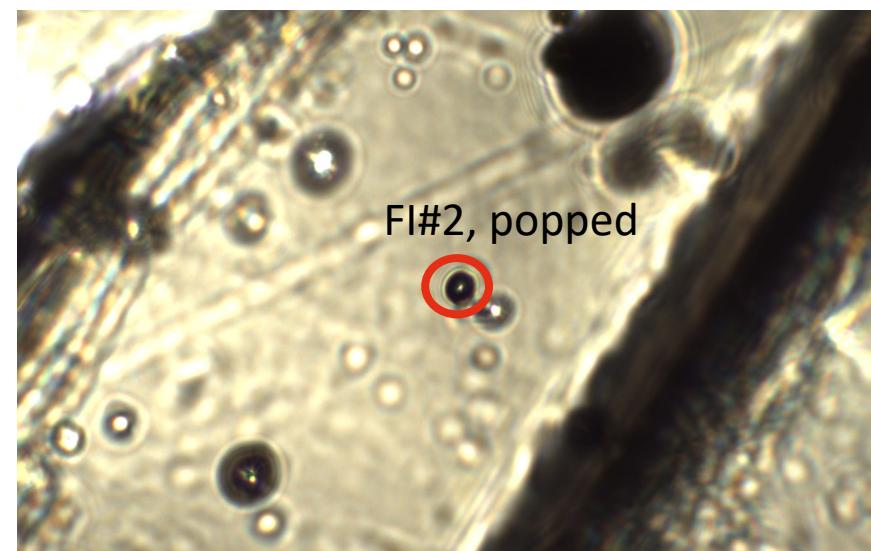
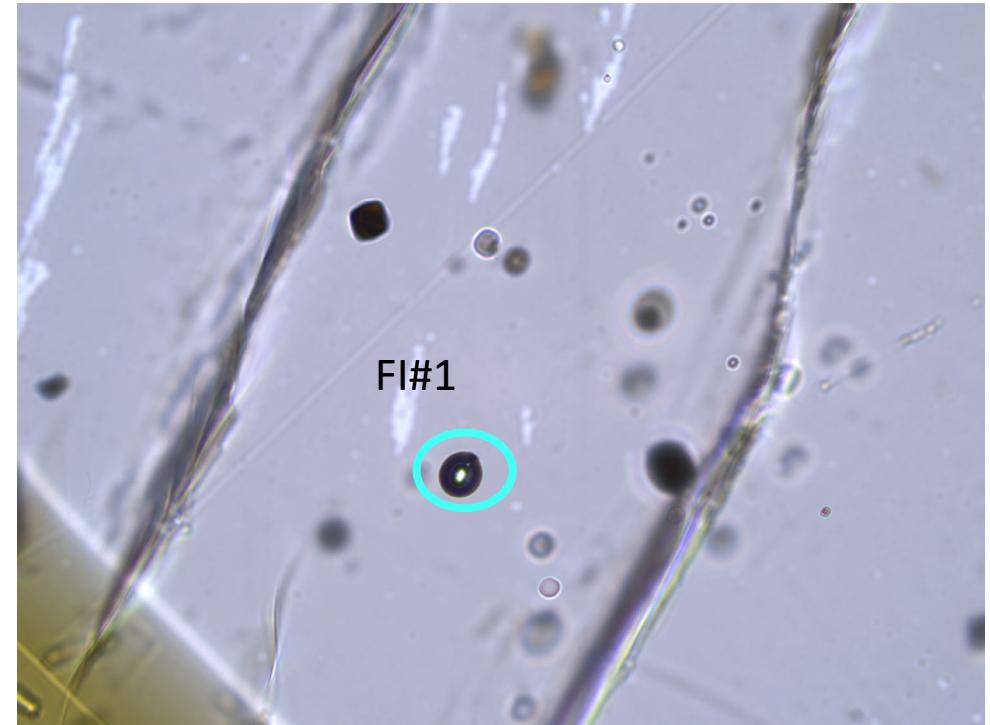
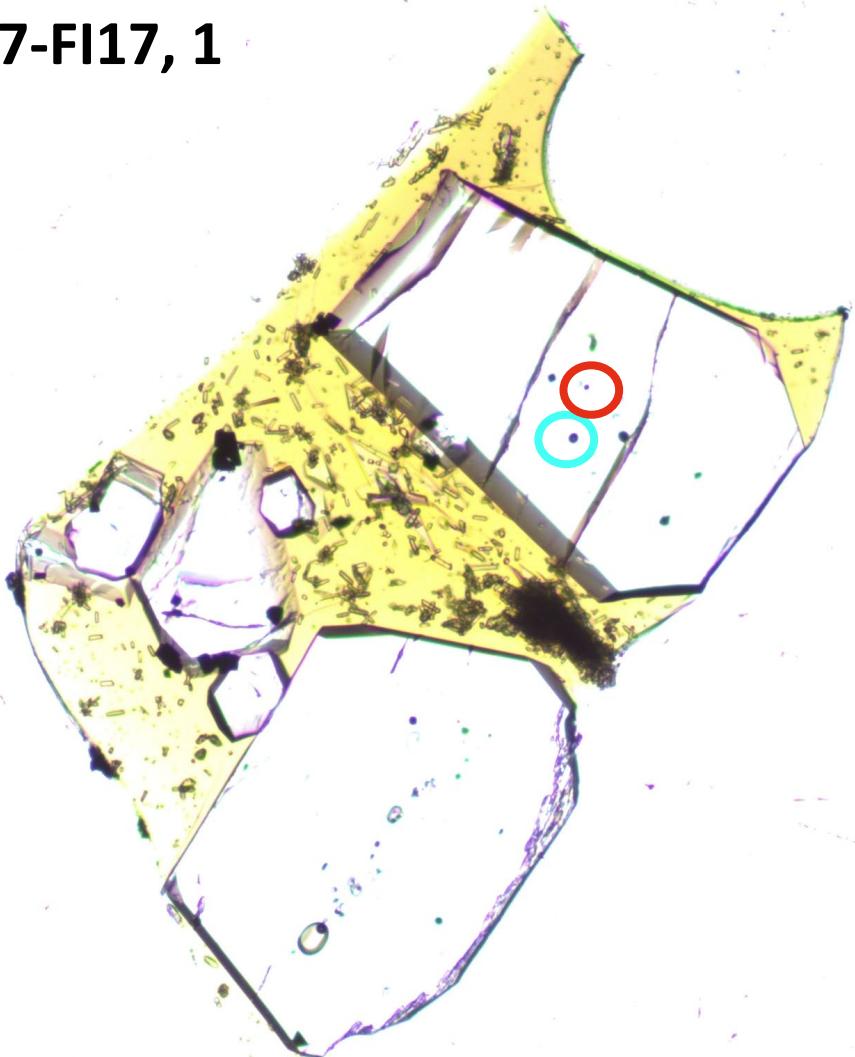
LL4-FI12dp, 1



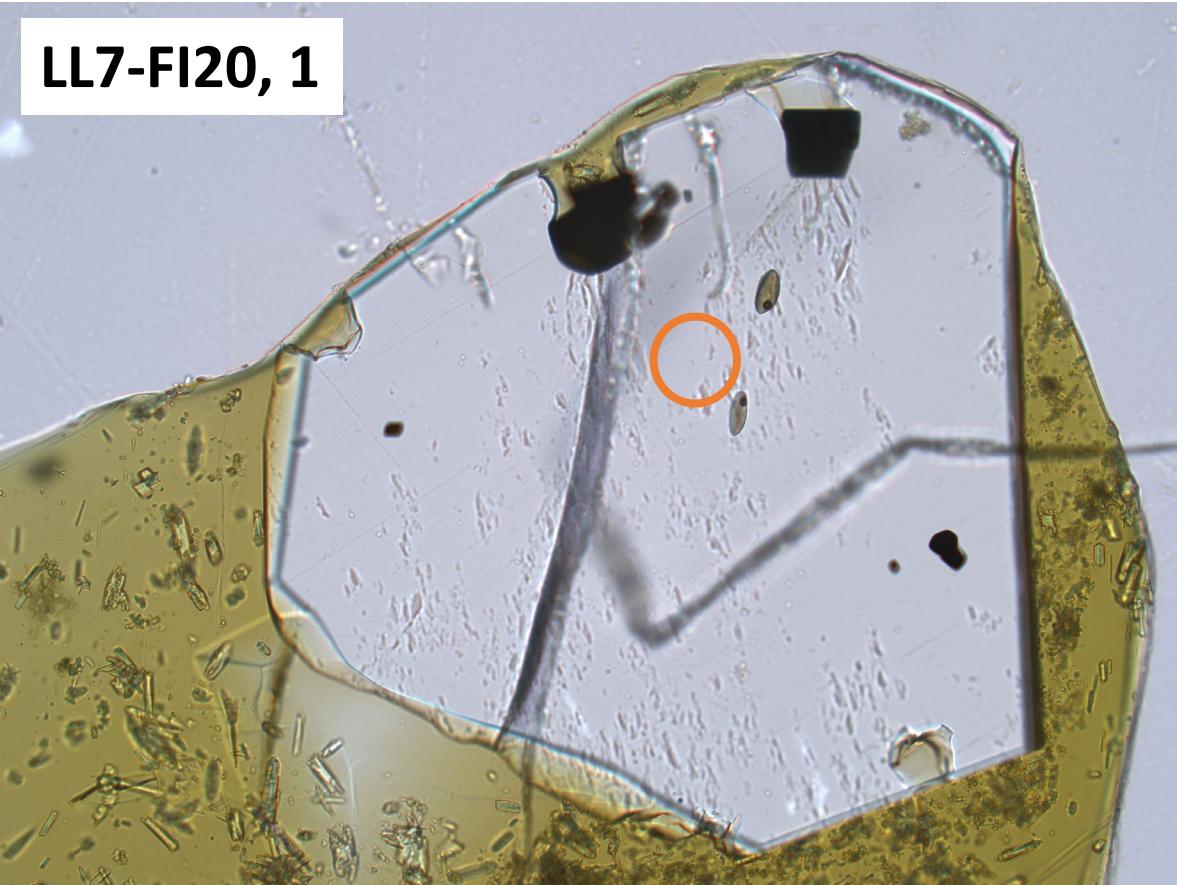
I never analyzed this



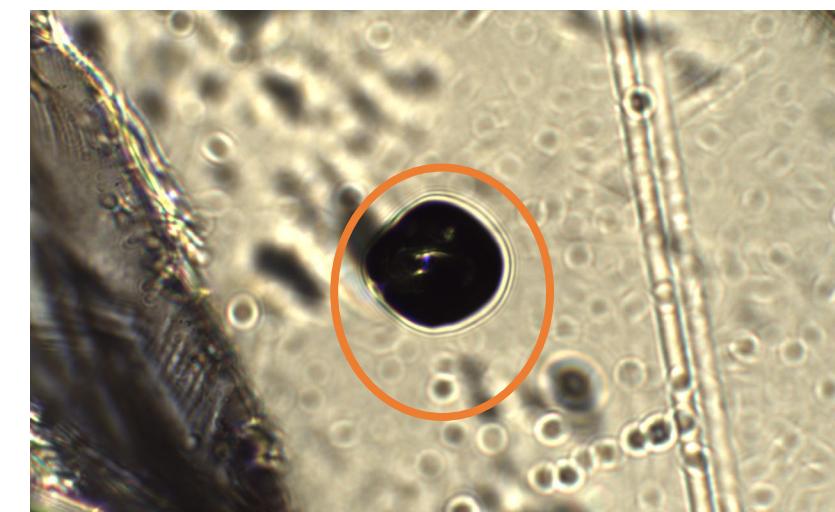
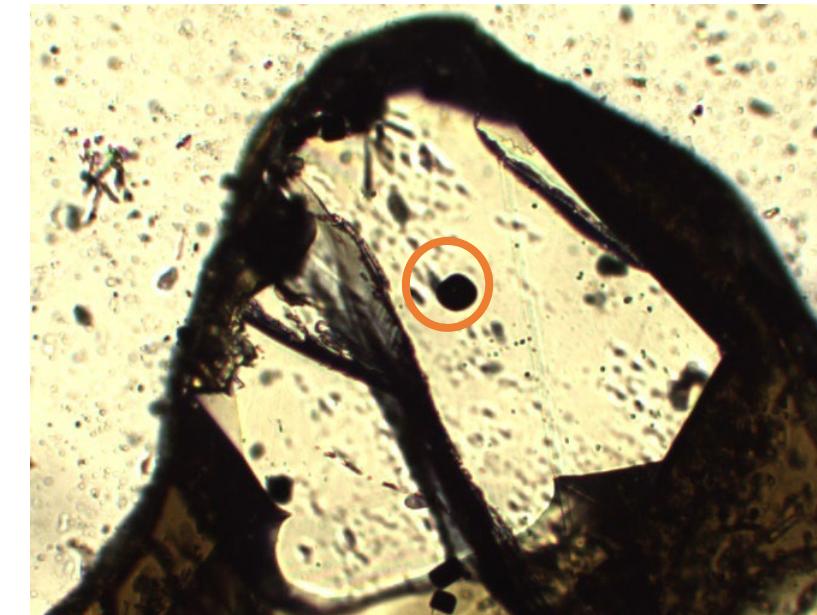
LL7-FI17, 1



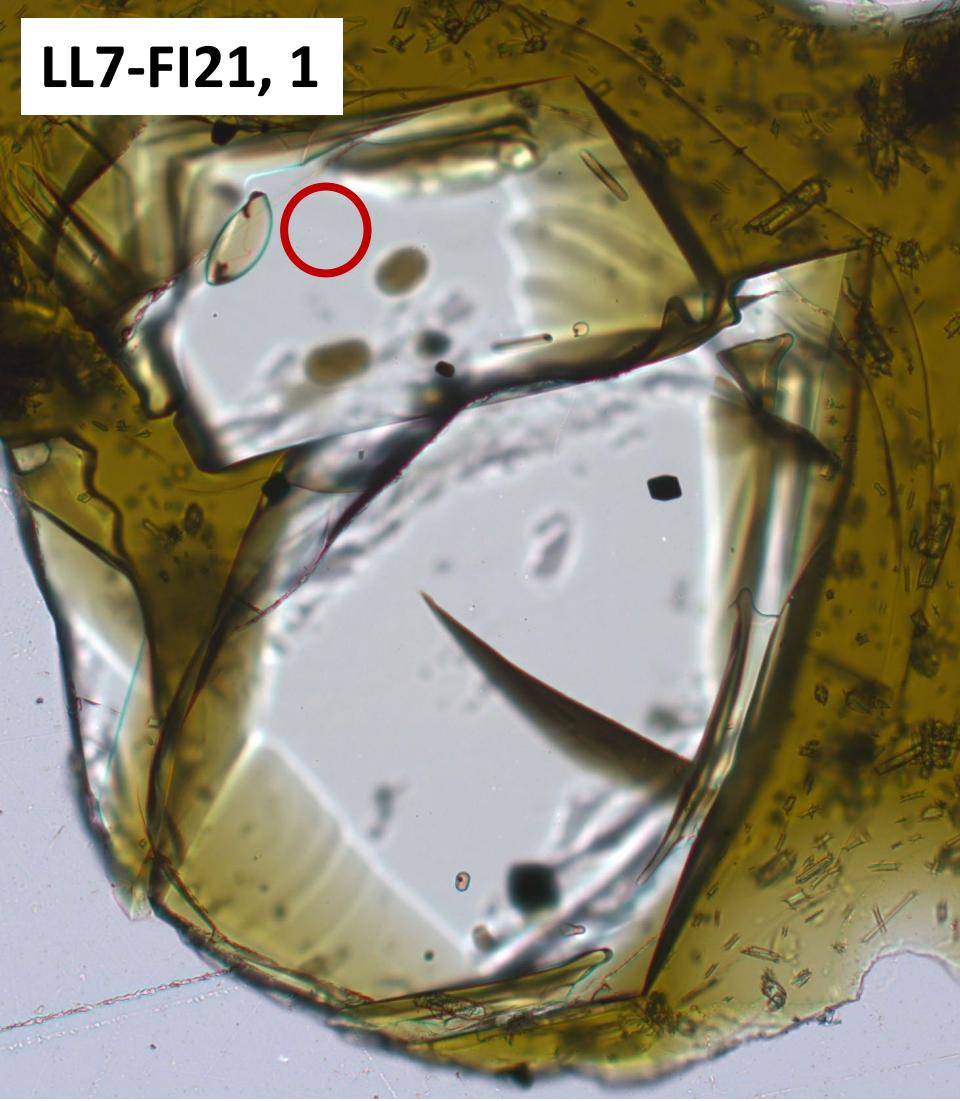
LL7-FI20, 1



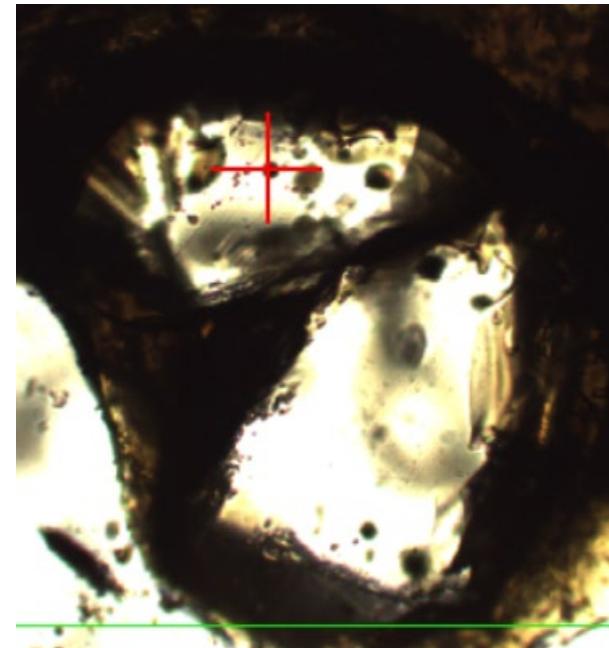
FI#1 gone



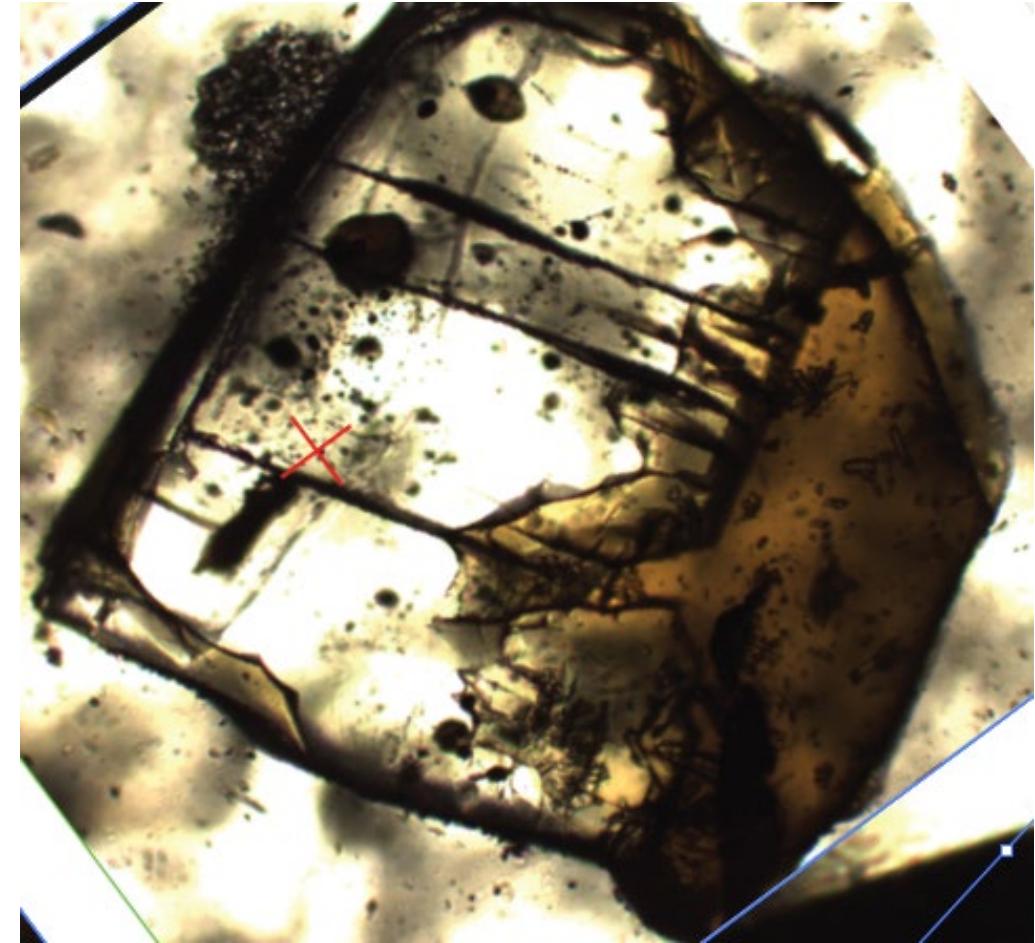
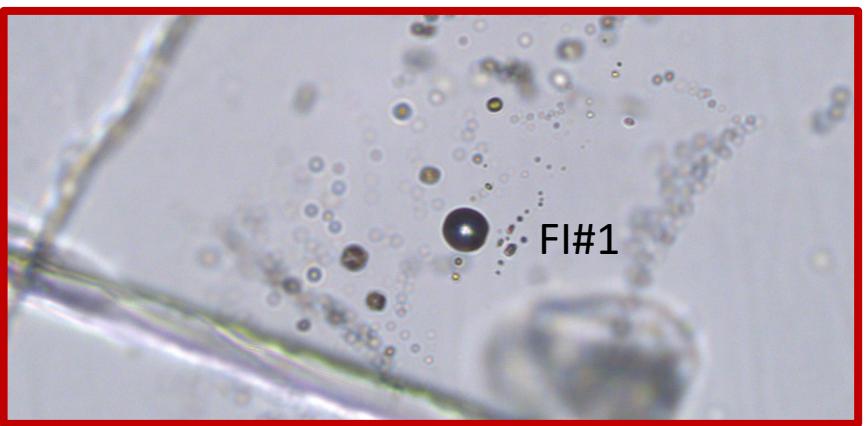
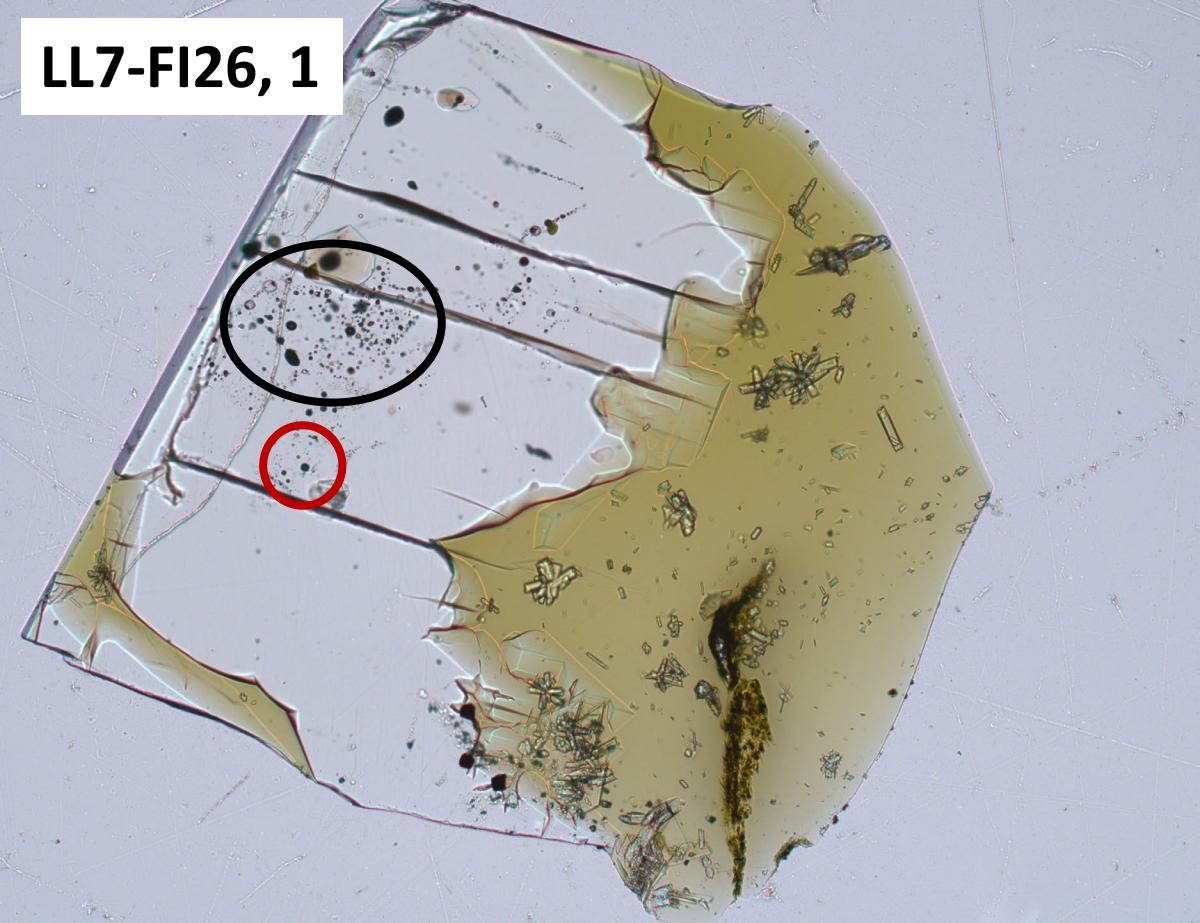
LL7-FI21, 1



FI#1 gone

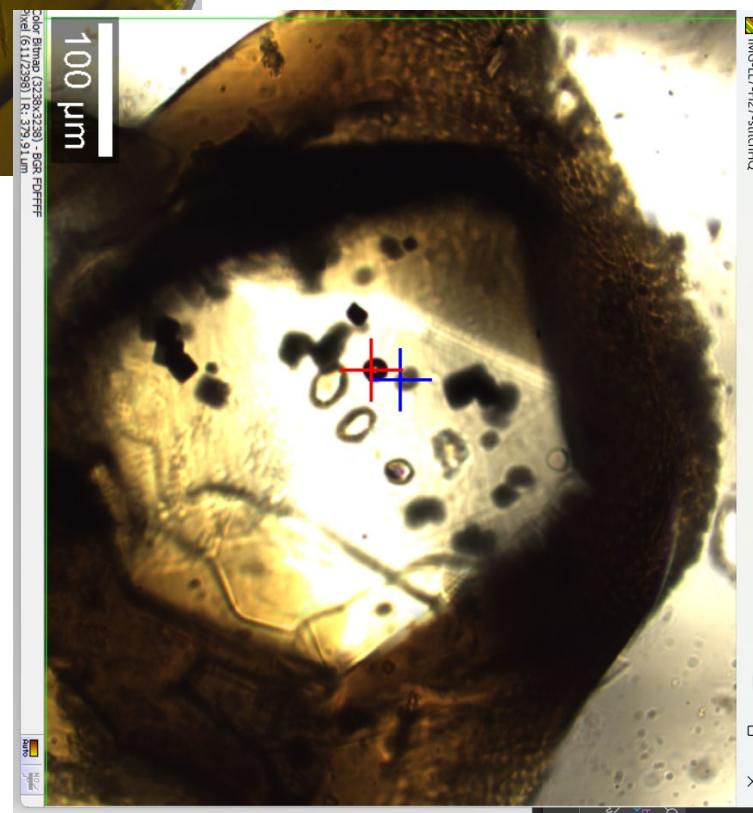
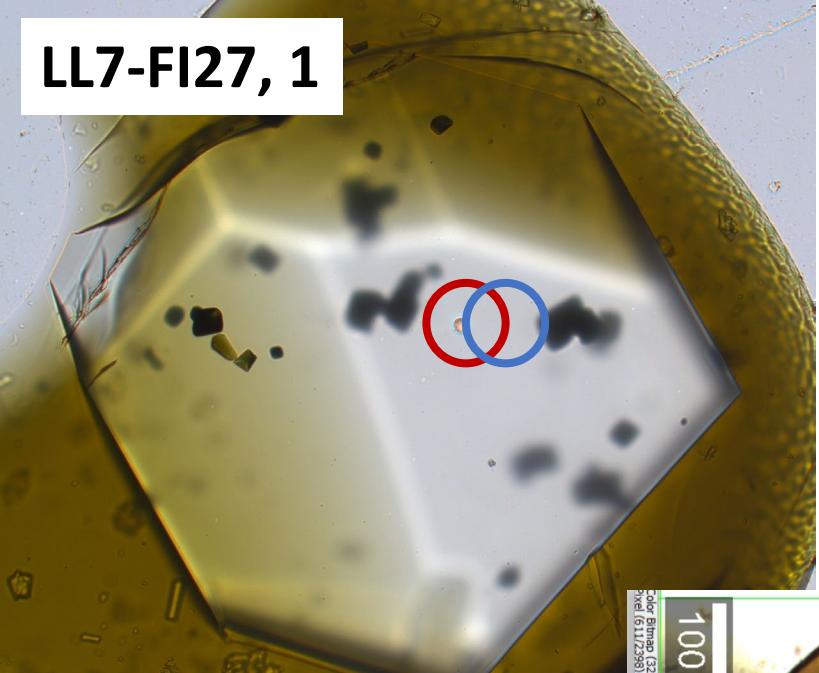


LL7-FI26, 1



This crystal has a whole cluster with various amounts of melt

LL7-FI27, 1



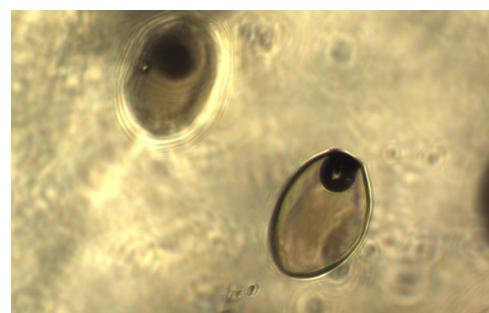
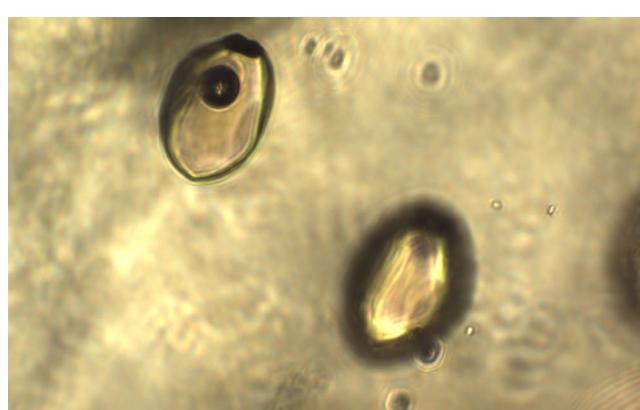
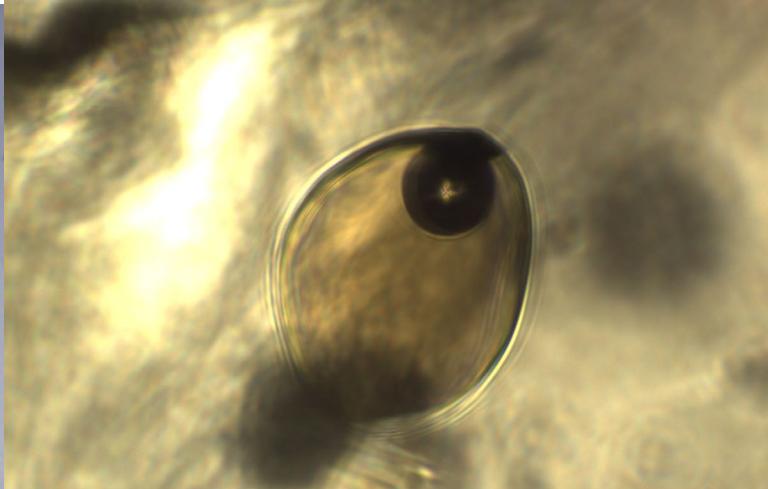
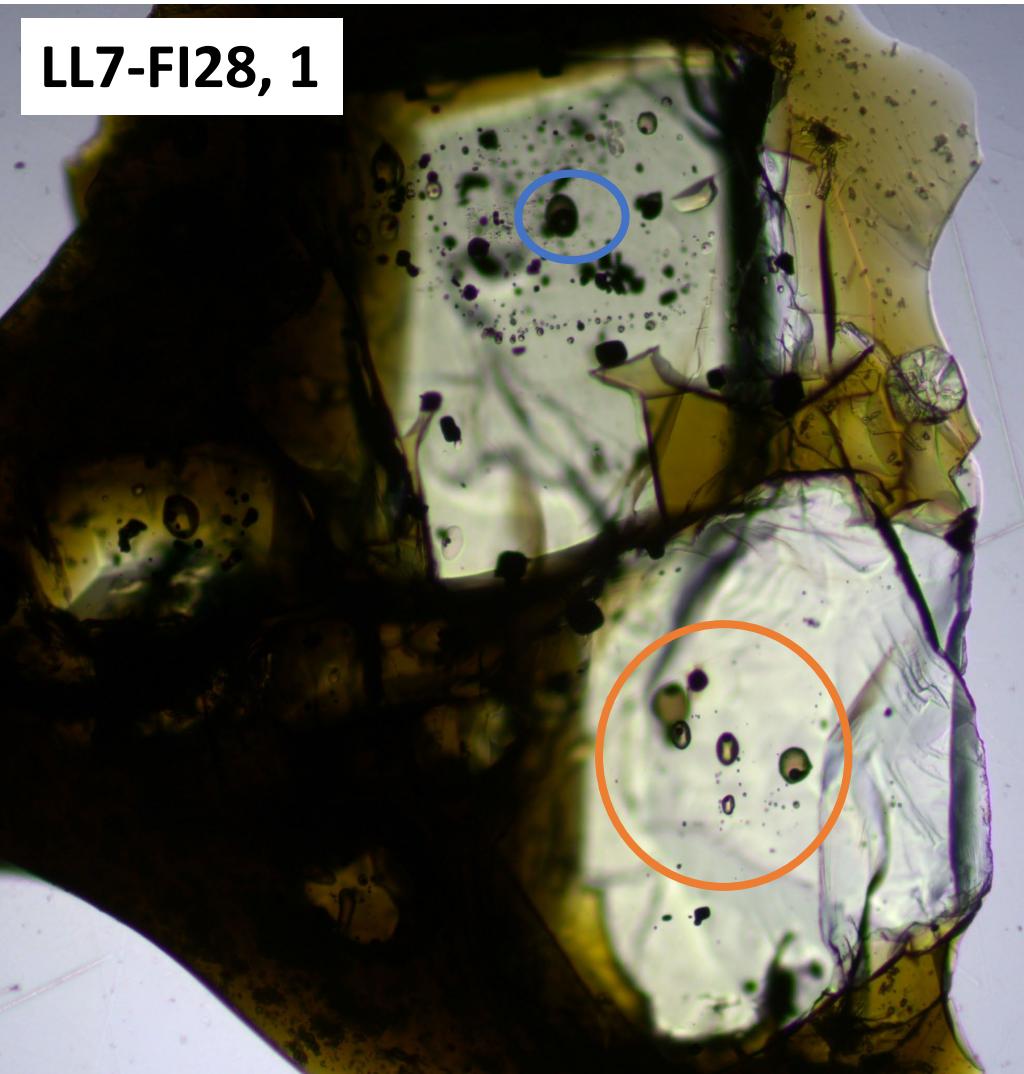
FI#1, popped now



FI#2, gone

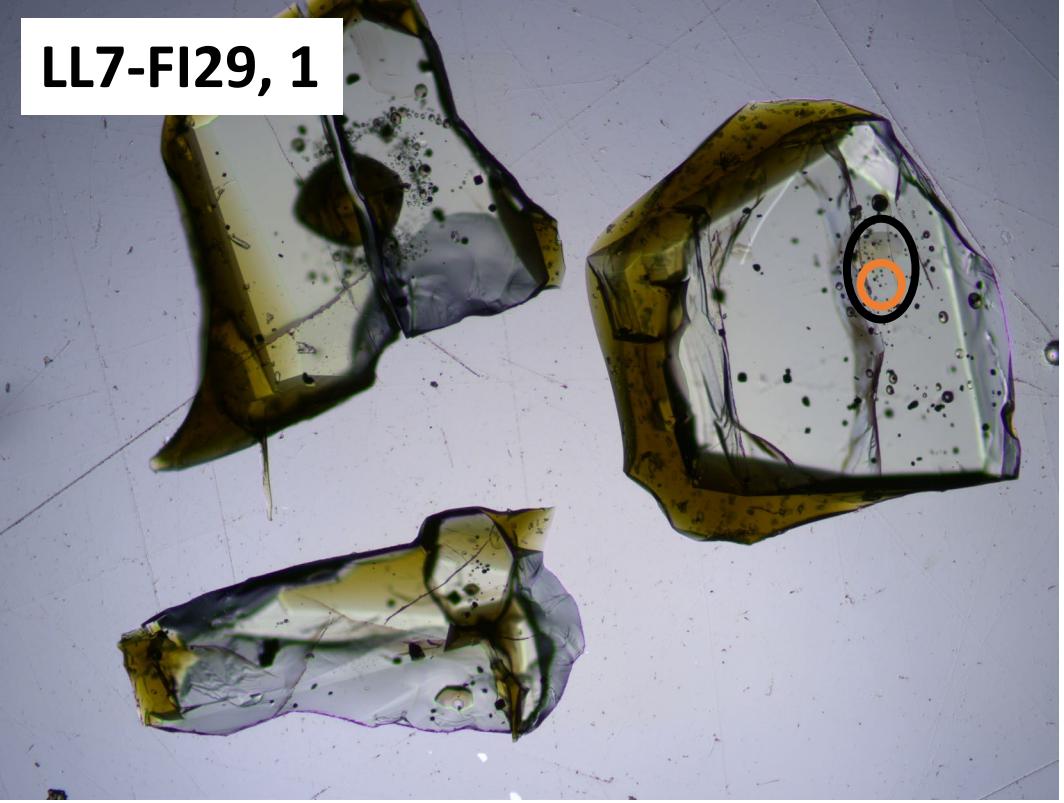


LL7-FI28, 1

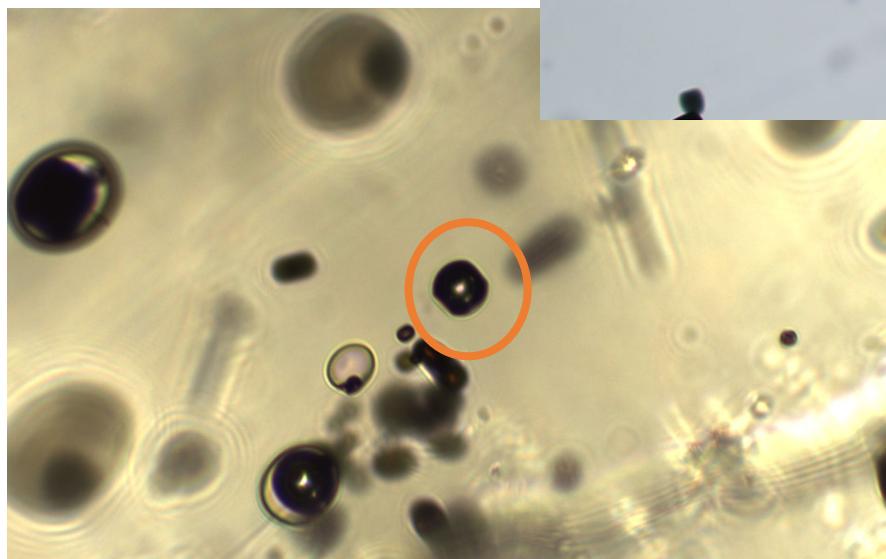
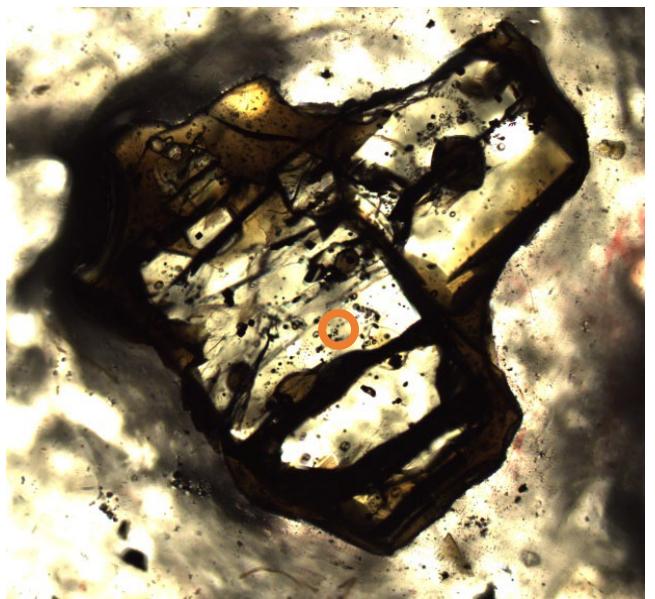
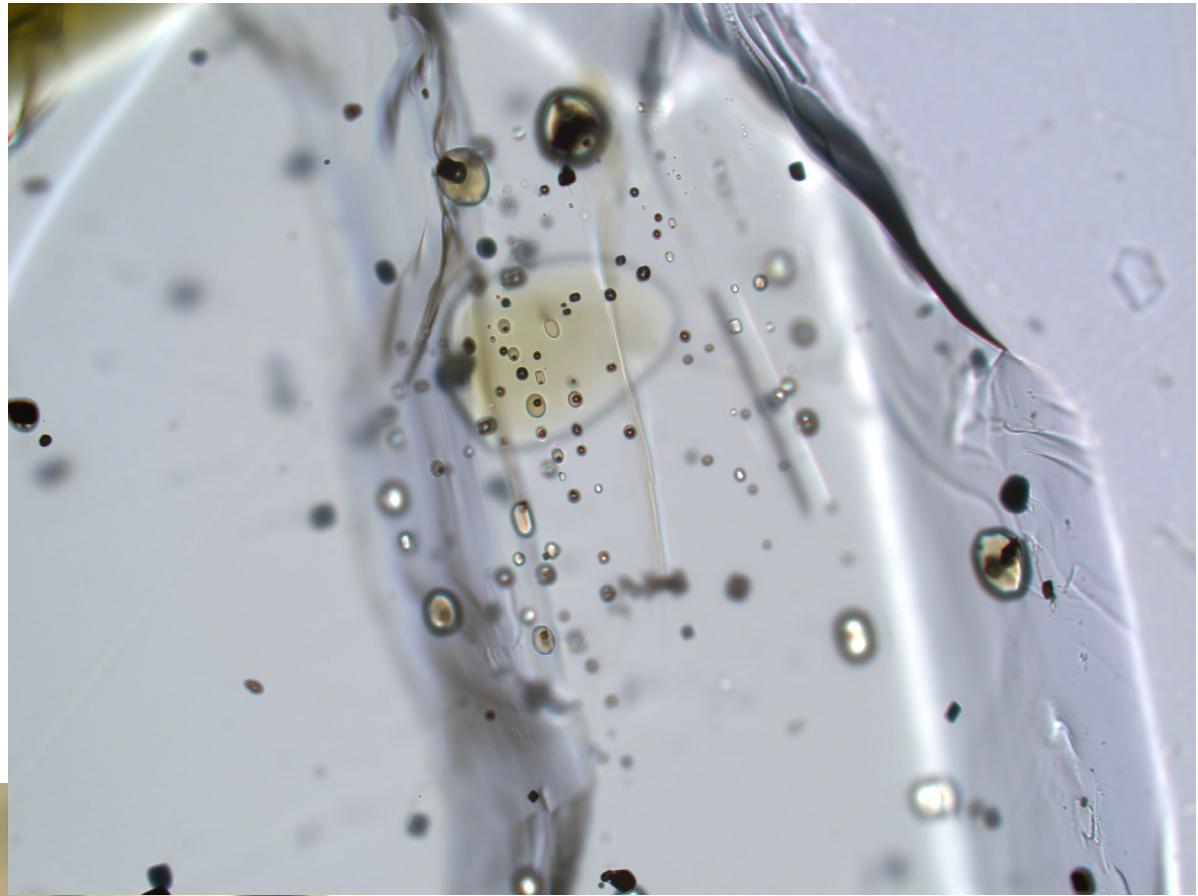


Mis only, maybe has some tiny FI in top crystal but not analyzed

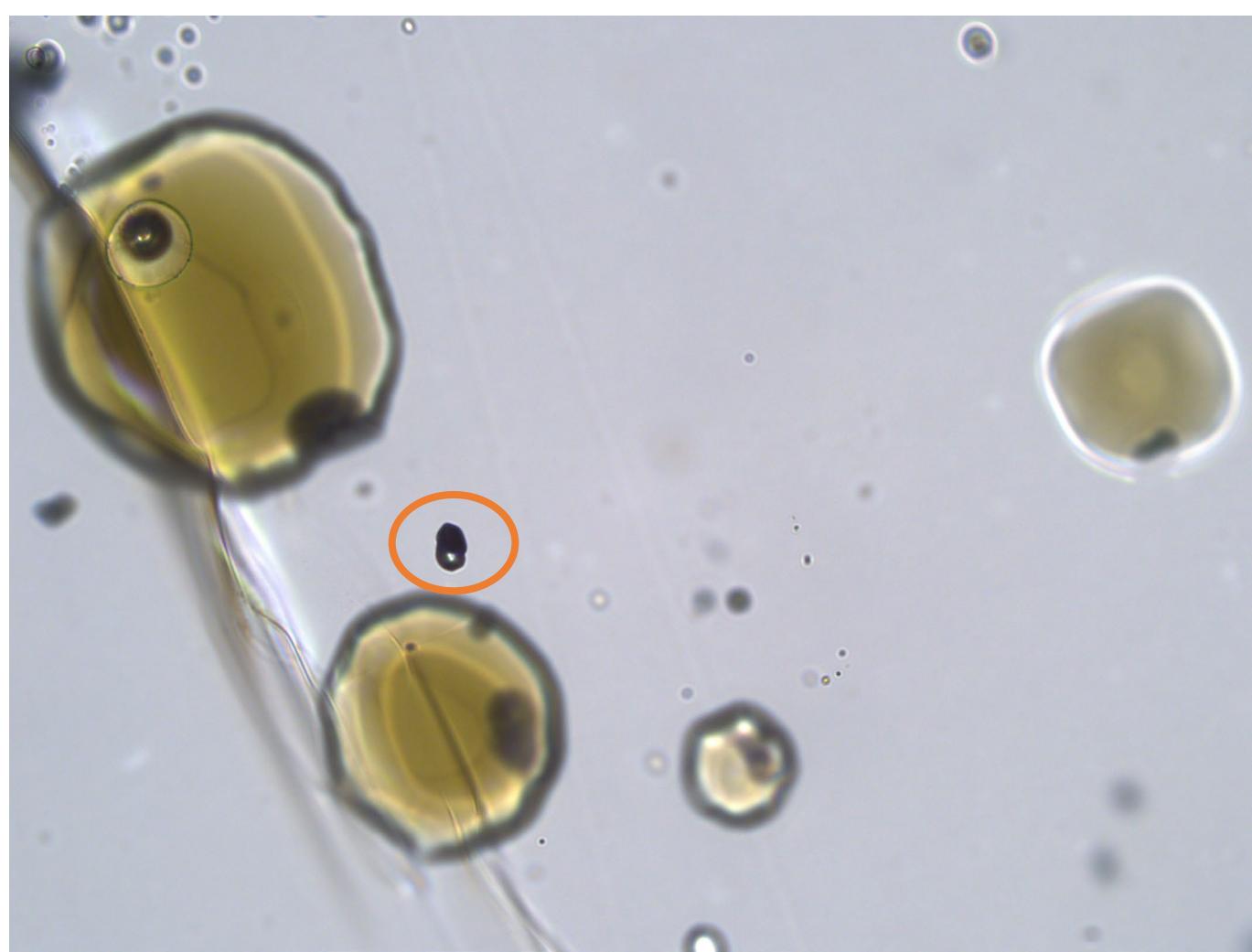
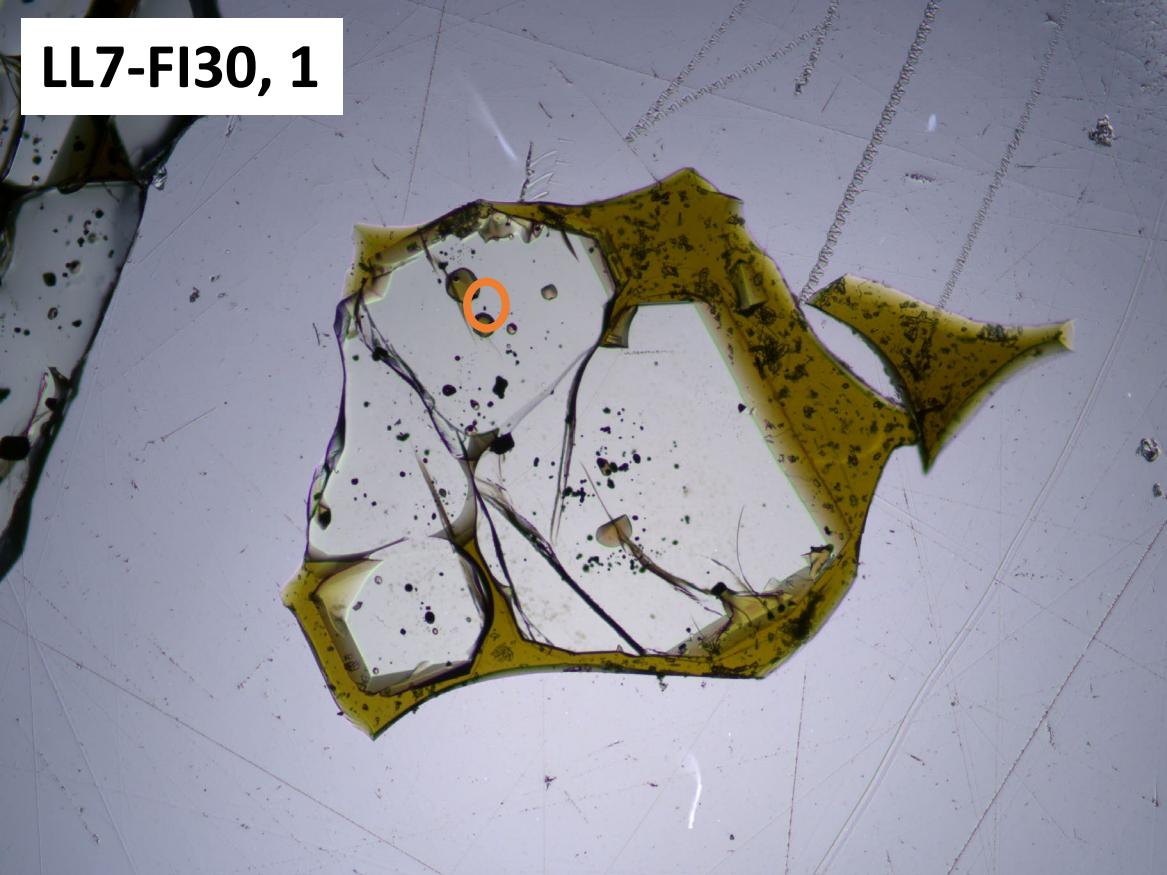
LL7-FI29, 1



FI# 1 gone. But there is a cluster visible with lots of FI

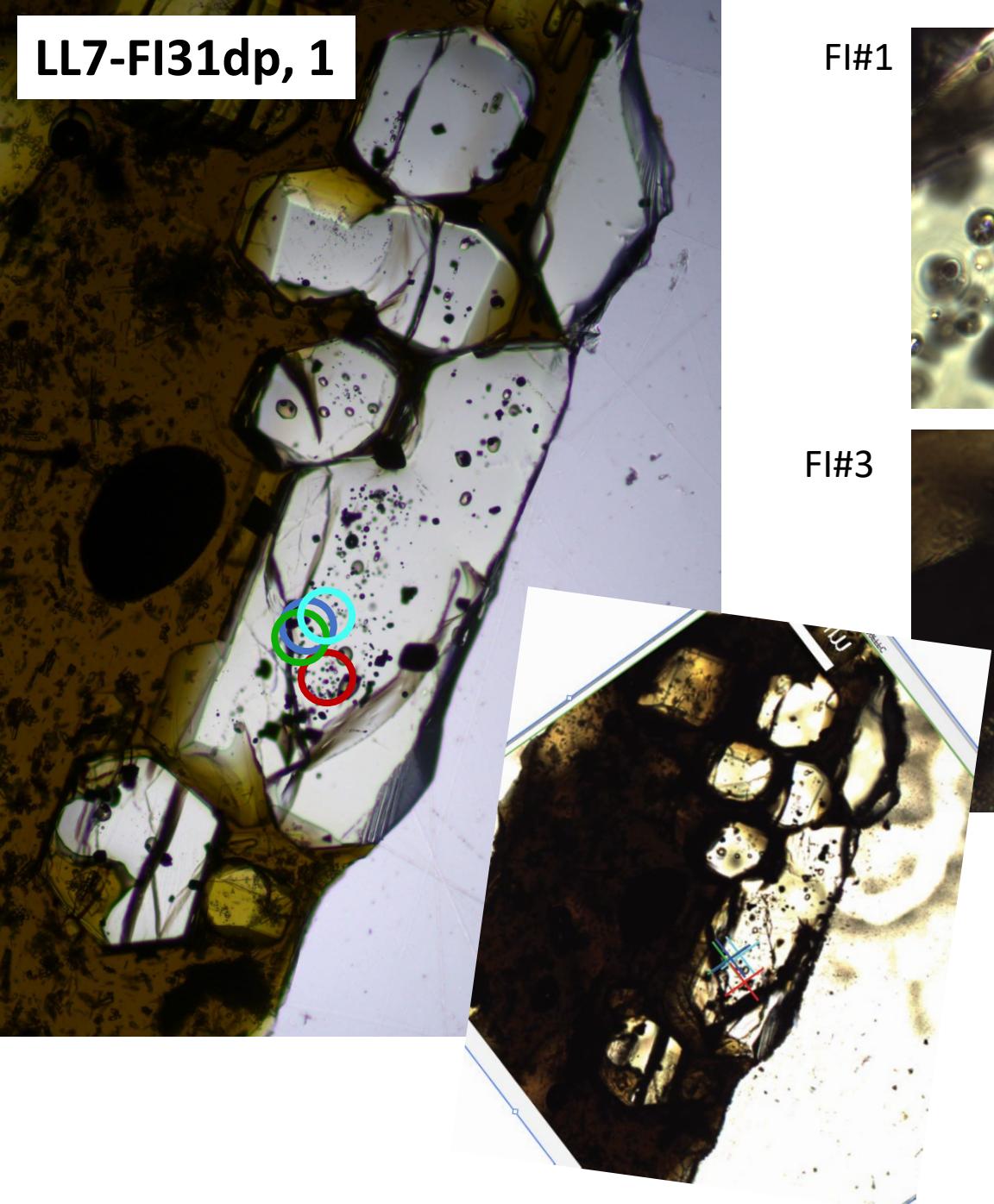


LL7-FI30, 1

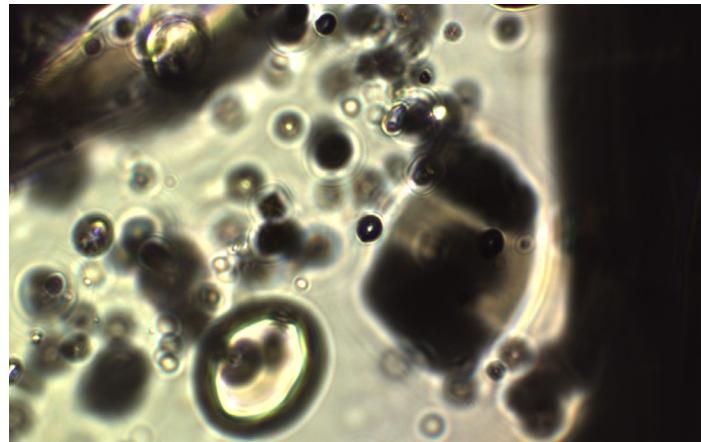


FI#1 never analyzed, attached to spinel

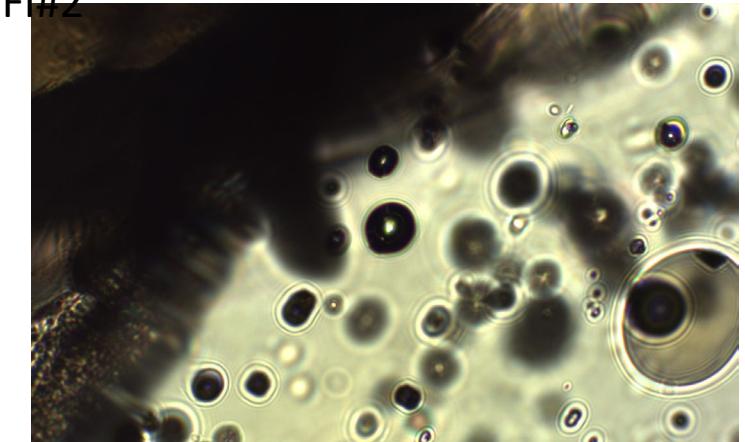
LL7-FI31dp, 1



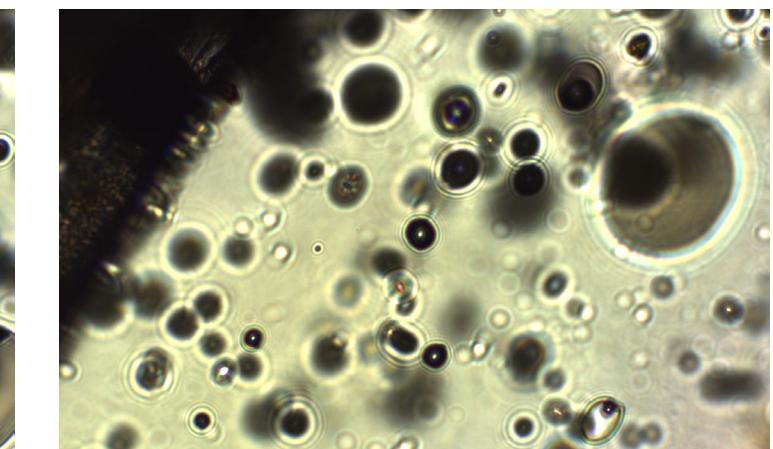
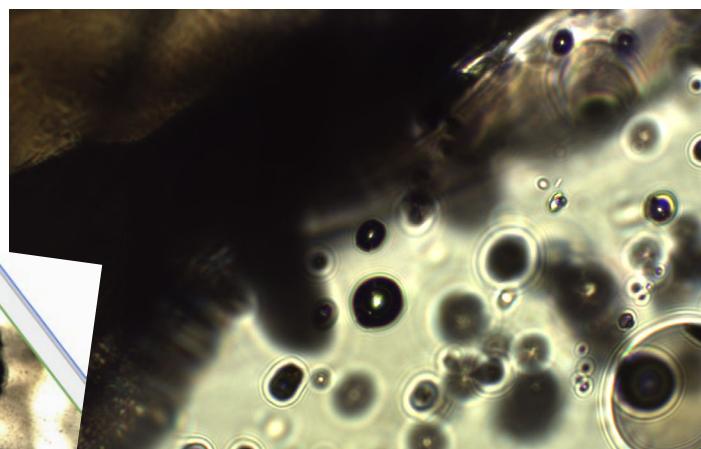
FI#1



FI#2

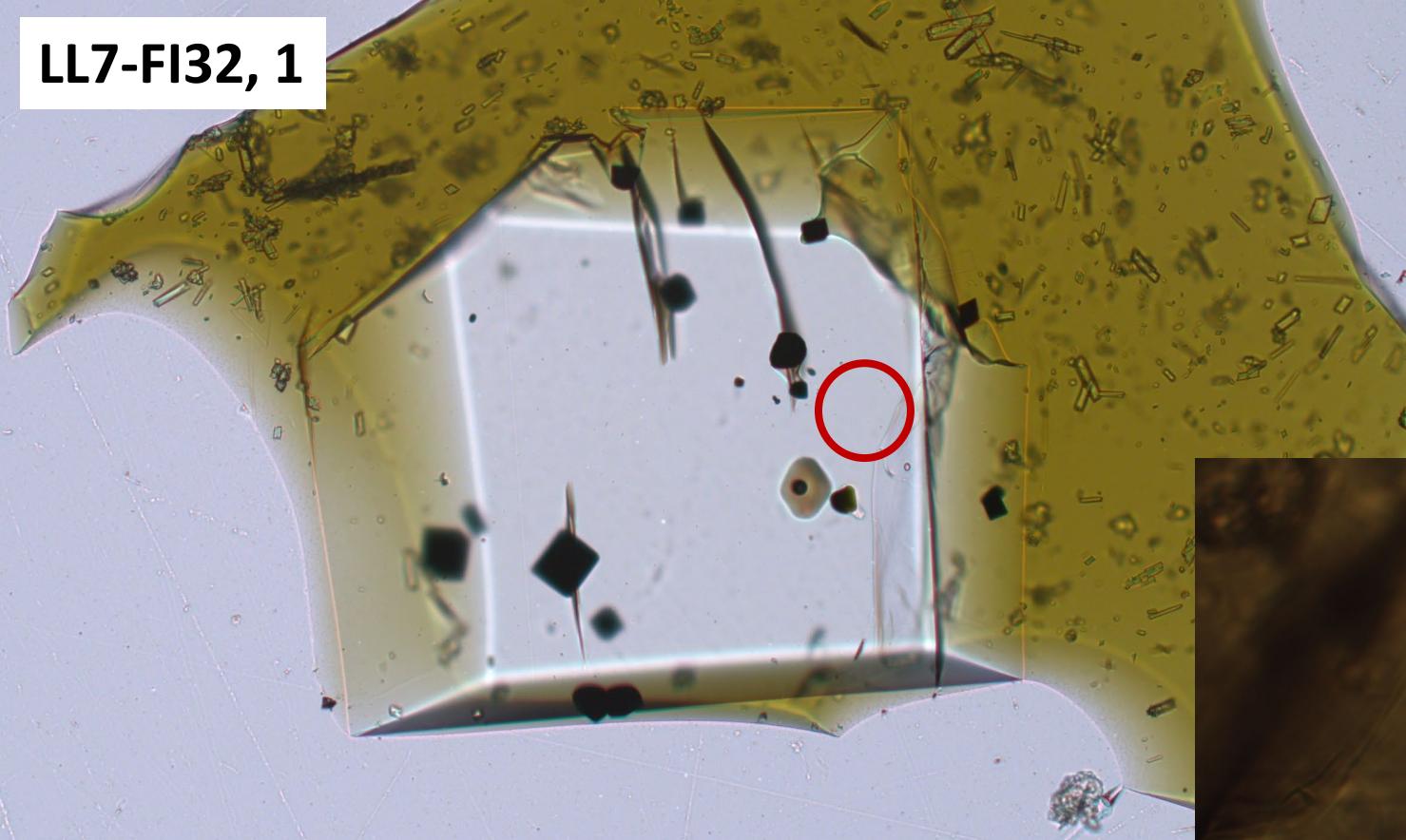


FI#3

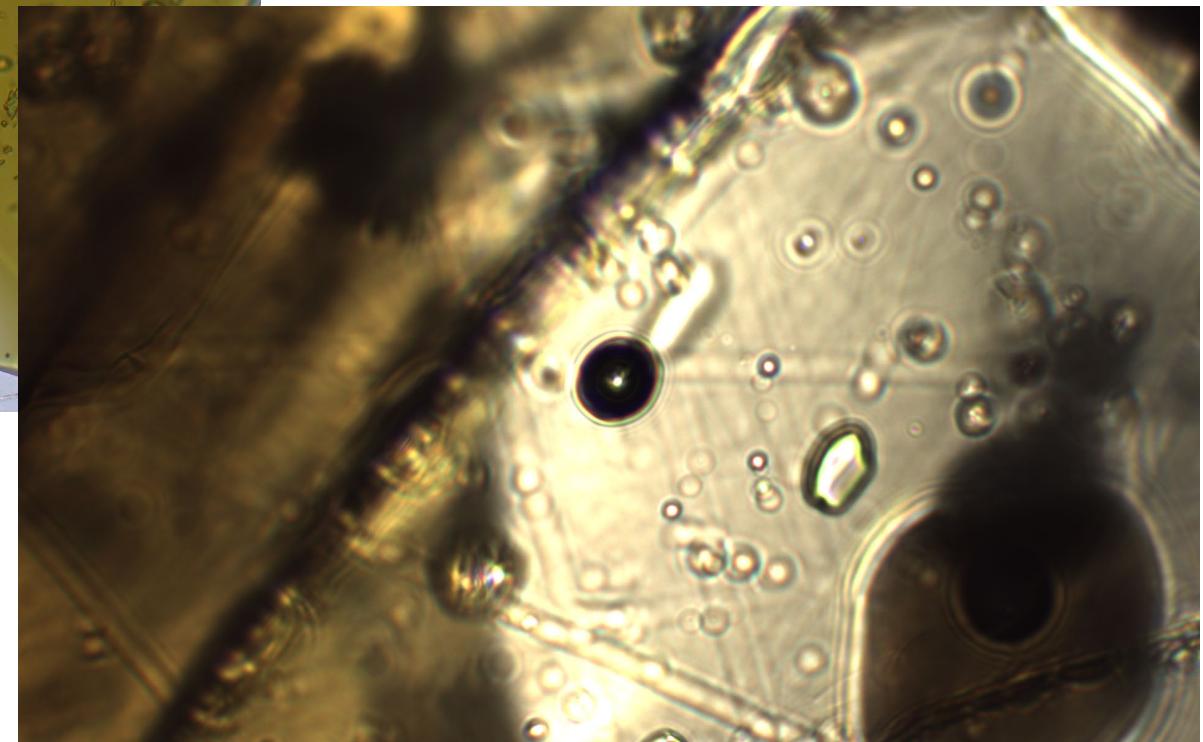


Cluster, looks like it's following growth zones

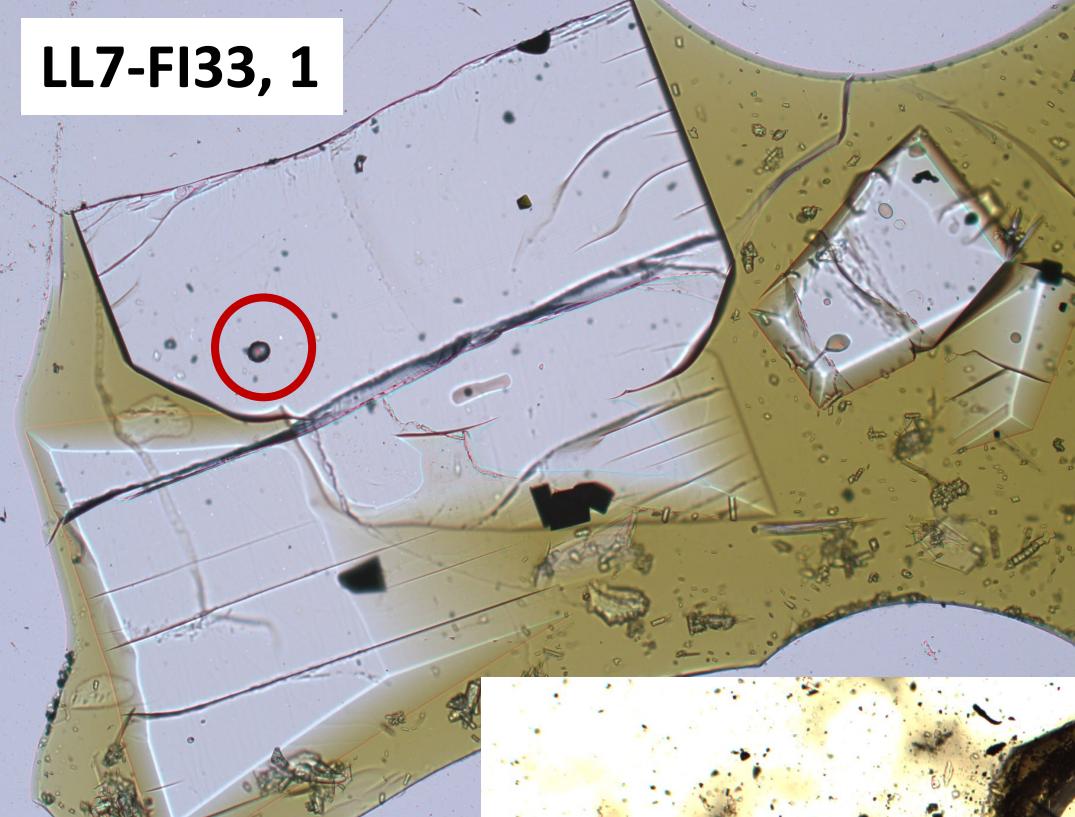
LL7-FI32, 1



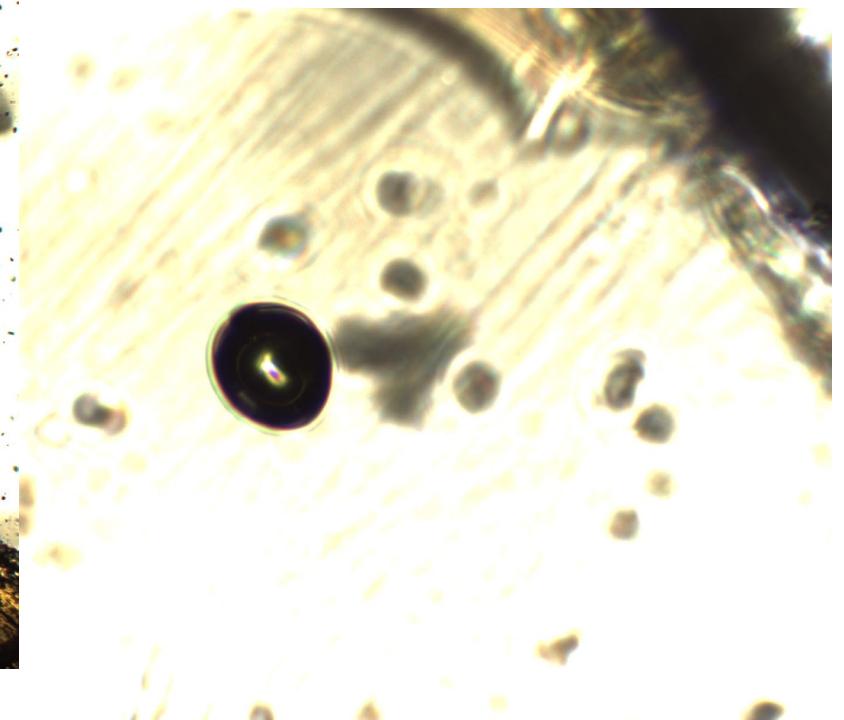
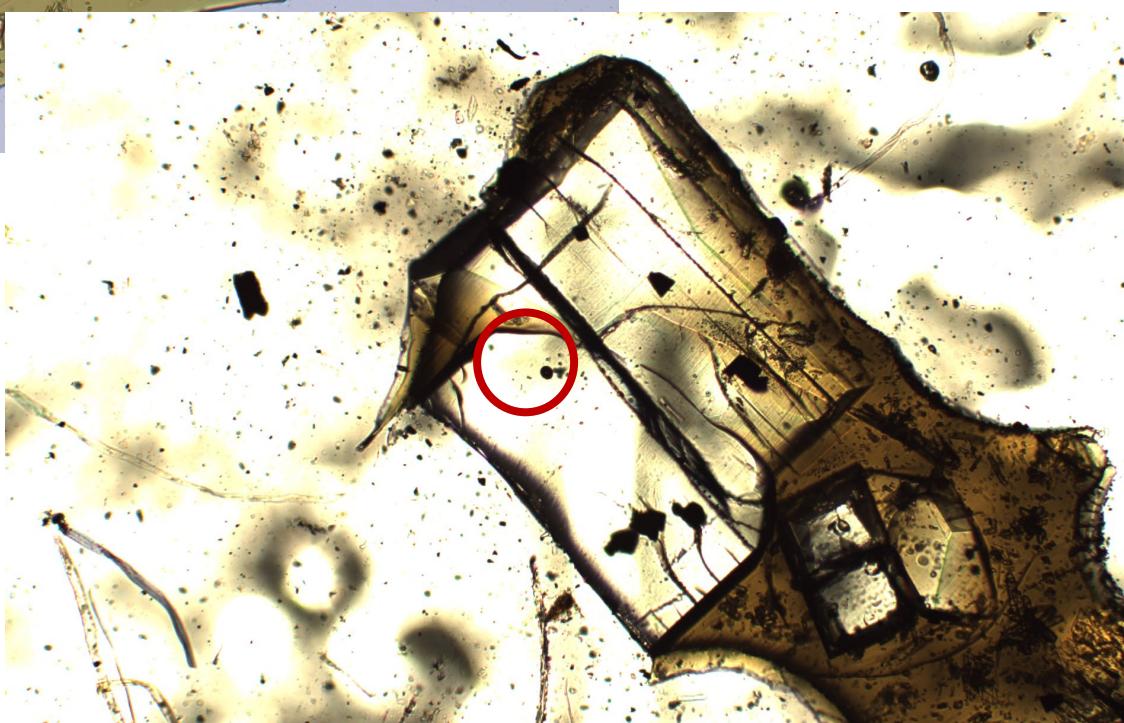
FI#1 gone



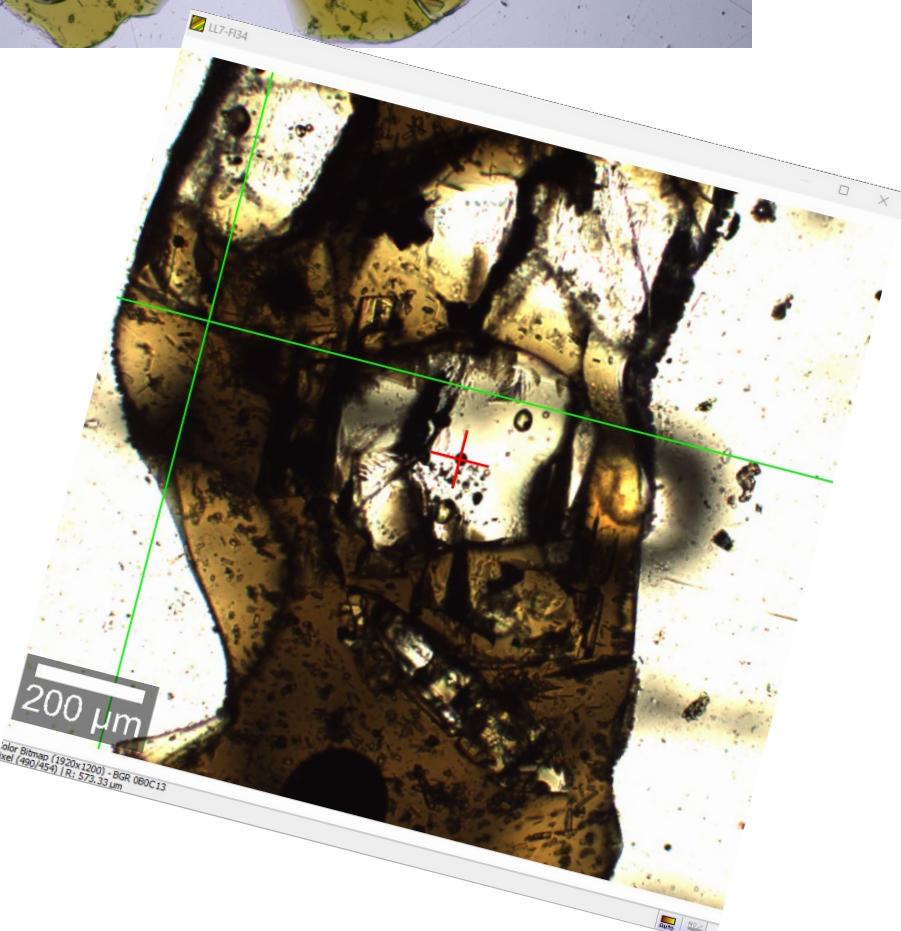
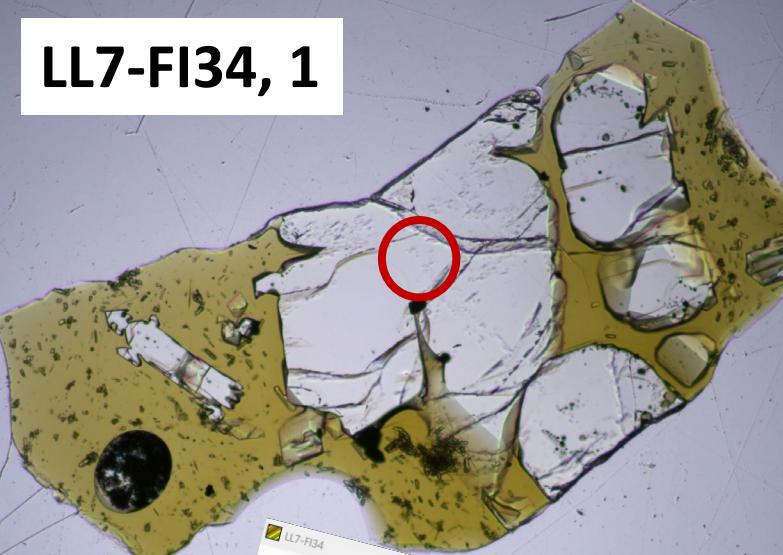
LL7-FI33, 1



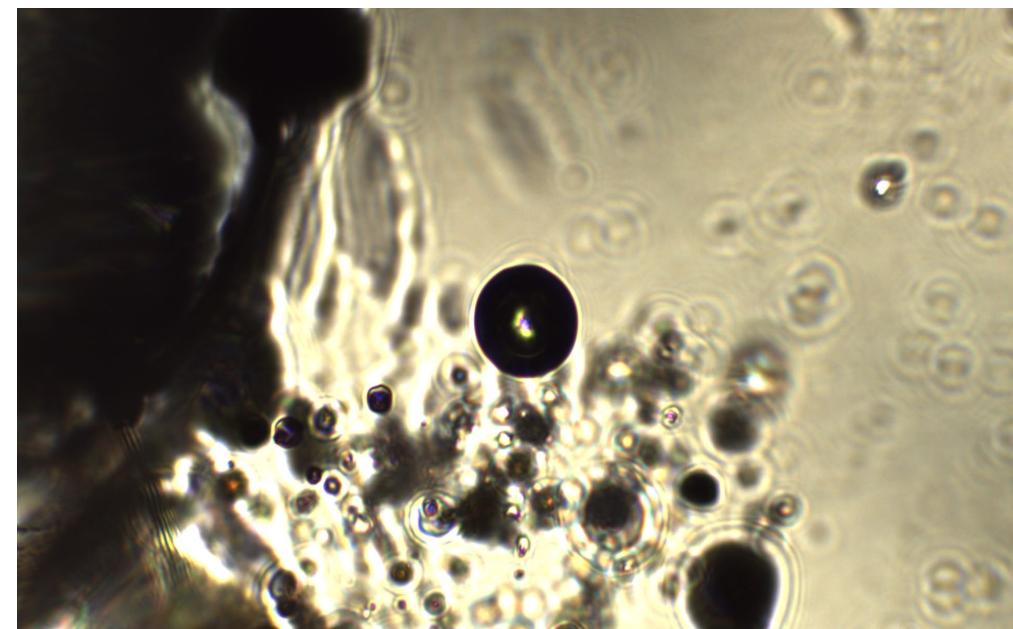
FI#1 popped



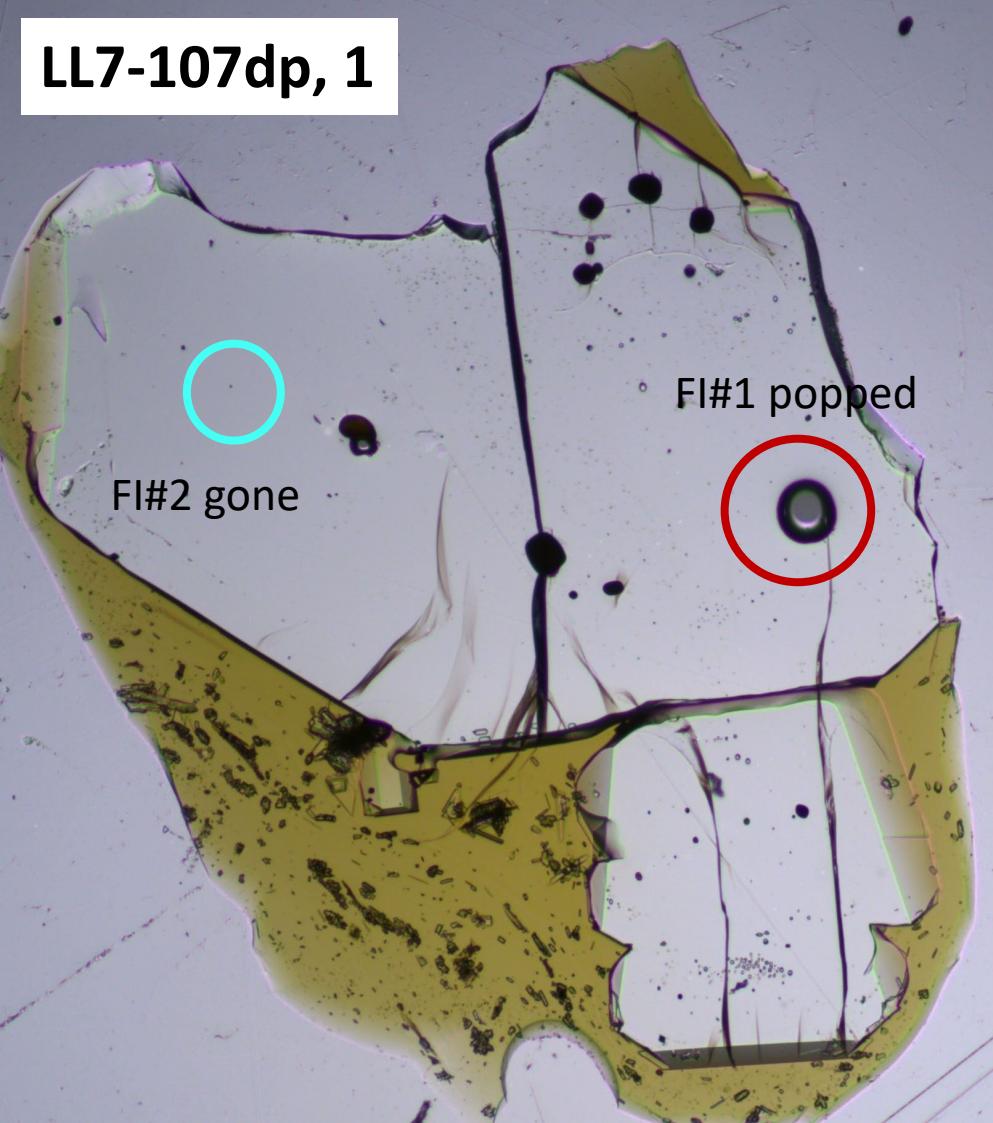
LL7-FI34, 1



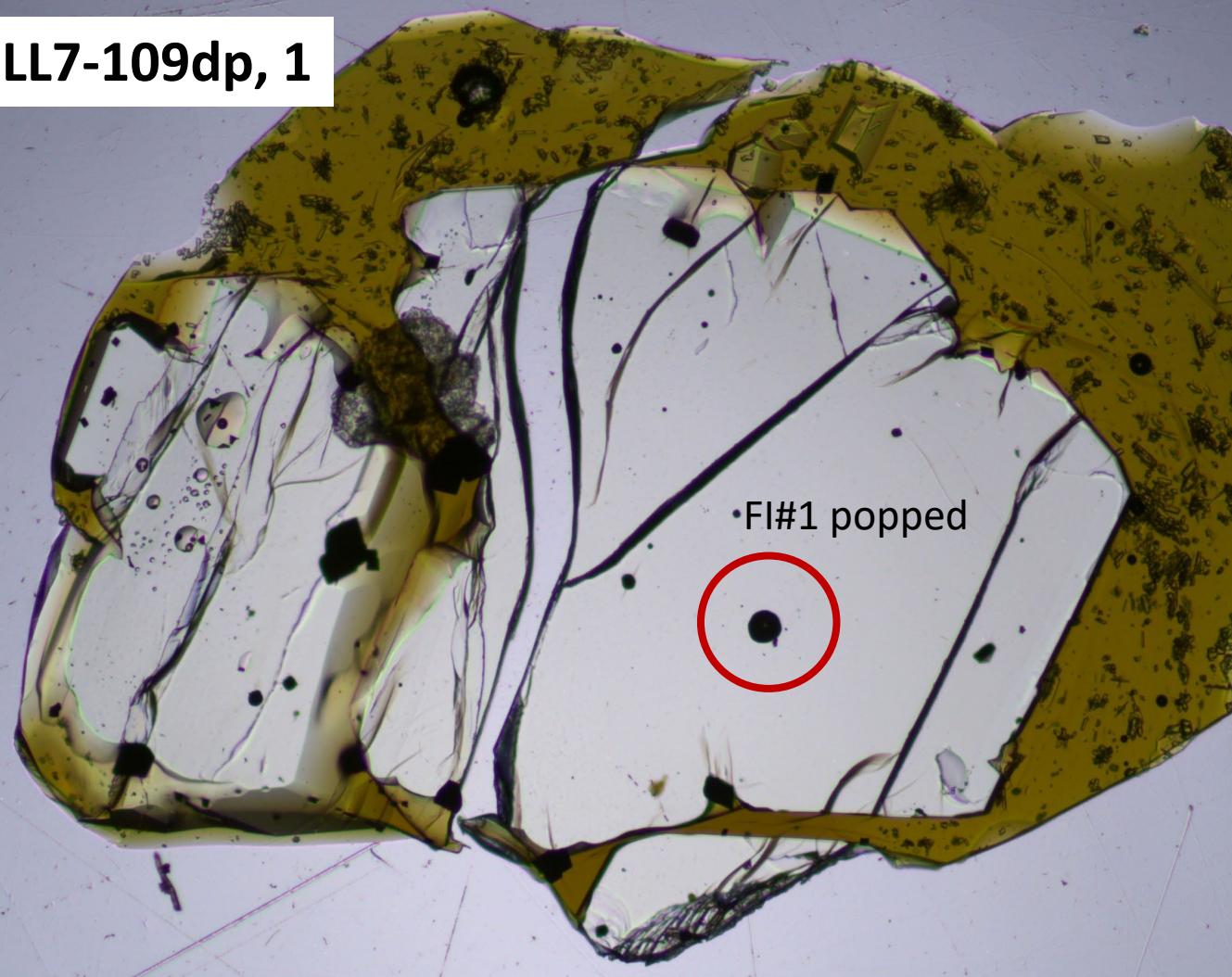
FI#1 gone



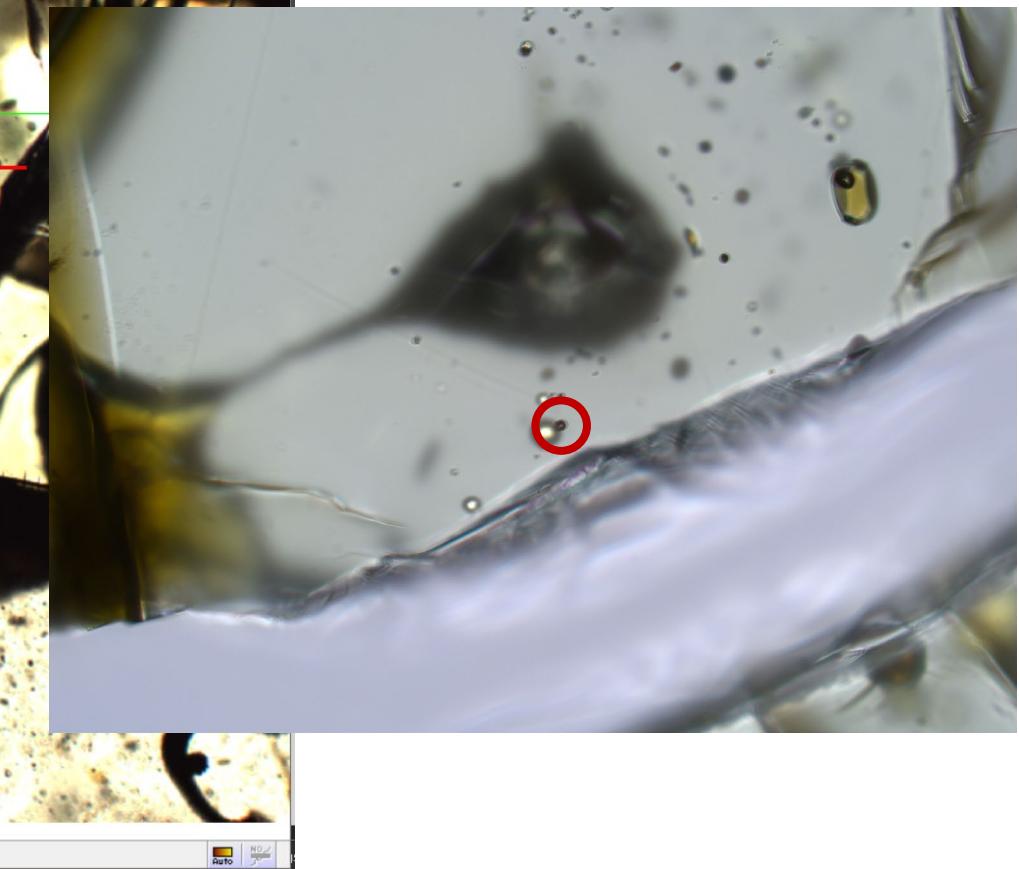
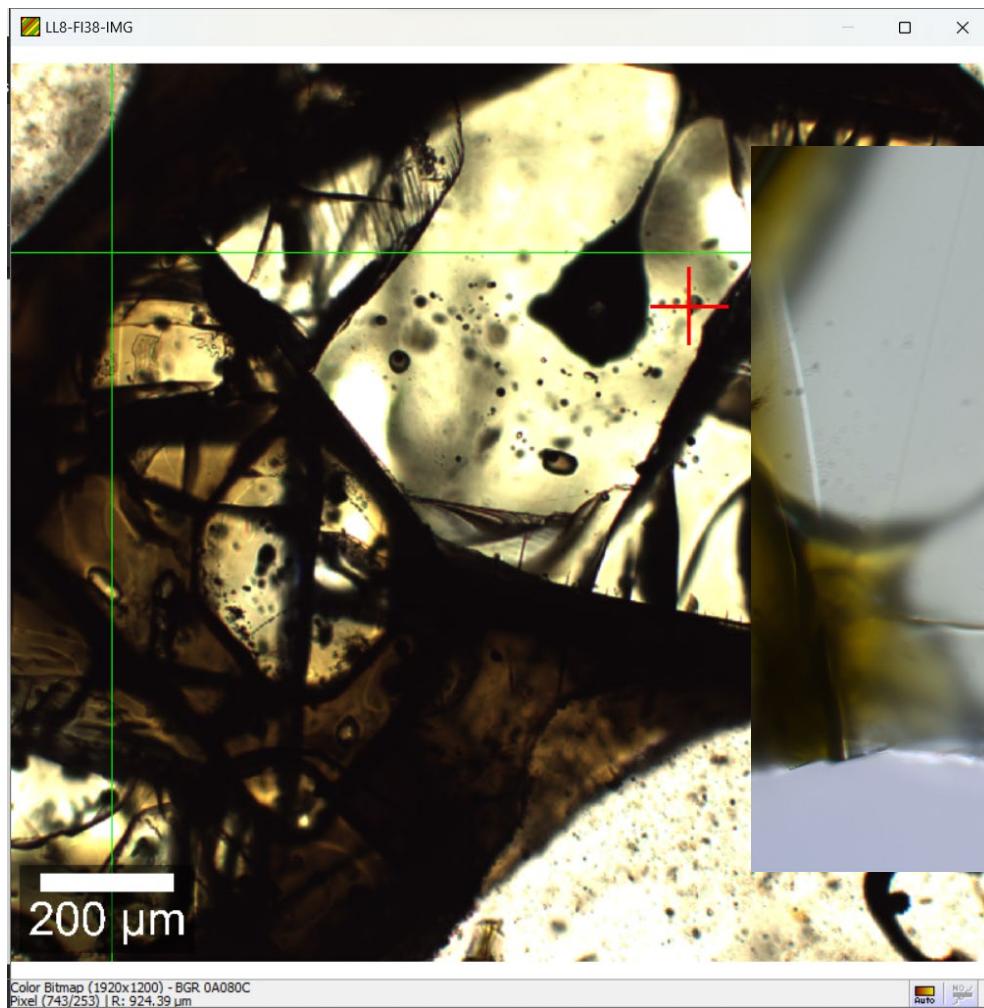
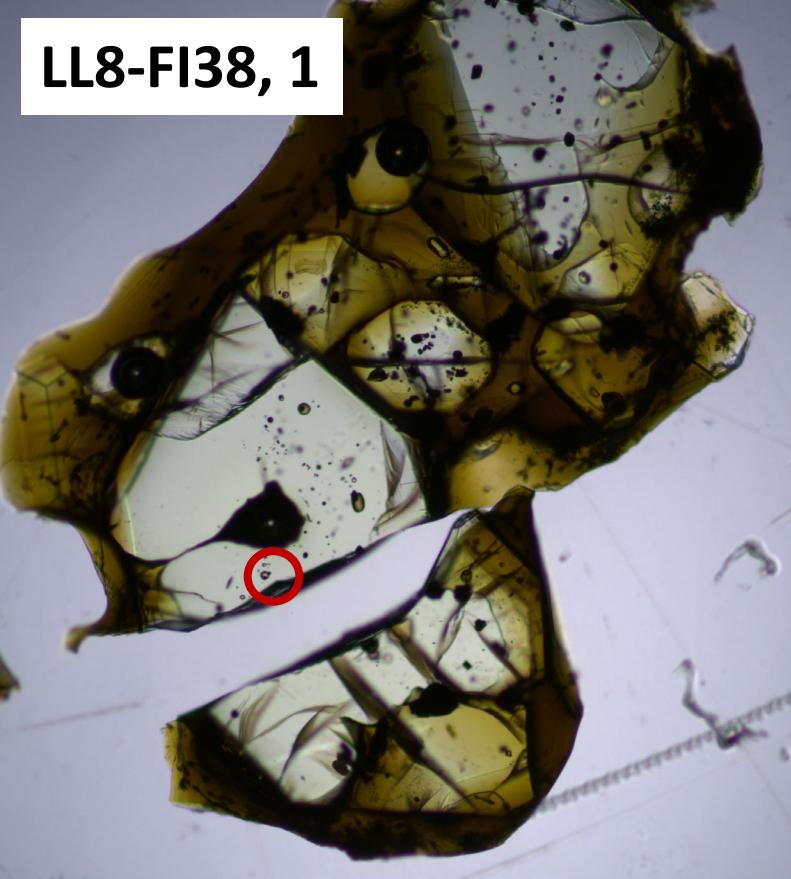
LL7-107dp, 1



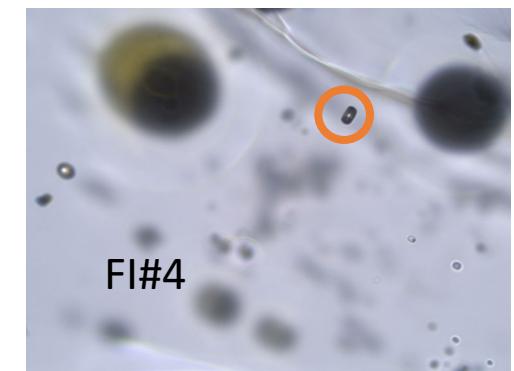
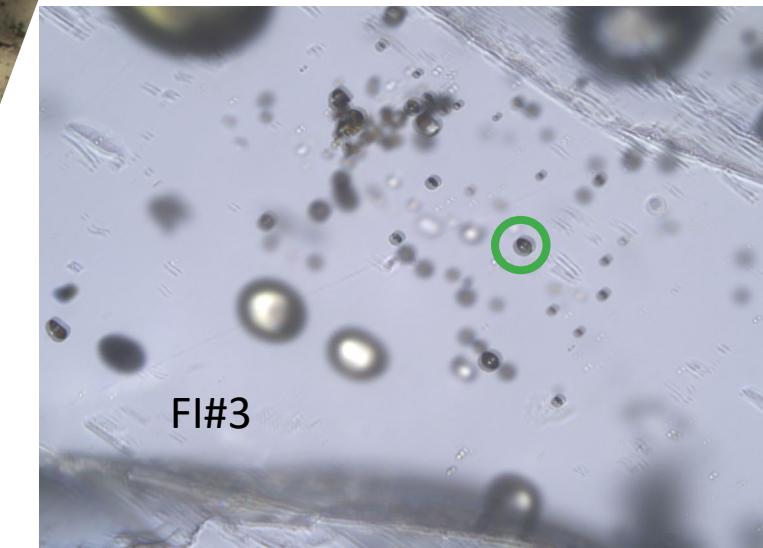
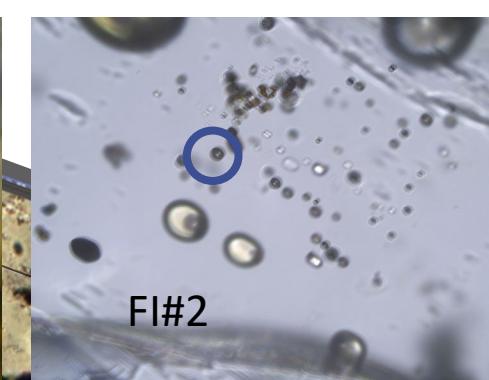
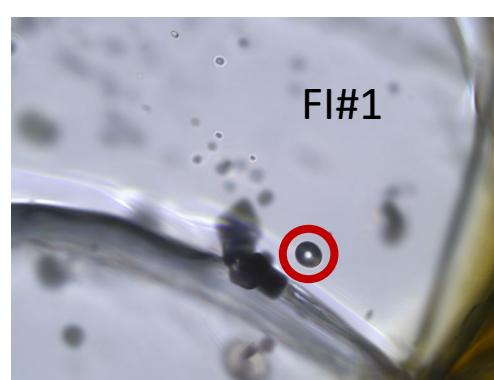
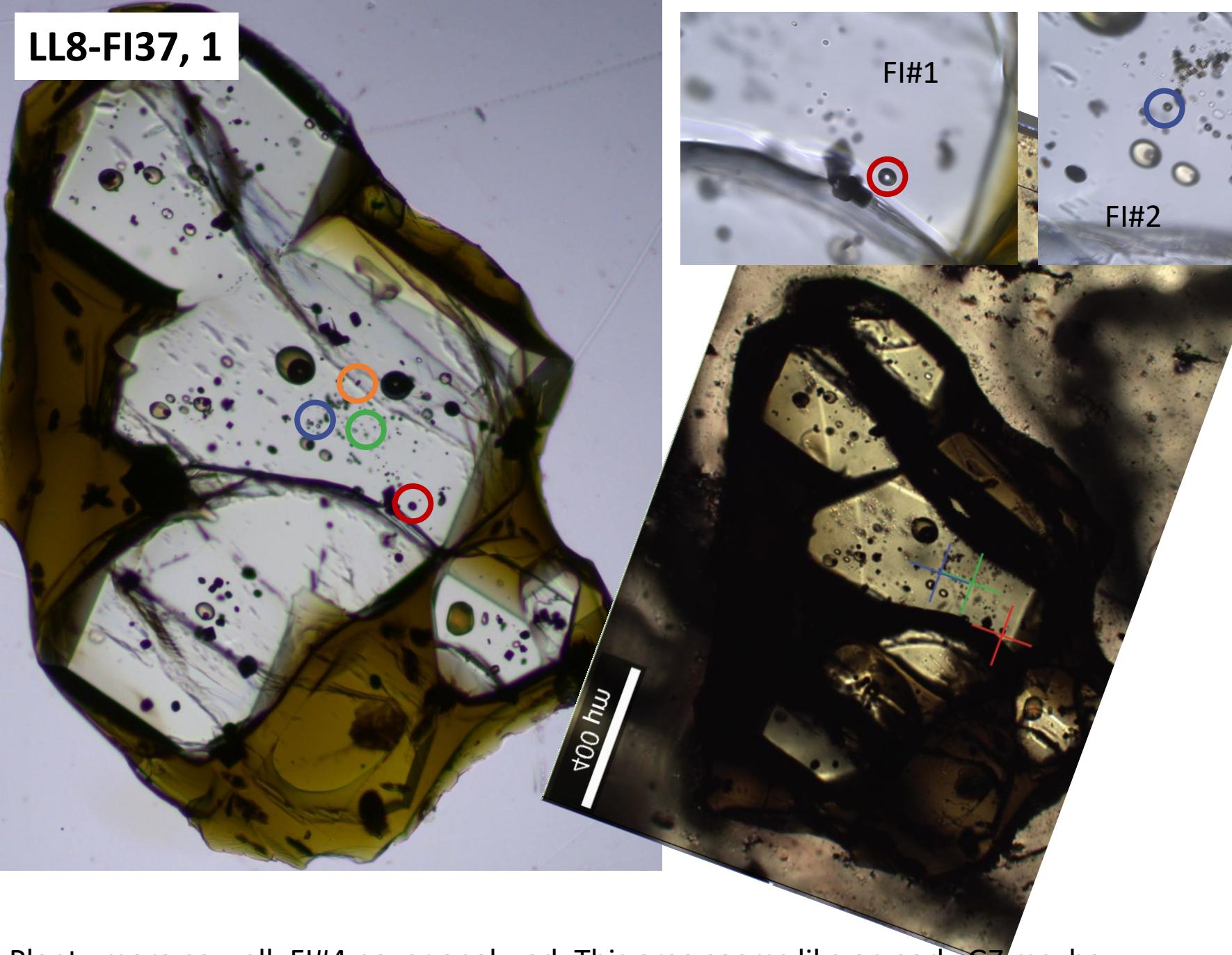
LL7-109dp, 1



LL8-FI38, 1

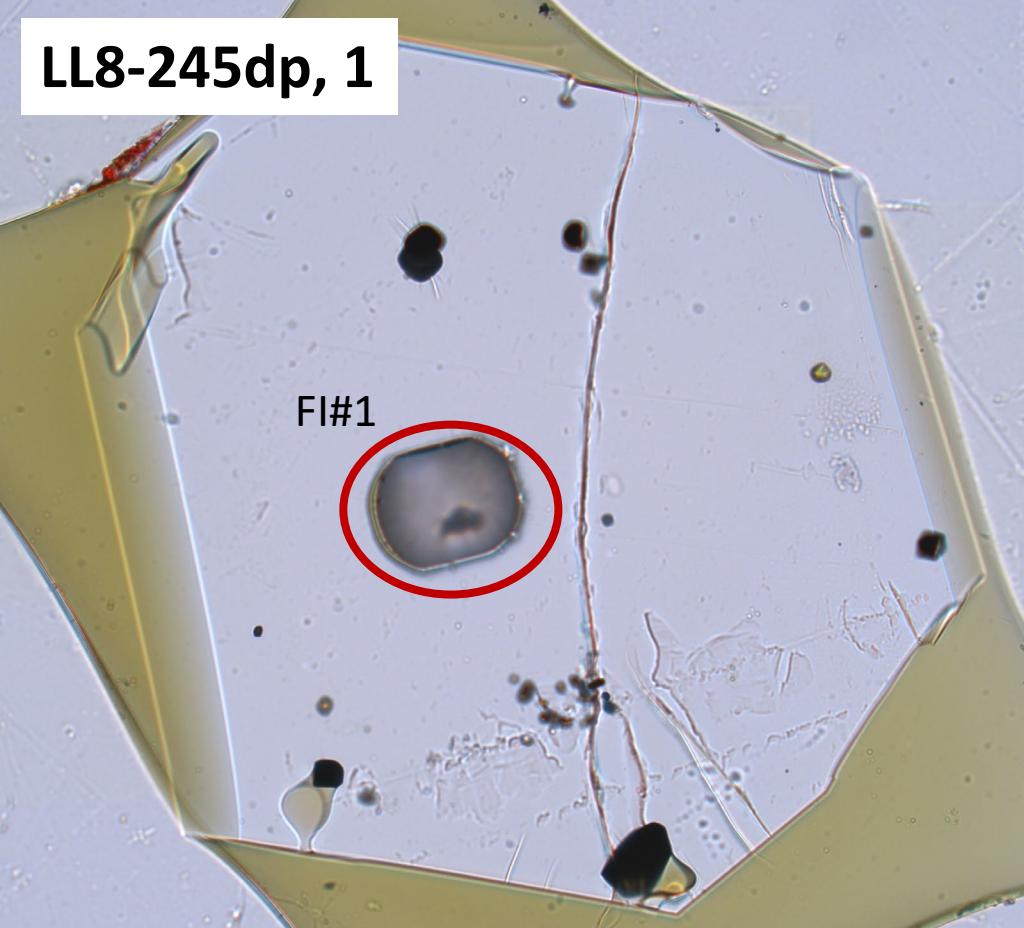


LL8-FI37, 1



Plenty more as well. FI#4 never analyzed. This area seems like an early GZ maybe

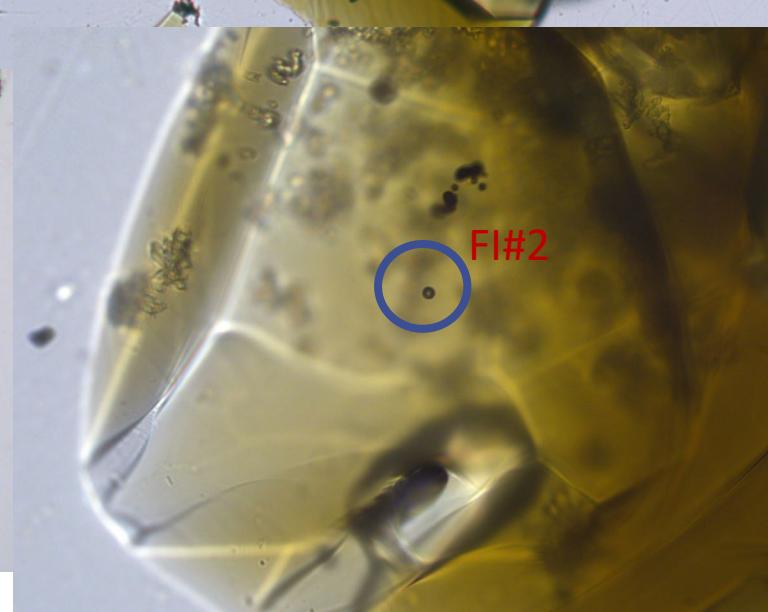
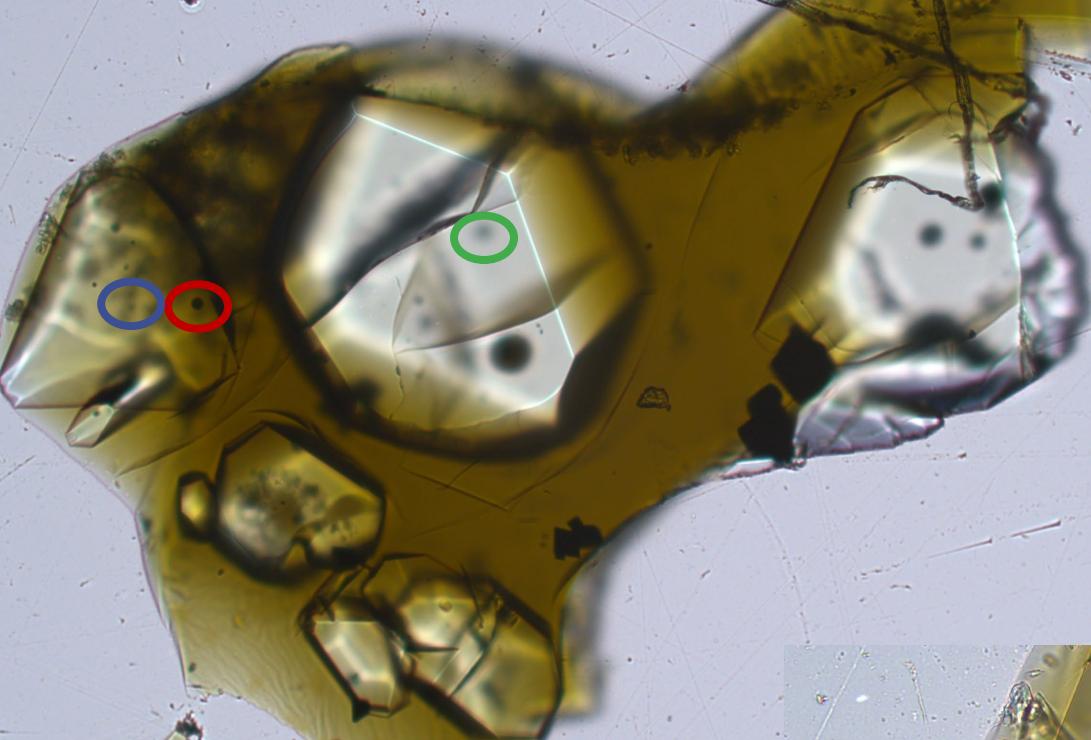
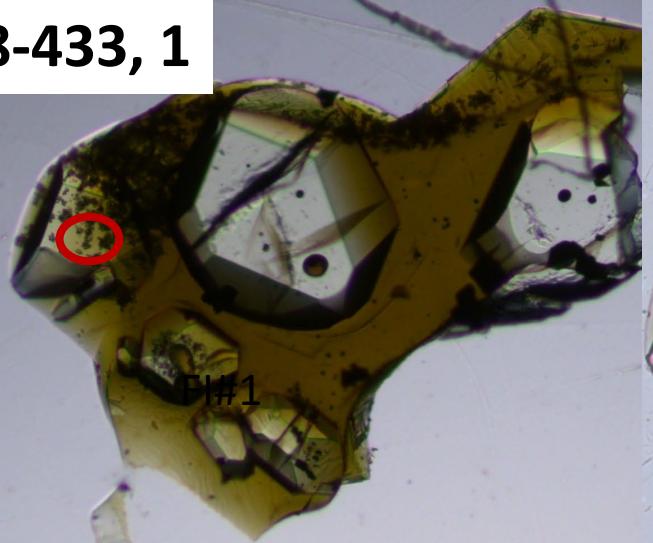
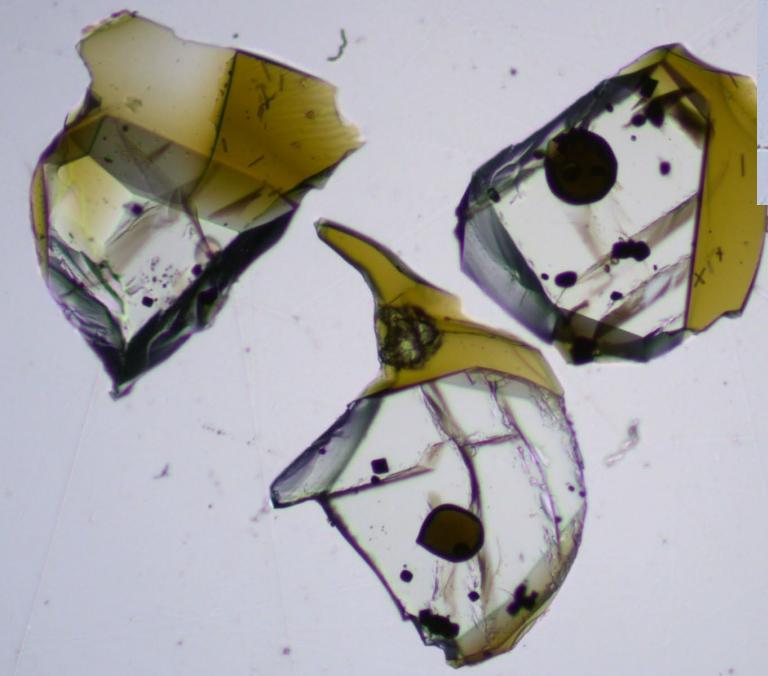
LL8-245dp, 1



This one was empty anyways

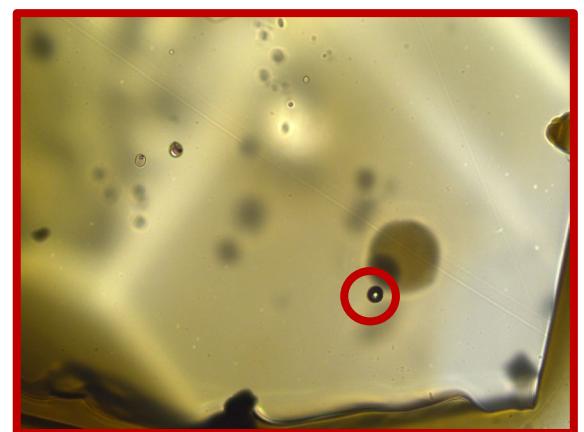
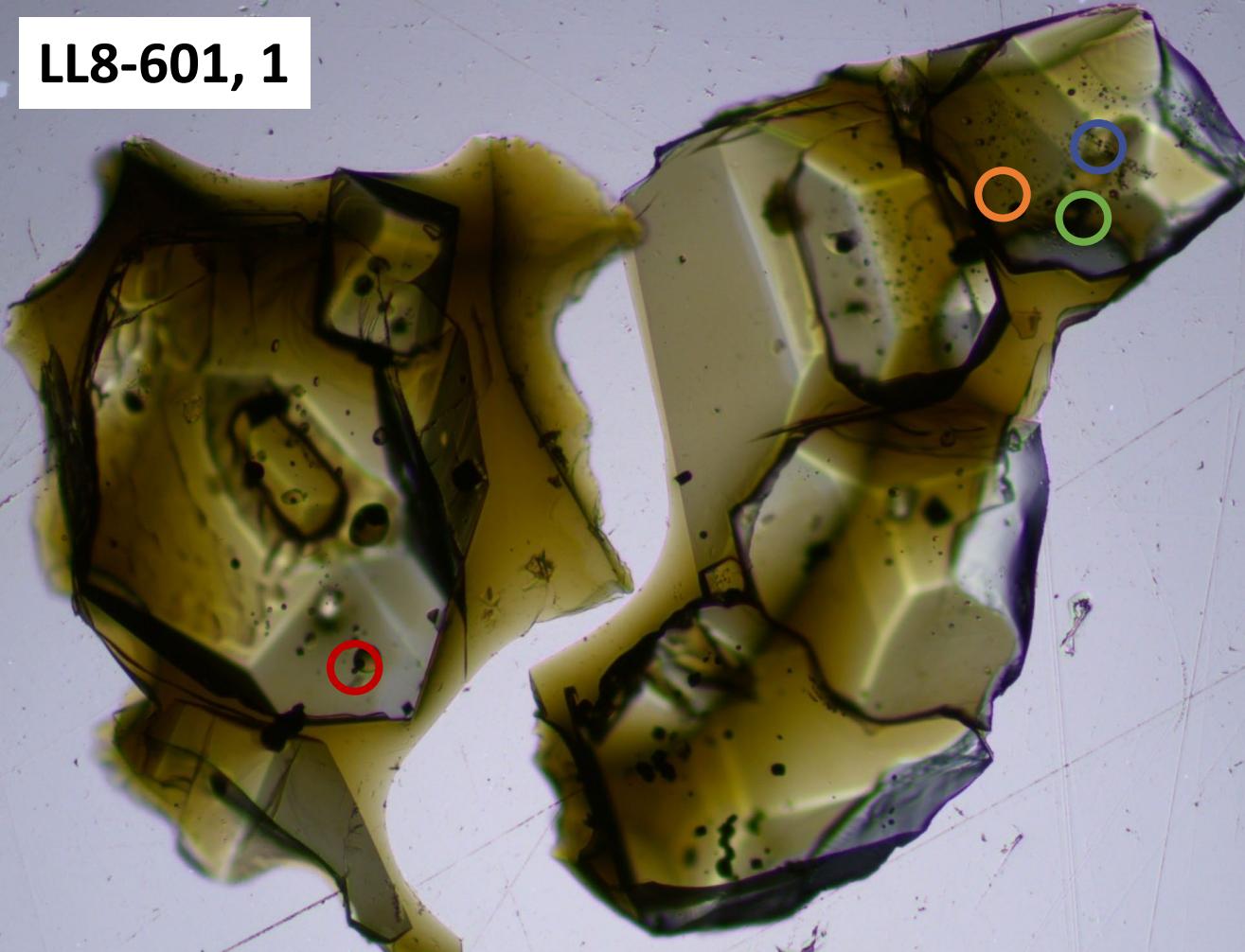
LL8-FI36 was mislabeled in the raman as LL8-3b but is also gone from the epoxy mount. Polished out completely probably

LL8-433, 1

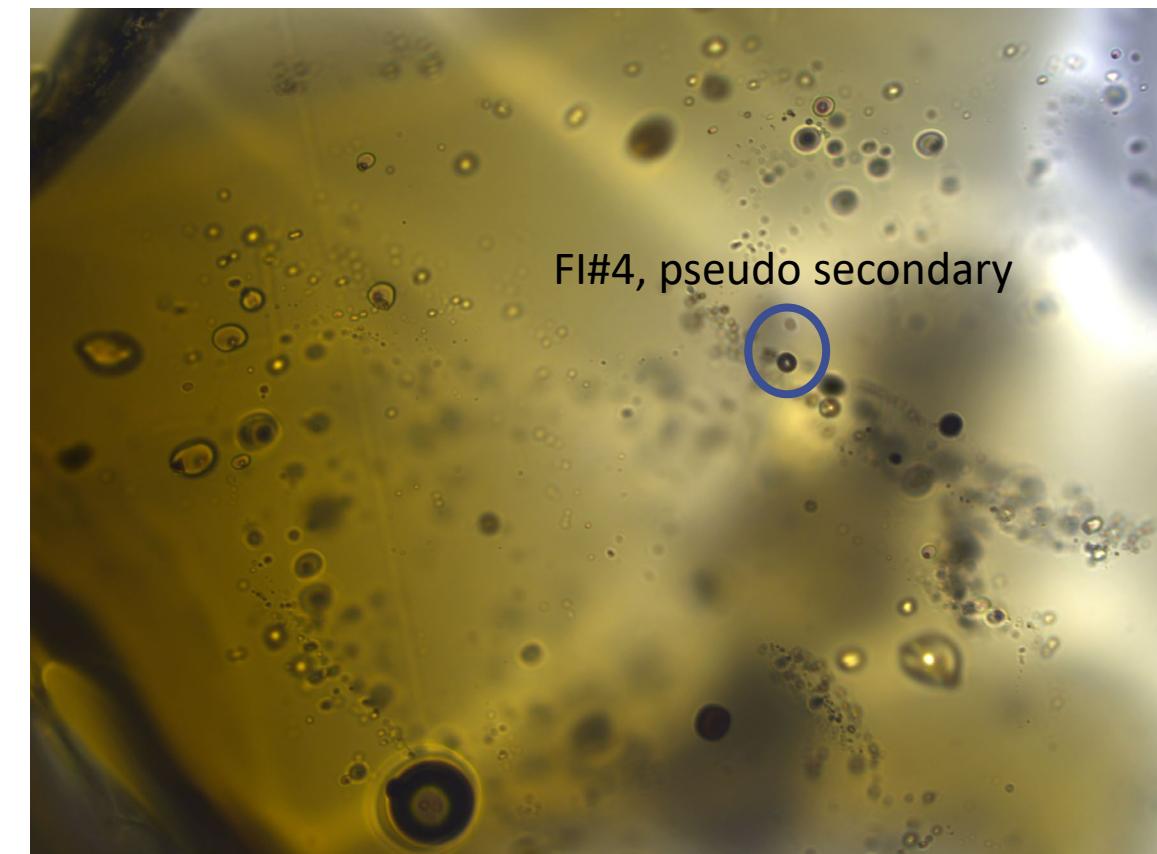


Really tough, broken, polished moved. PROBABLY RERAMAN

LL8-601, 1

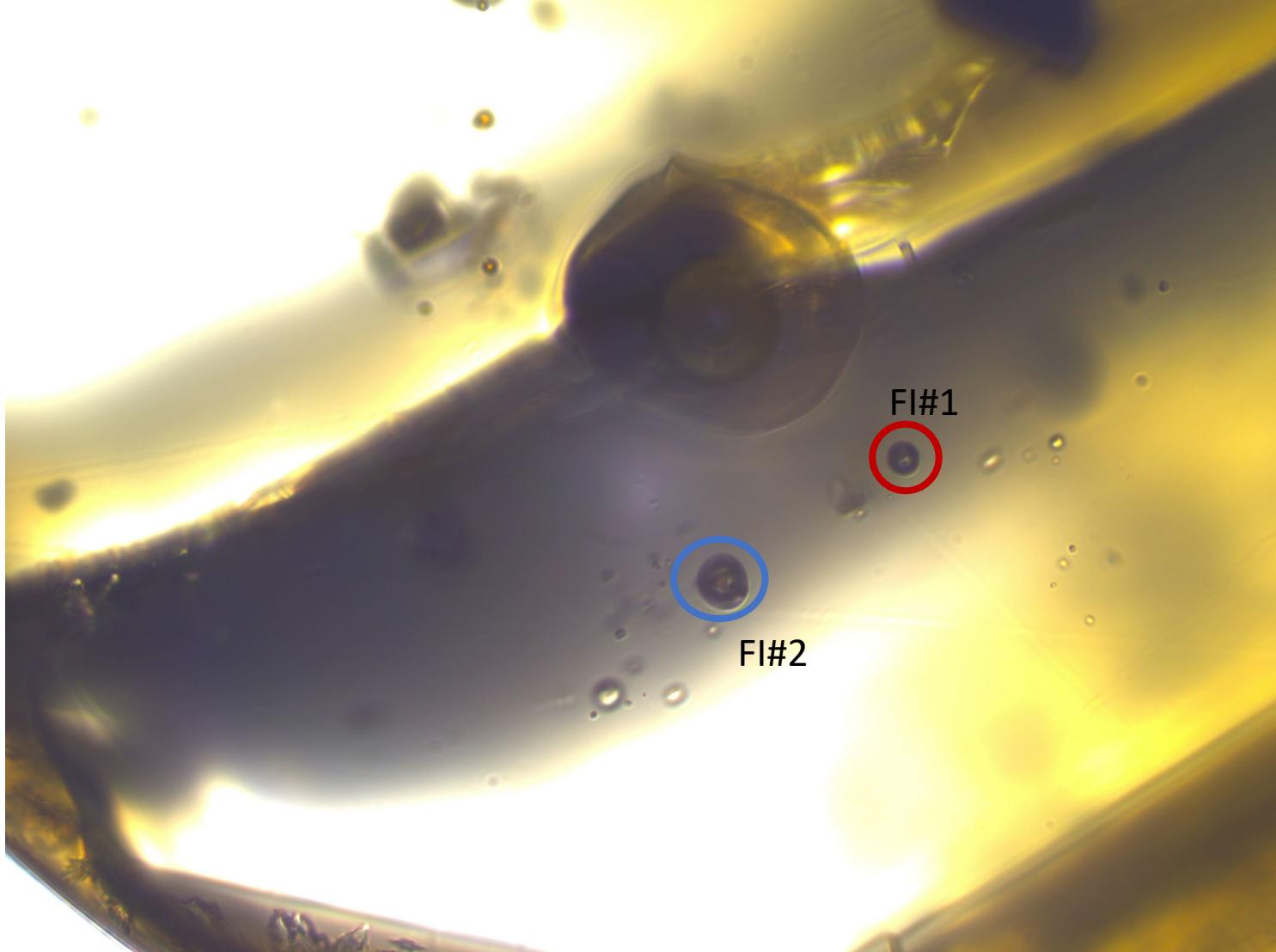
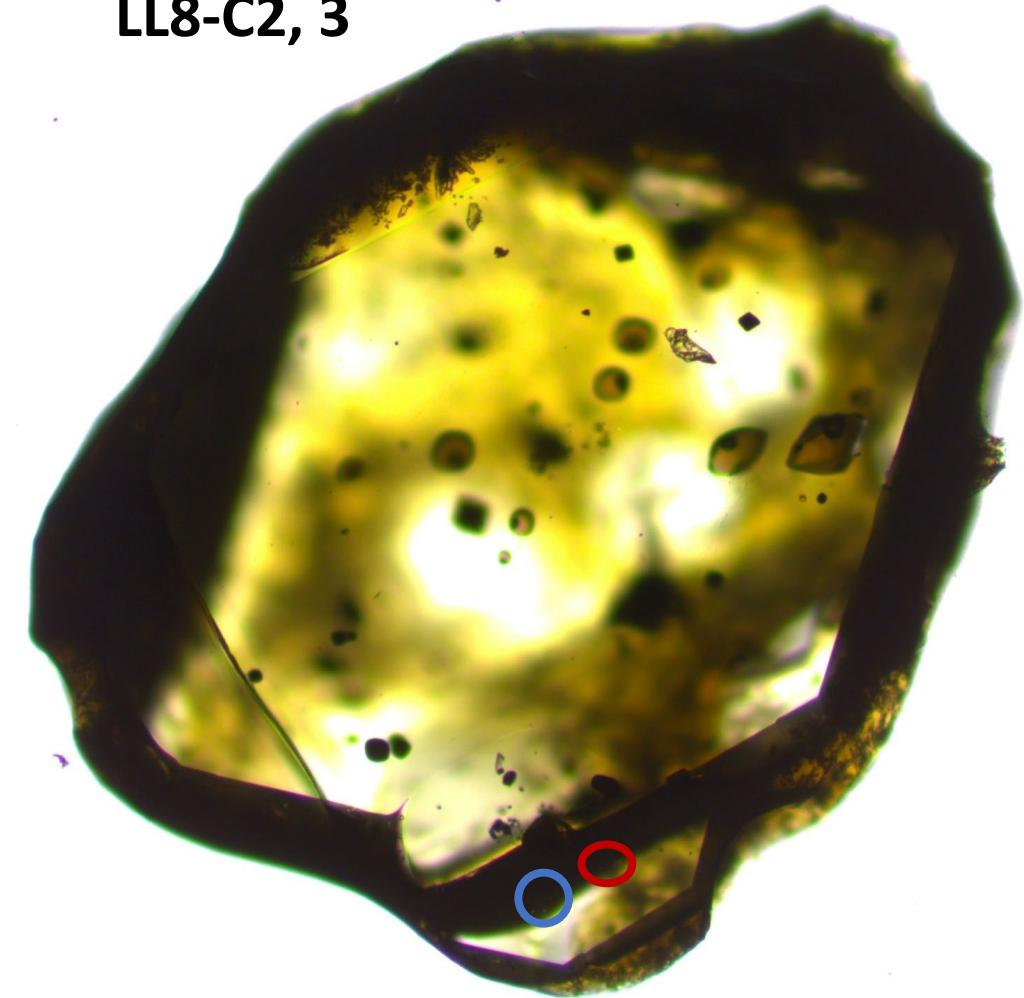


FI#1, others are lost

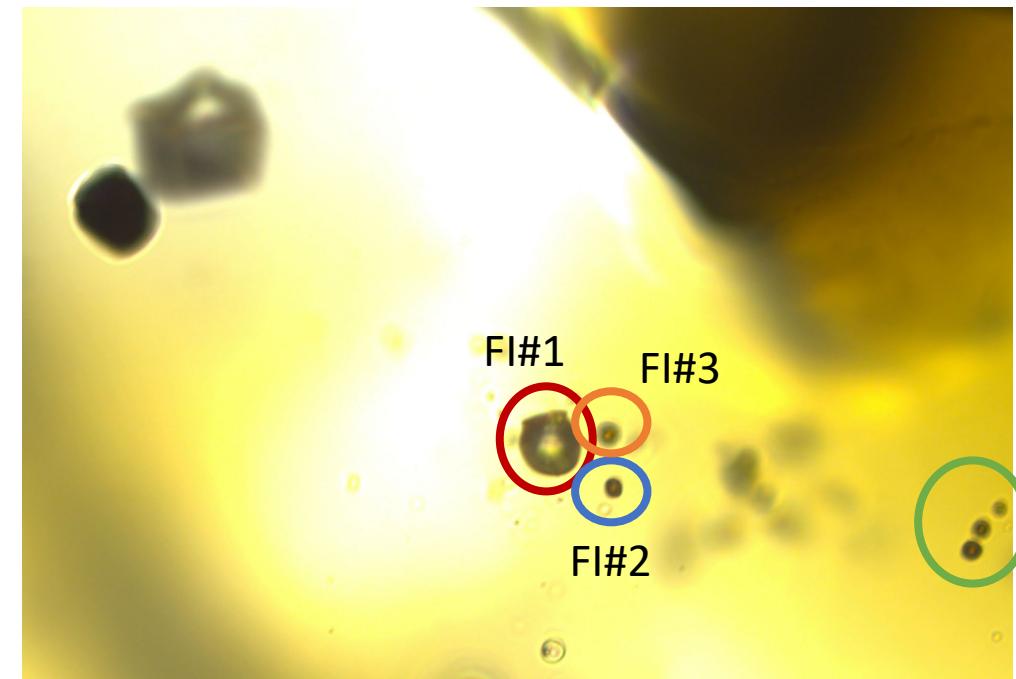
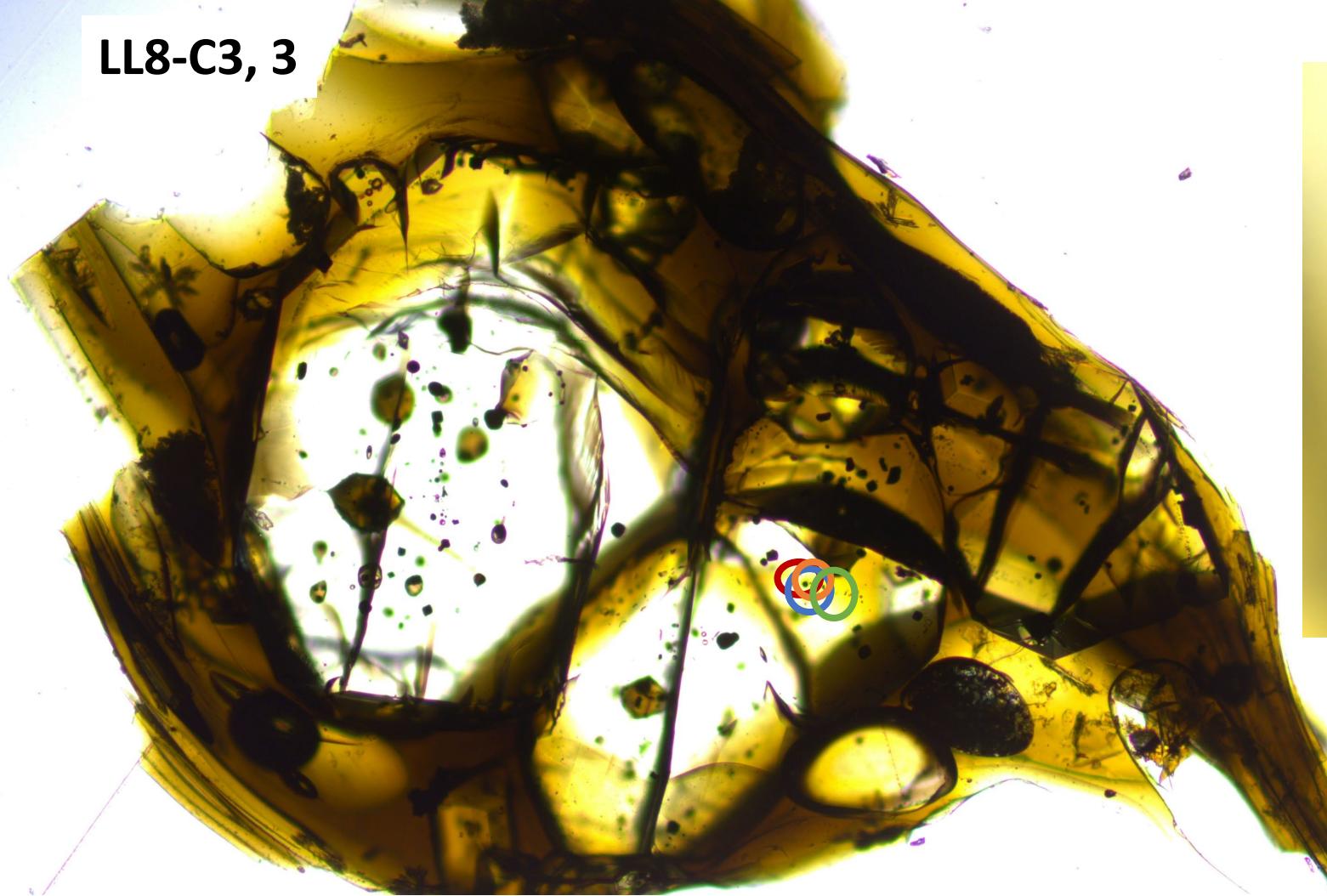


FI#4, pseudo secondary

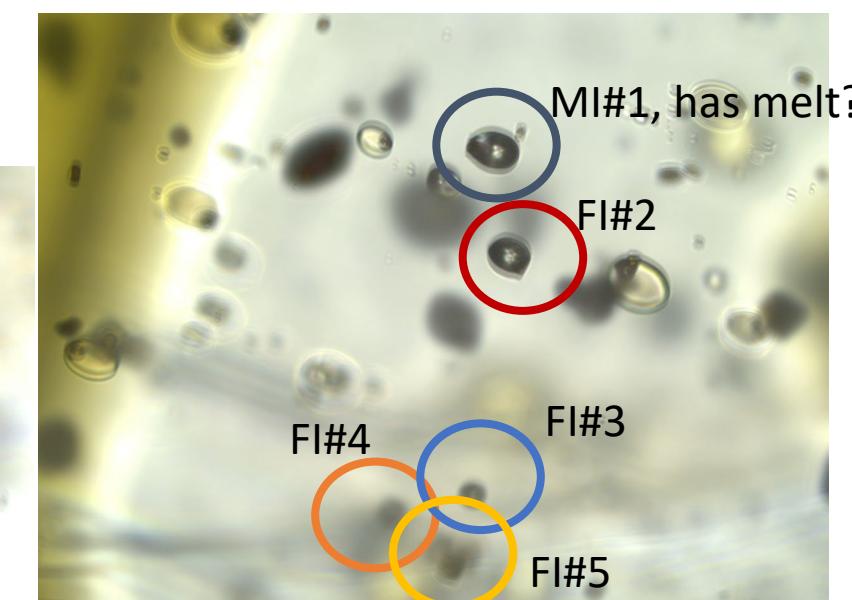
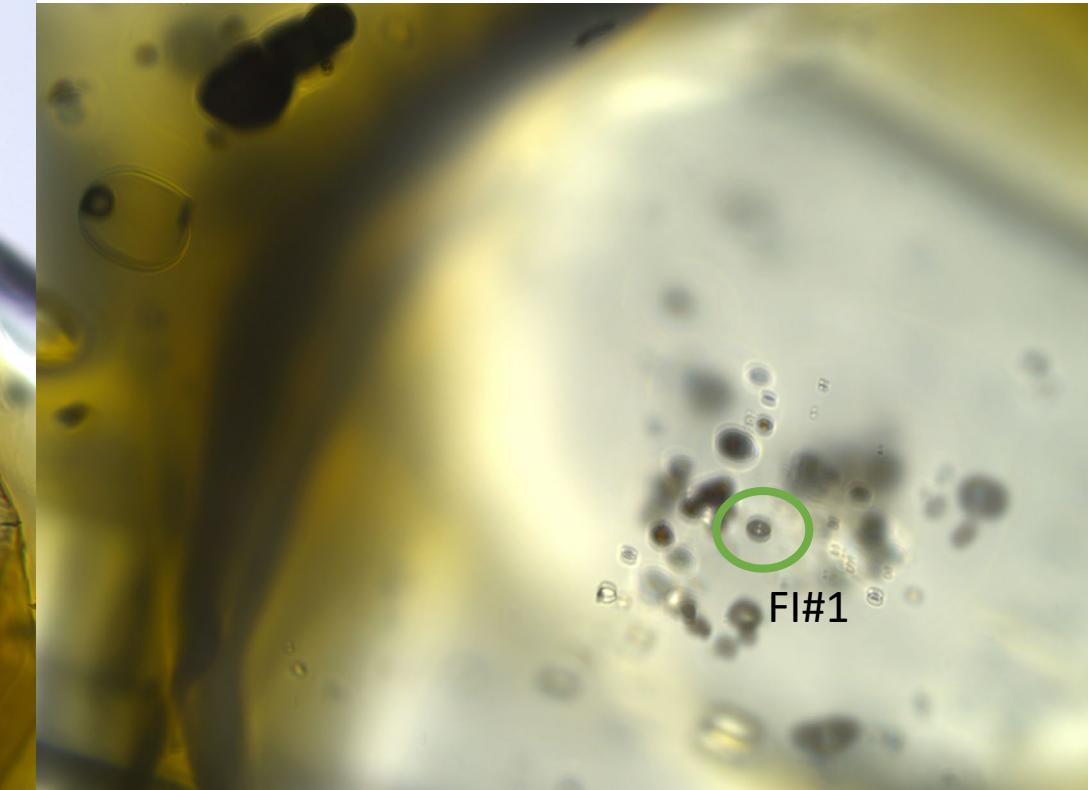
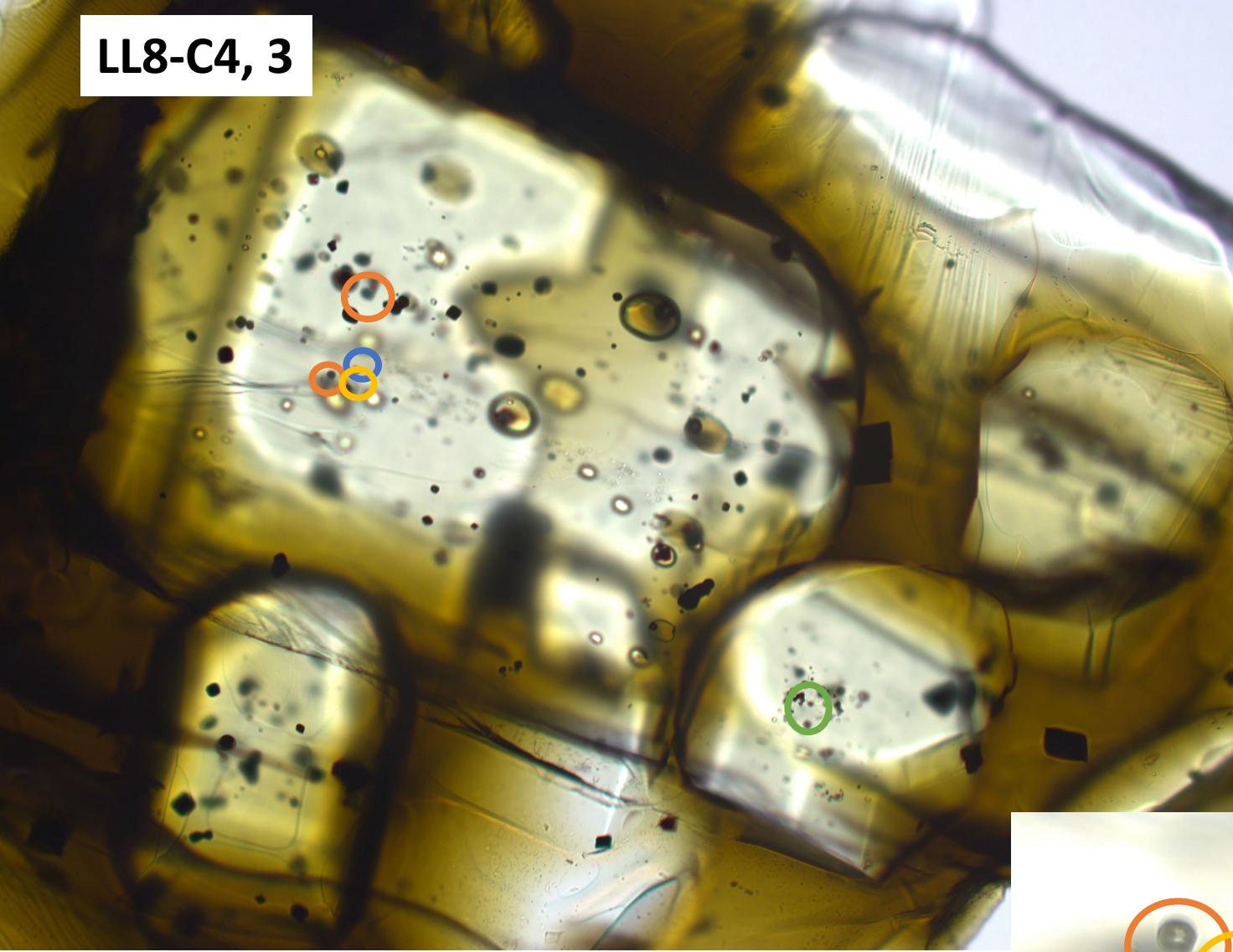
LL8-C2, 3



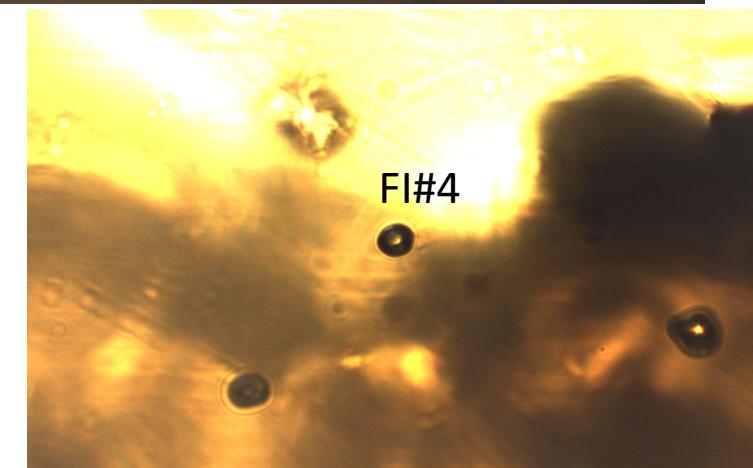
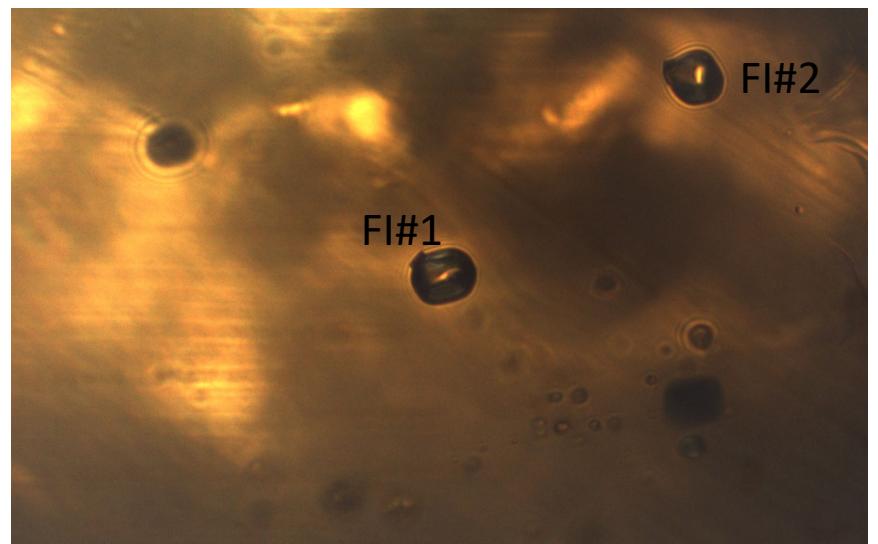
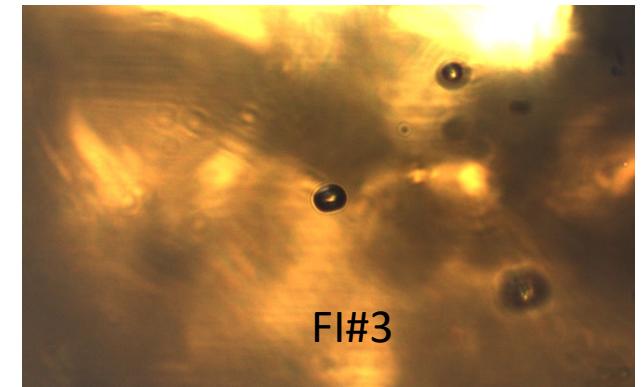
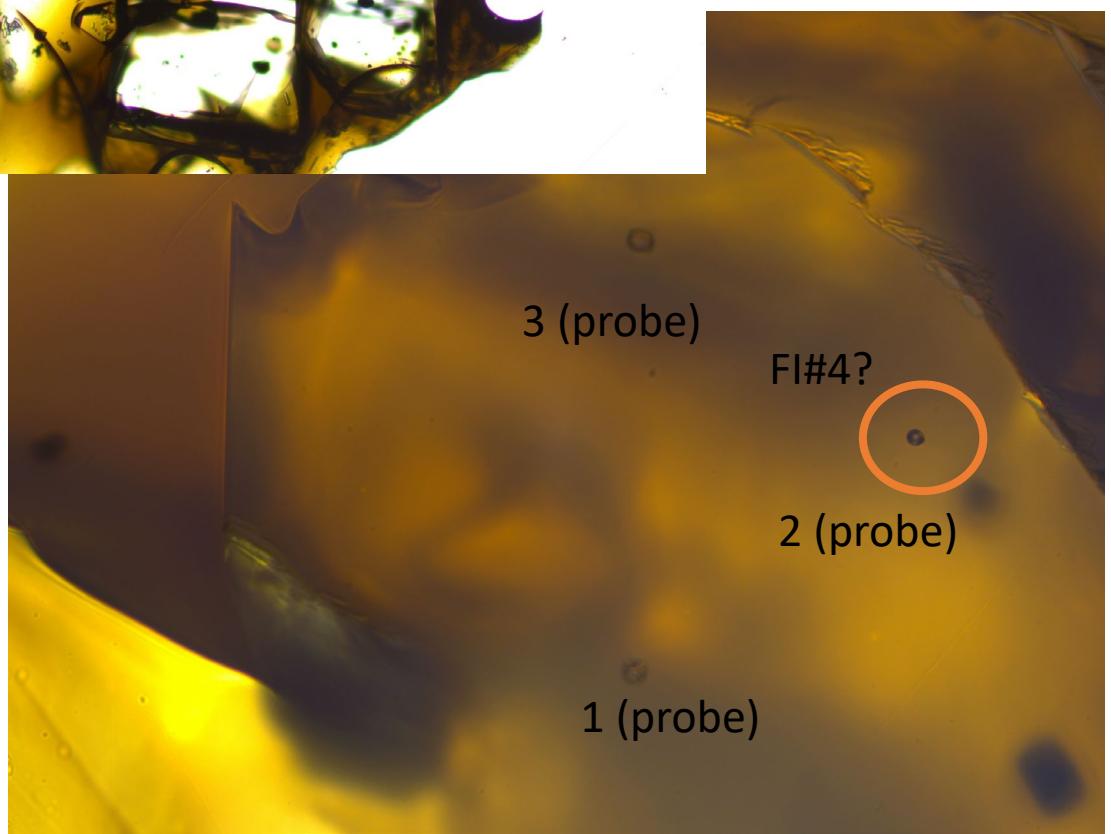
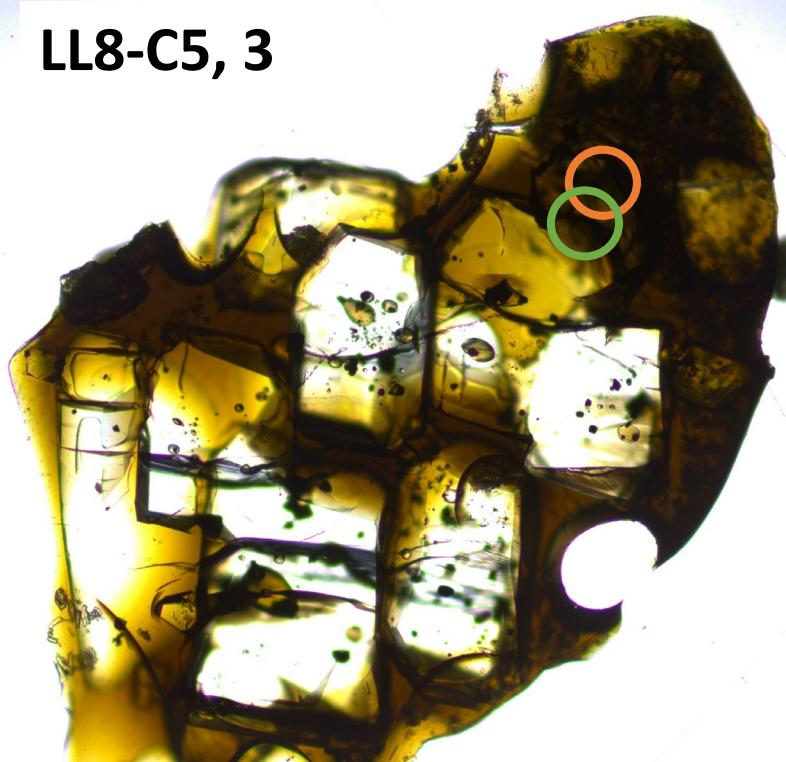
LL8-C3, 3



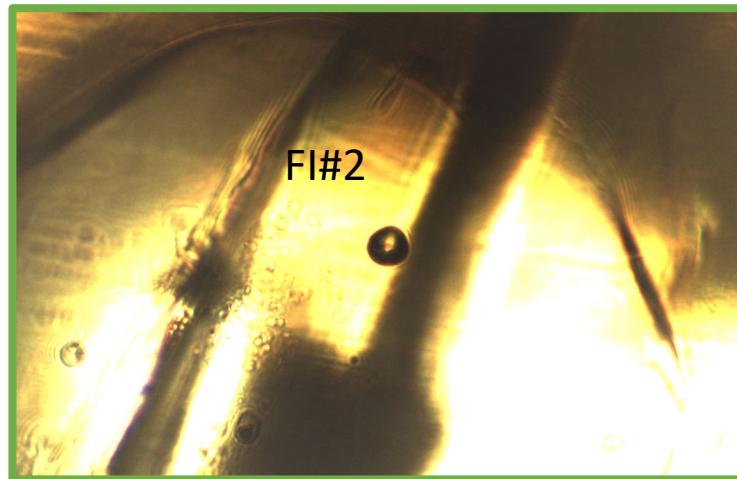
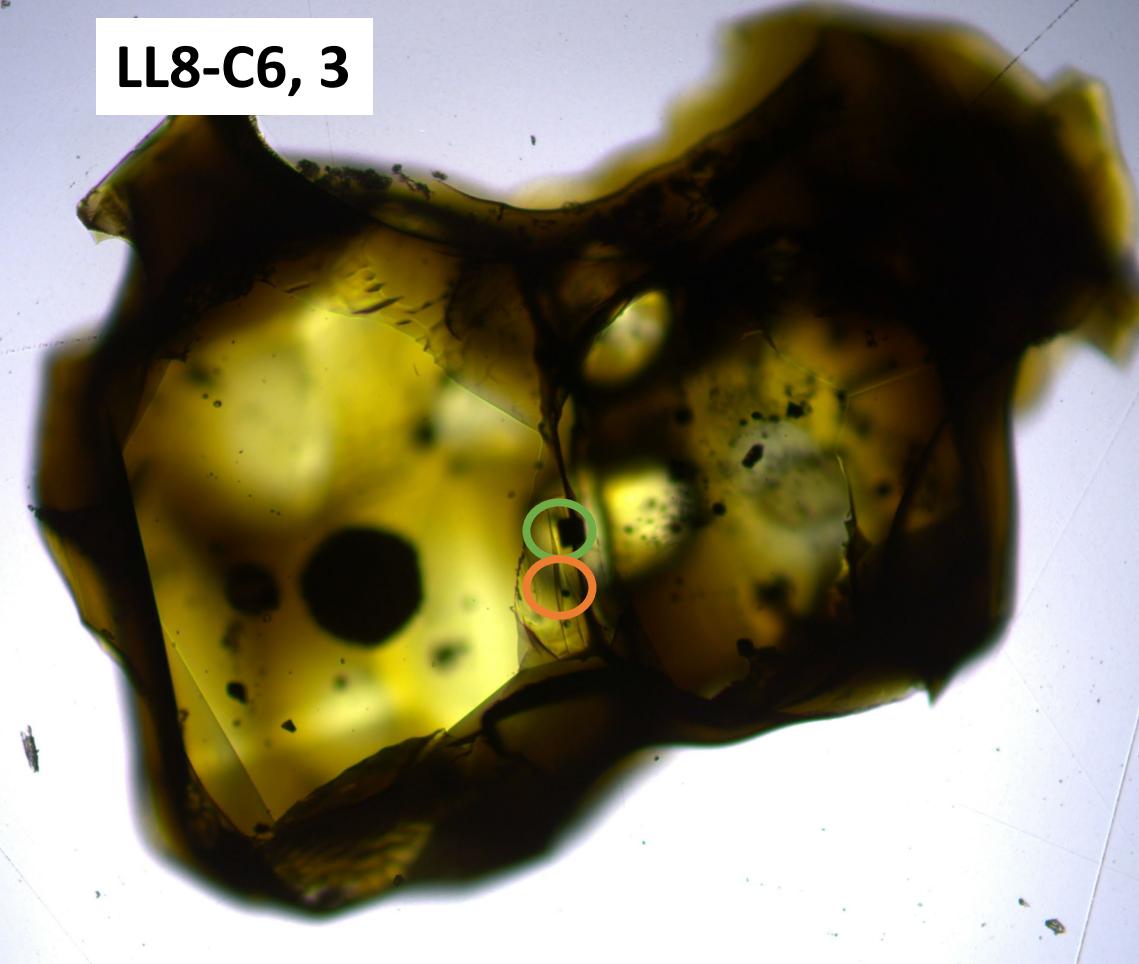
LL8-C4, 3



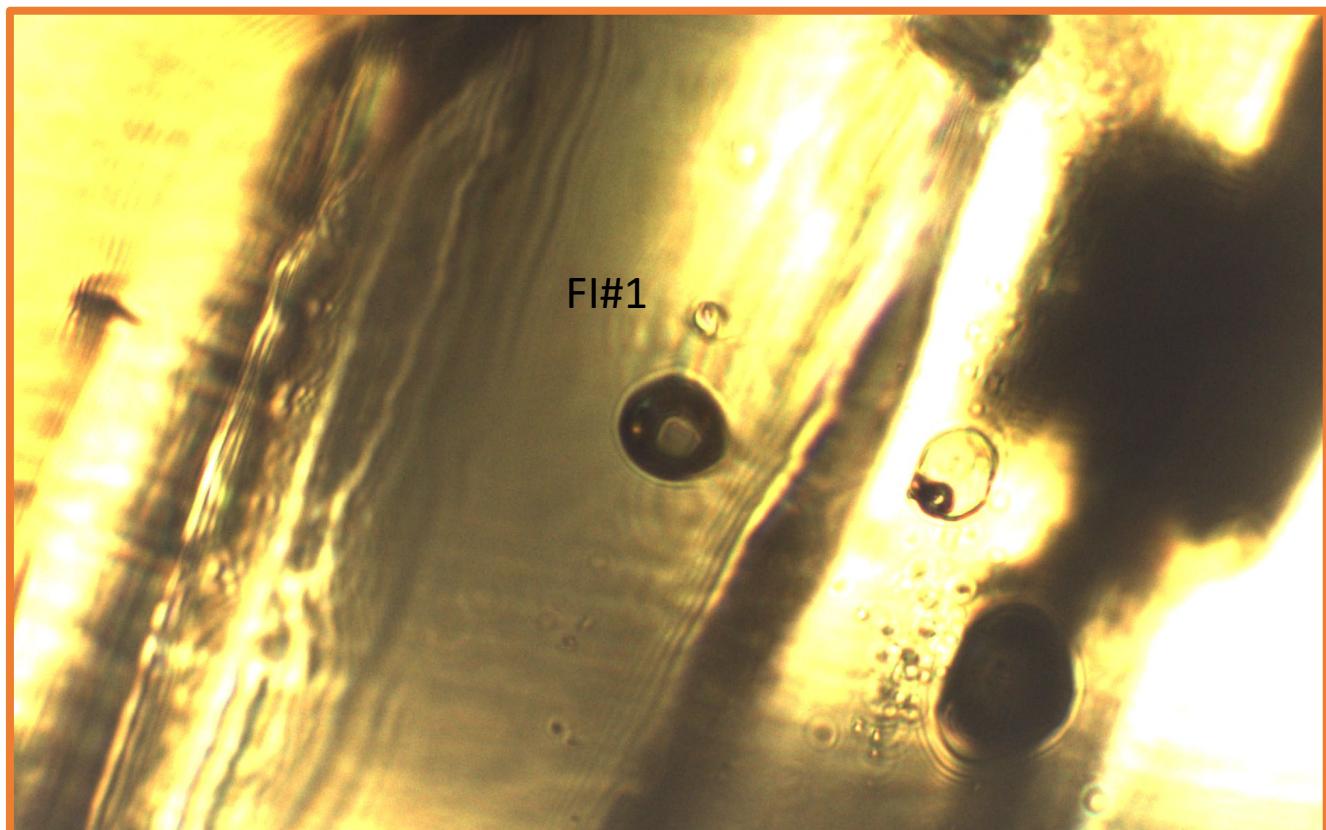
LL8-C5, 3



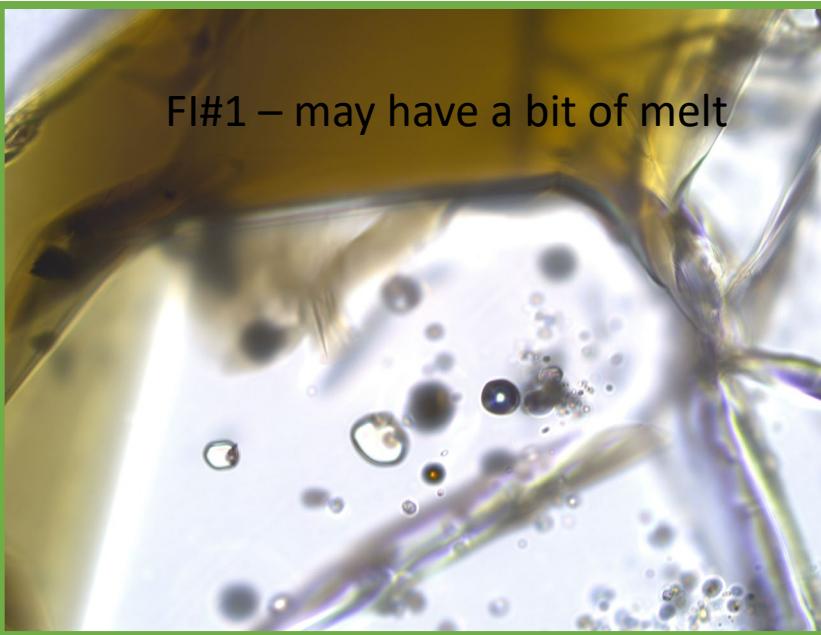
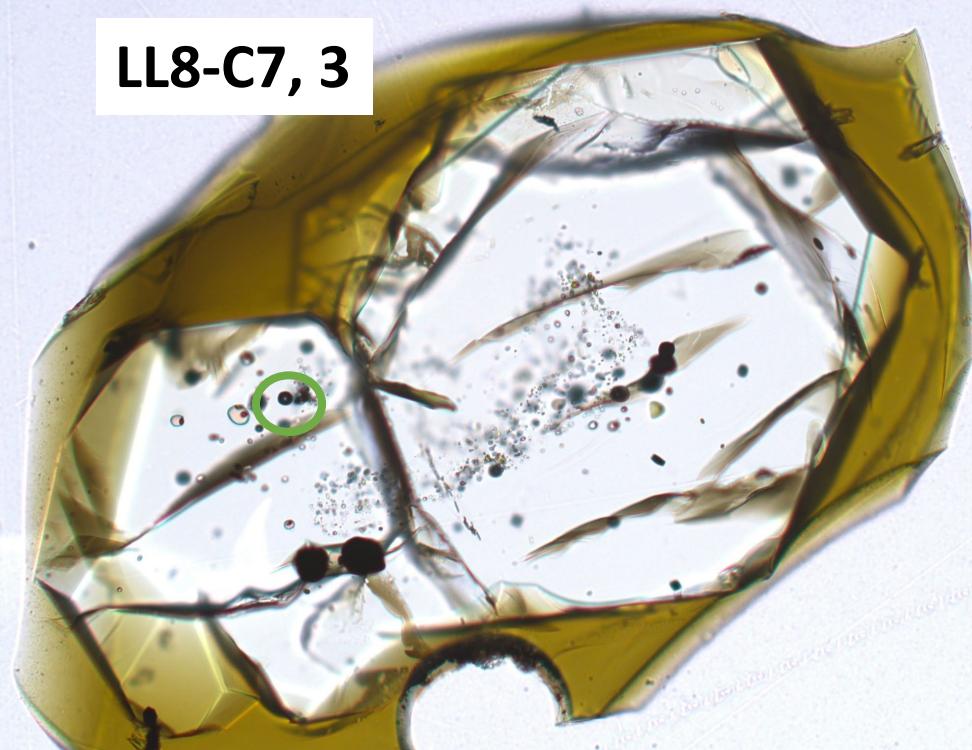
LL8-C6, 3



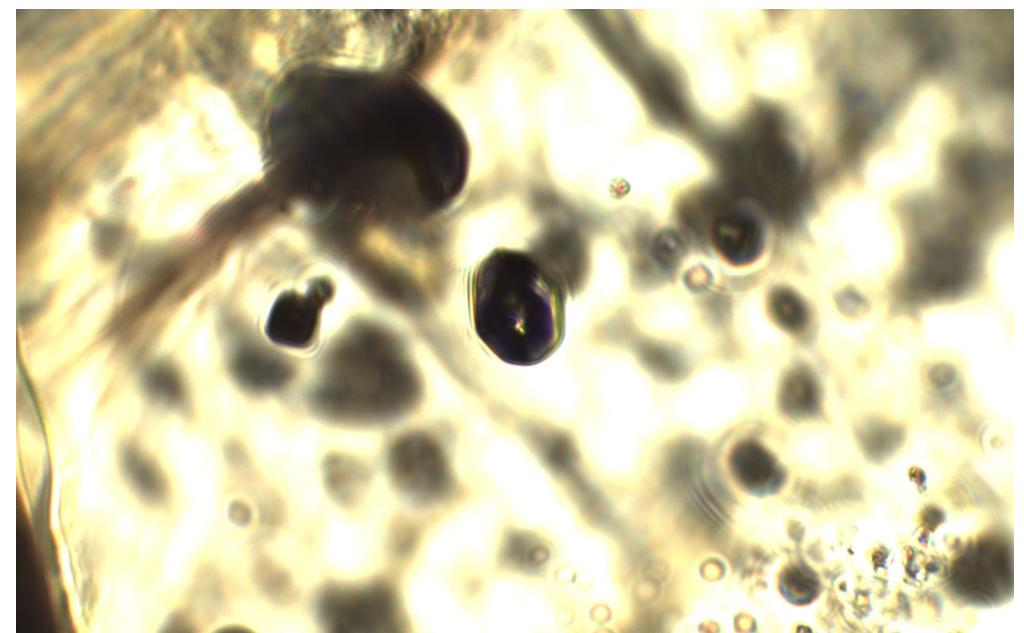
Small xtal in between



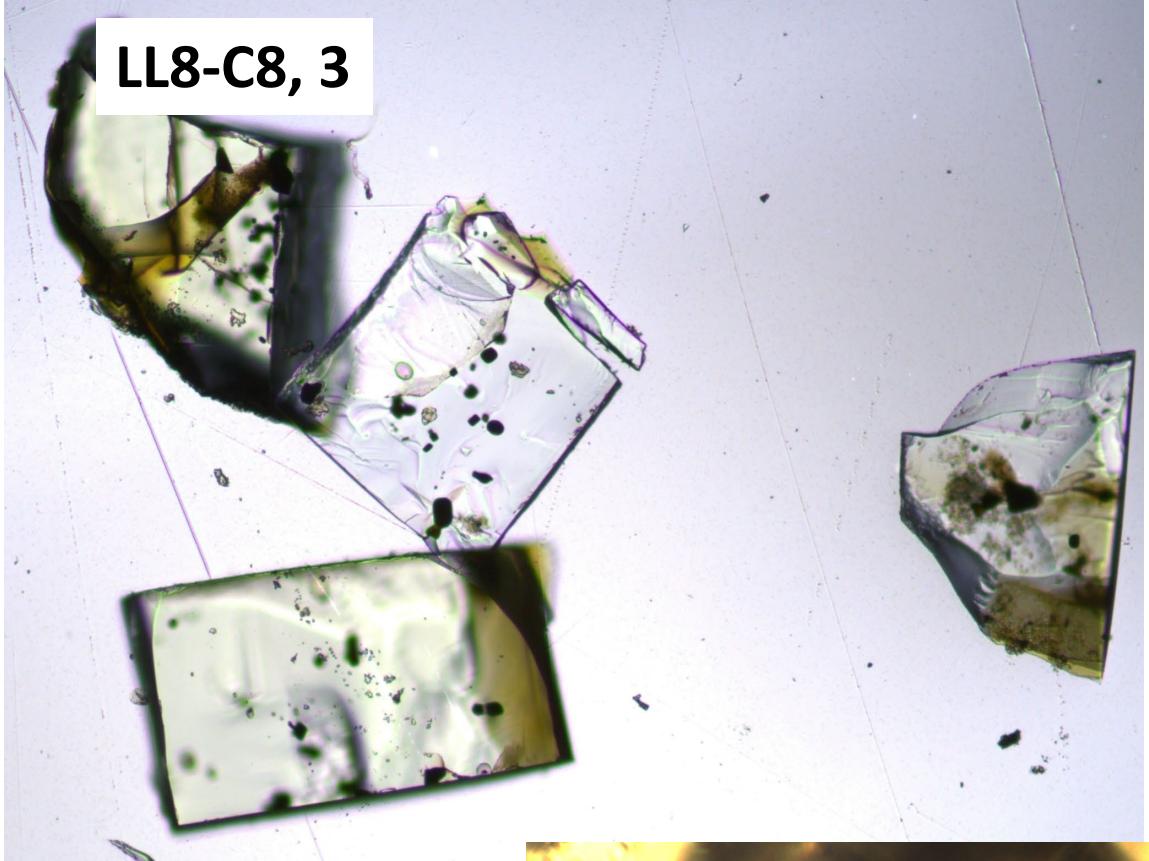
LL8-C7, 3



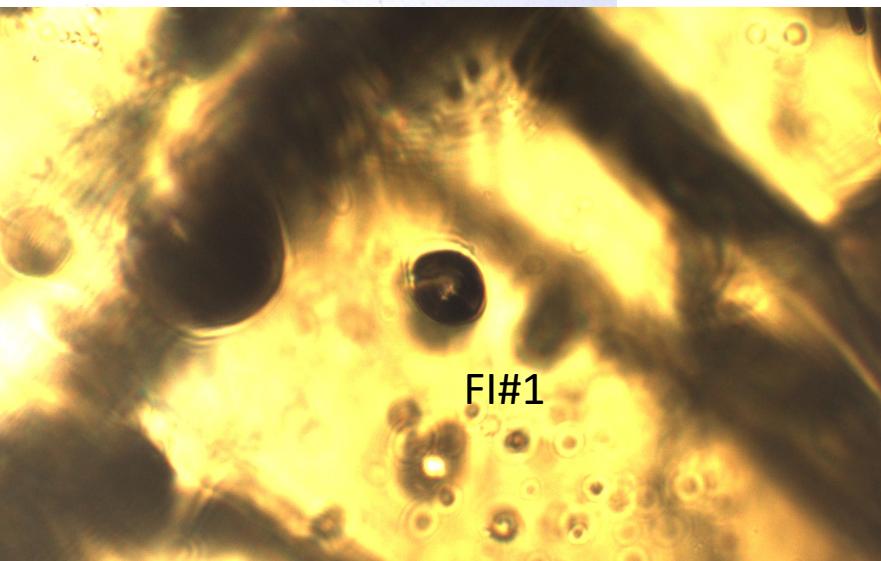
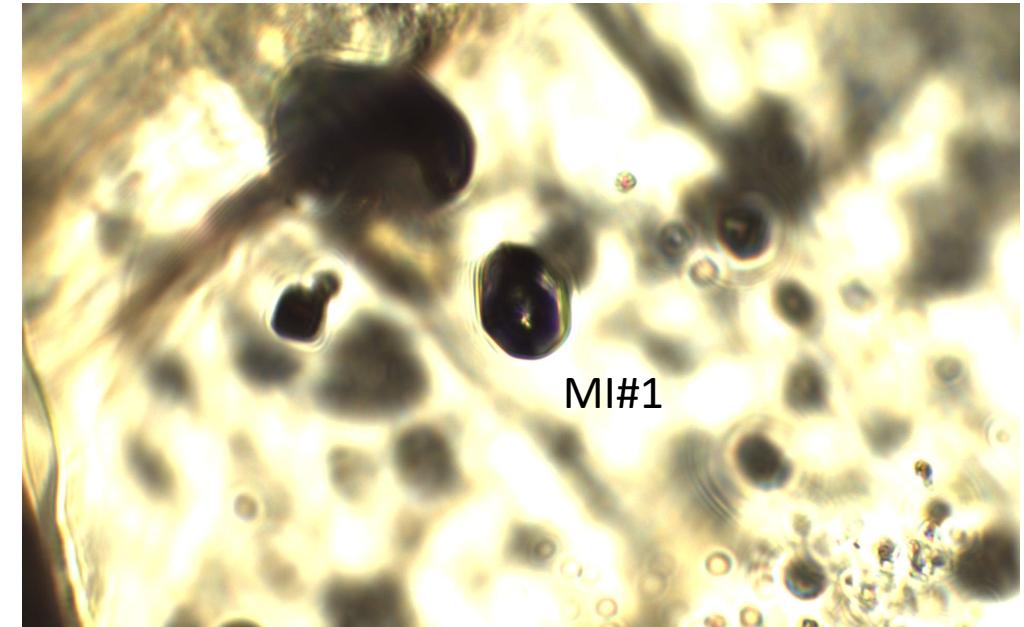
FI#1 – may have a bit of melt



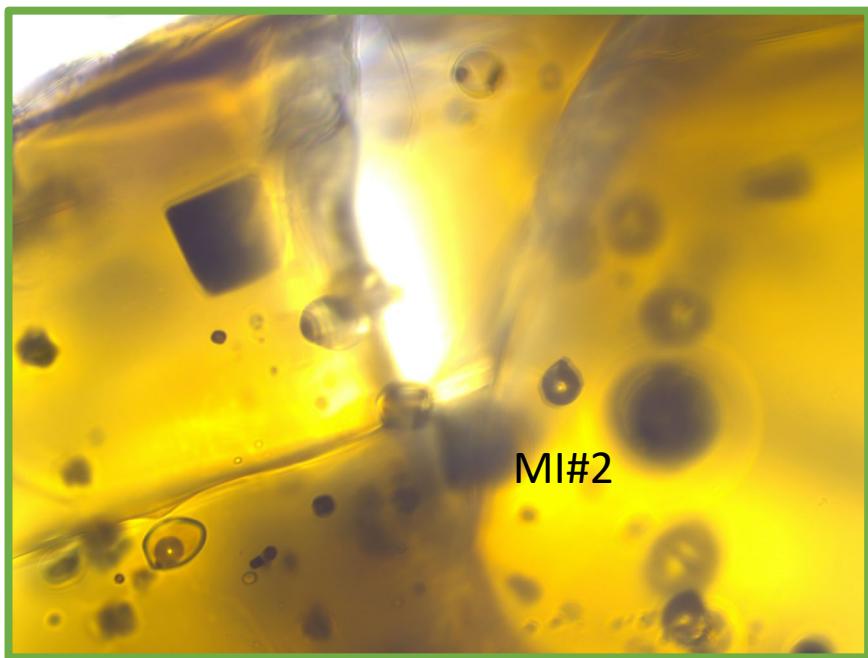
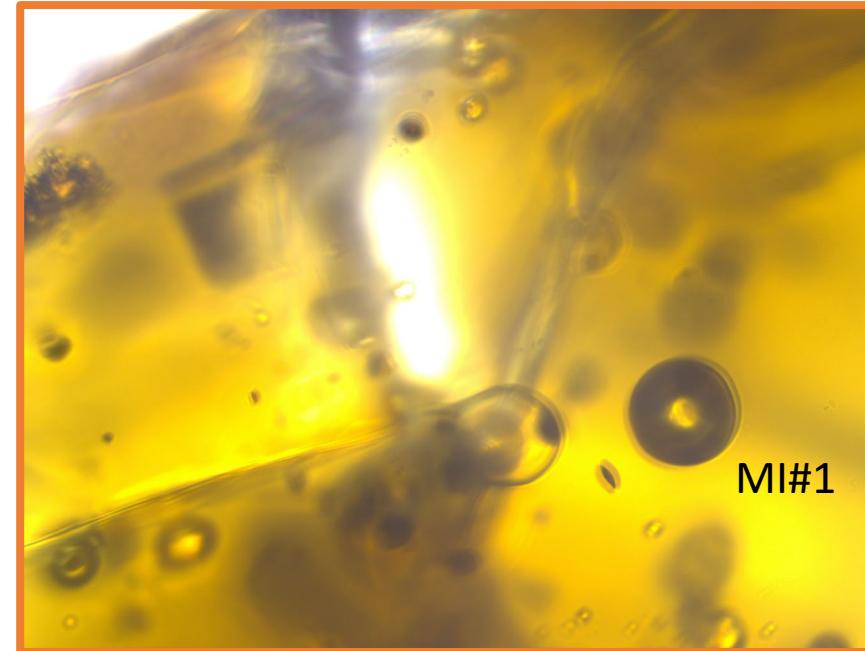
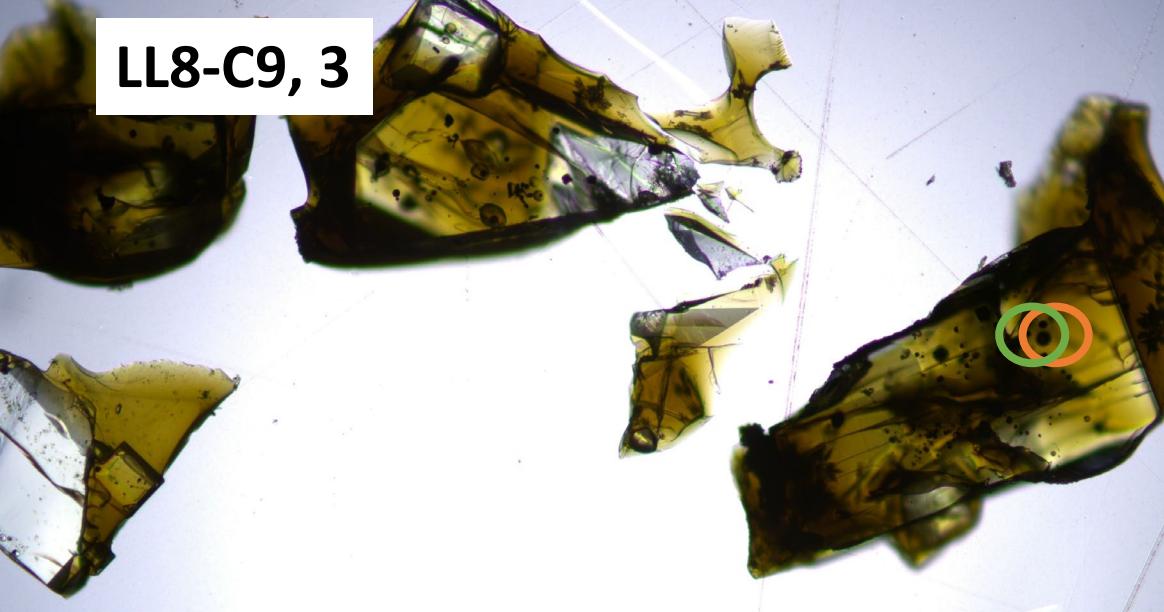
LL8-C8, 3



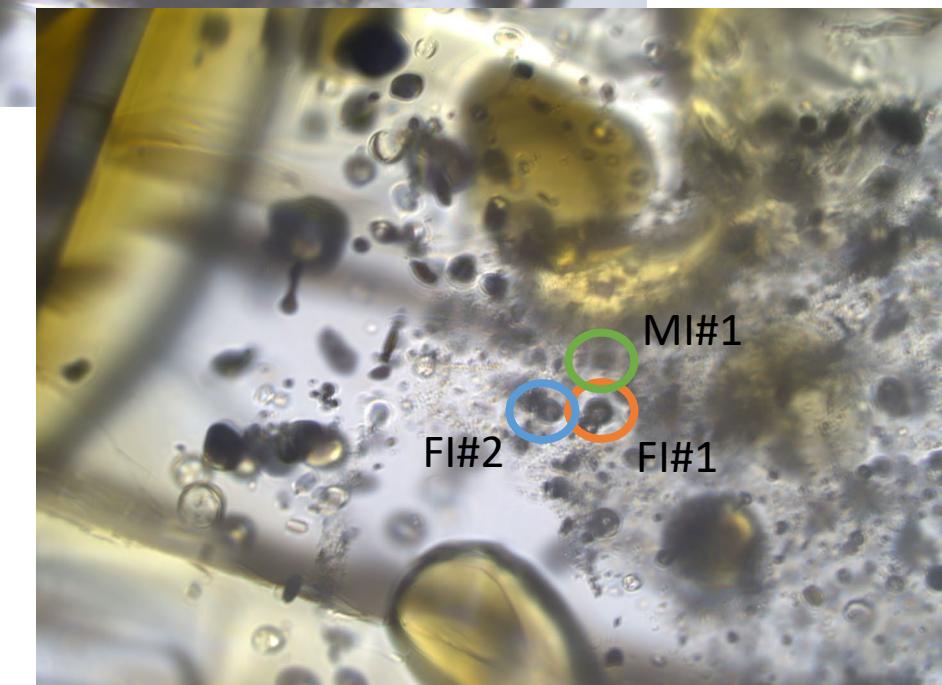
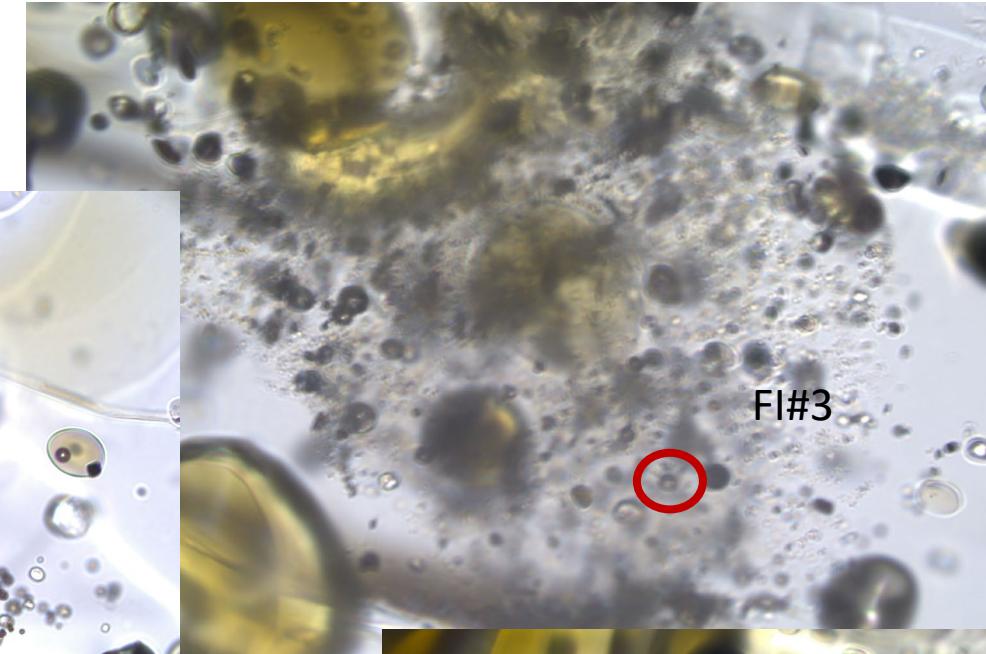
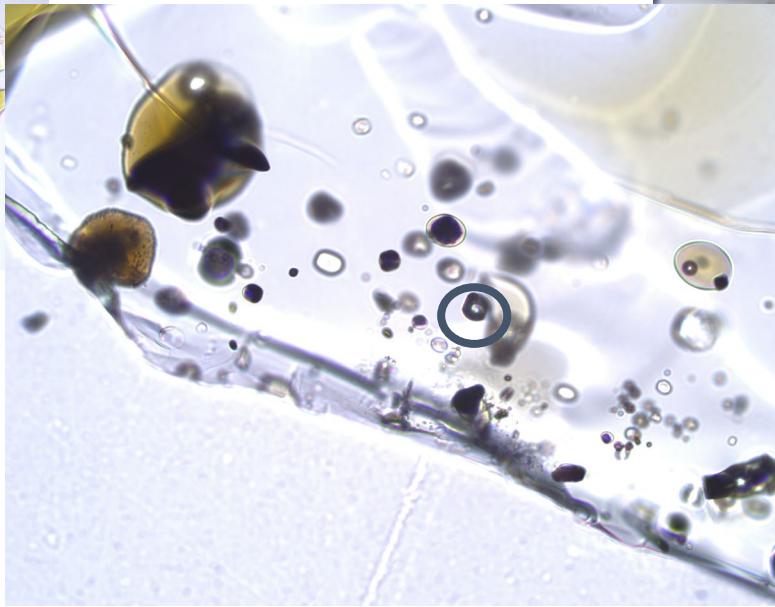
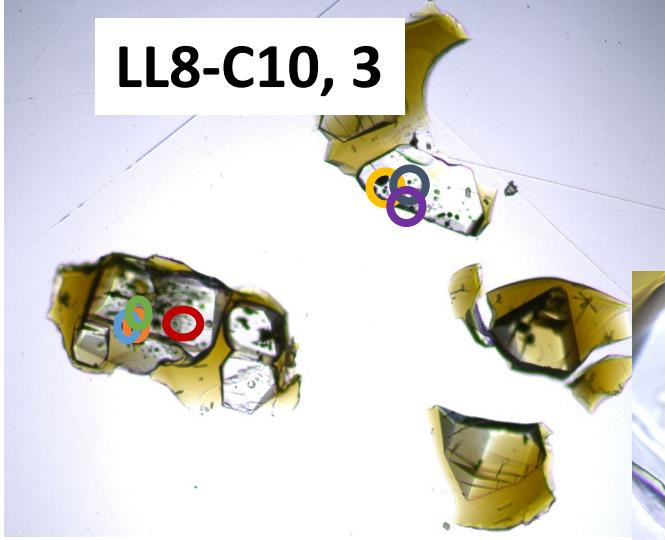
Got split into pieces and polished out



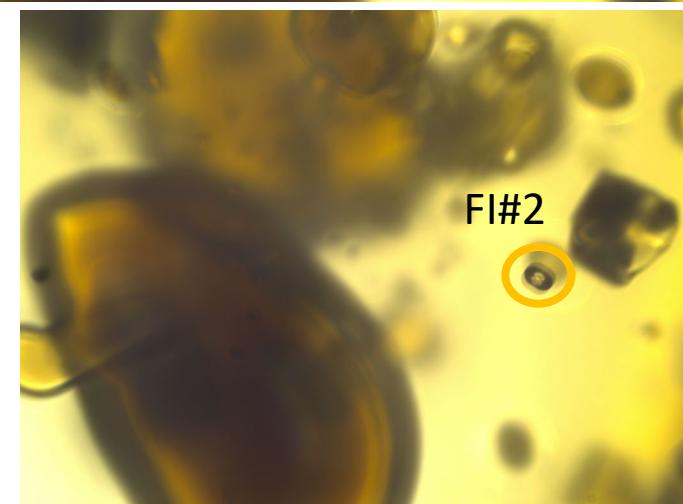
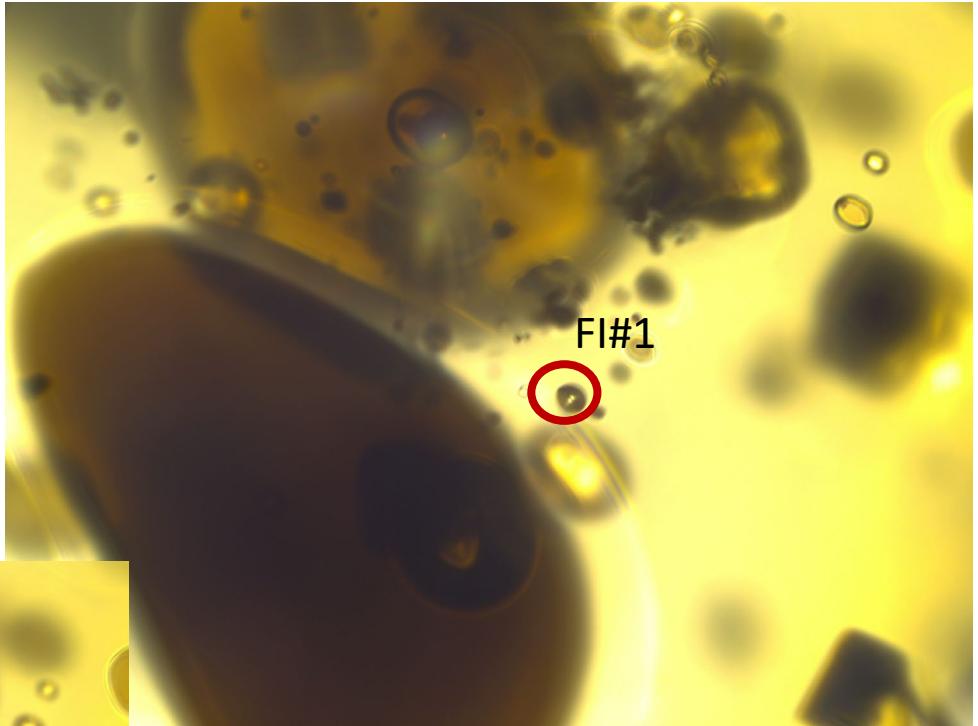
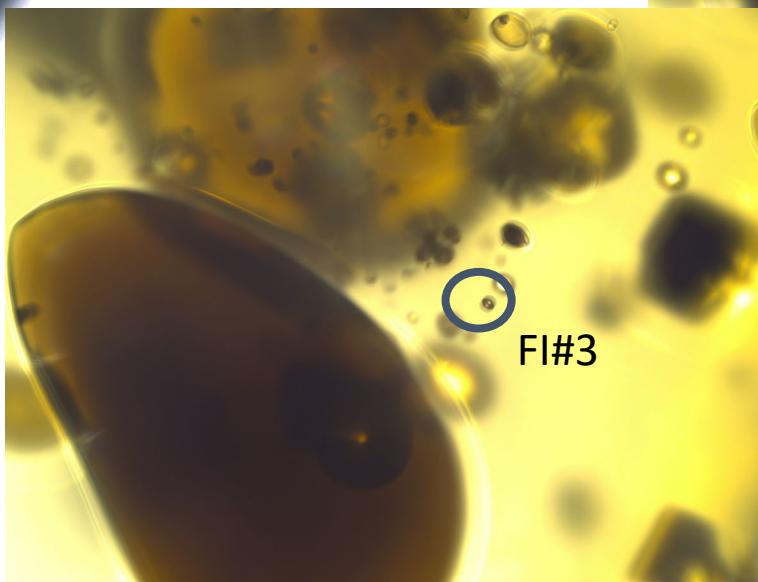
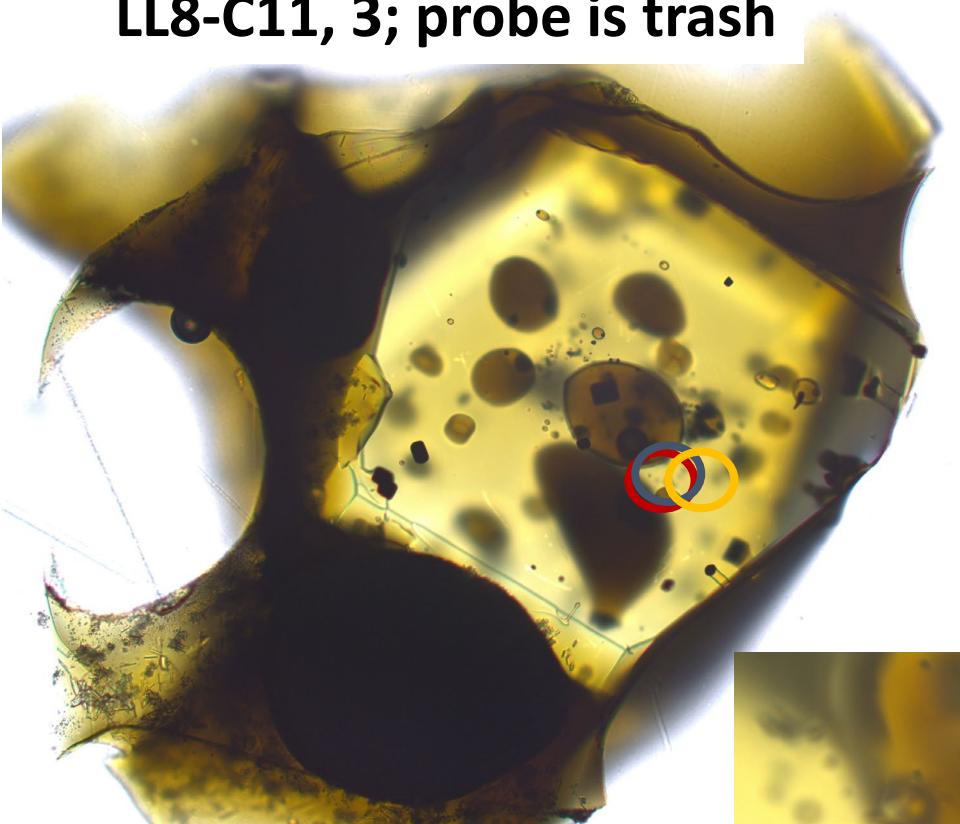
LL8-C9, 3



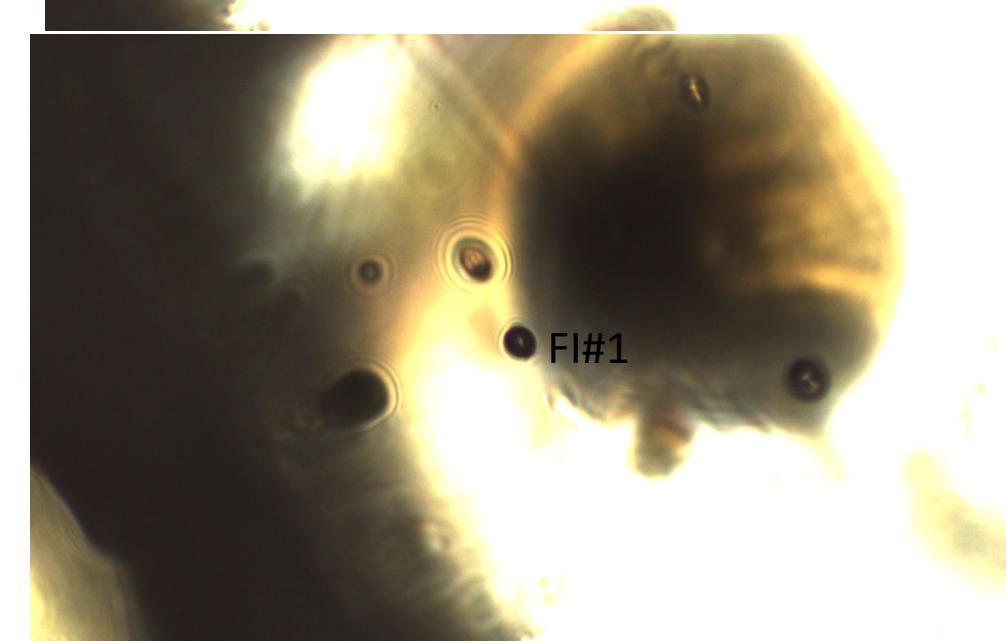
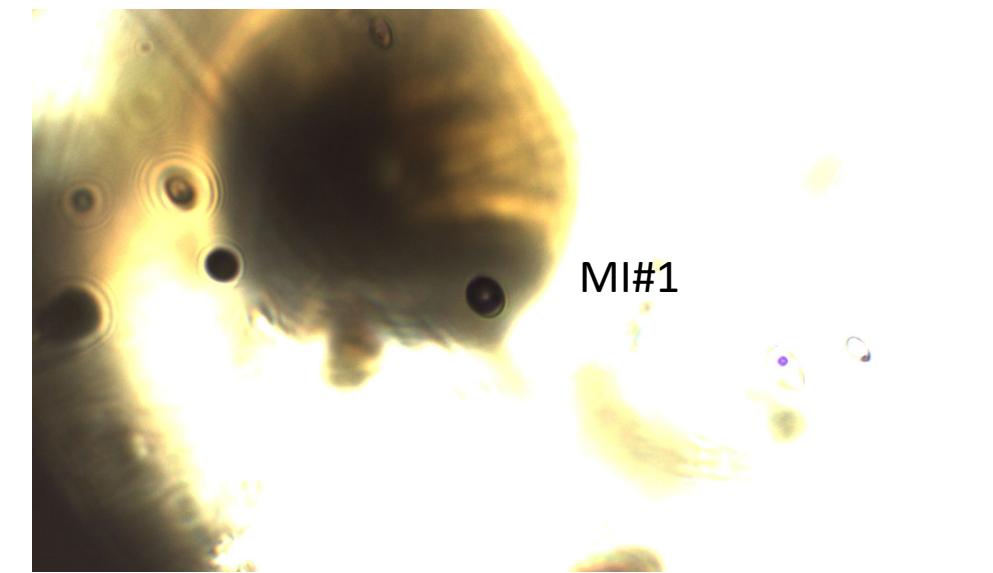
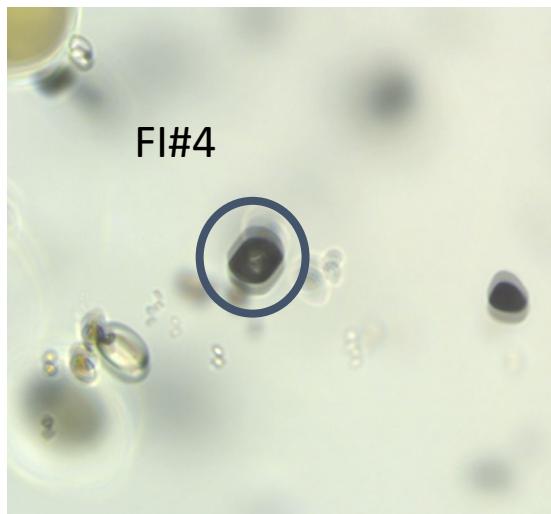
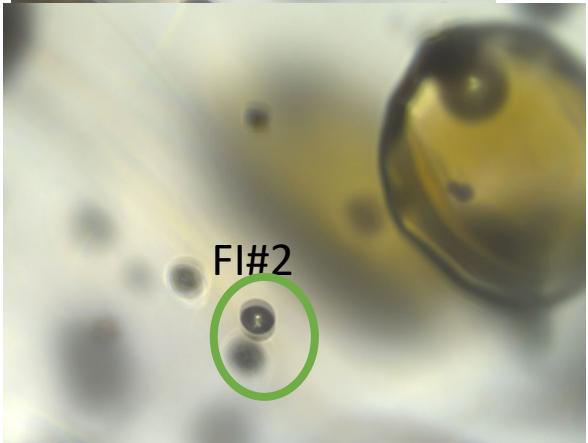
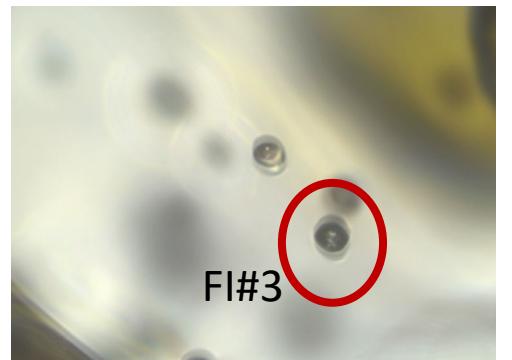
LL8-C10, 3



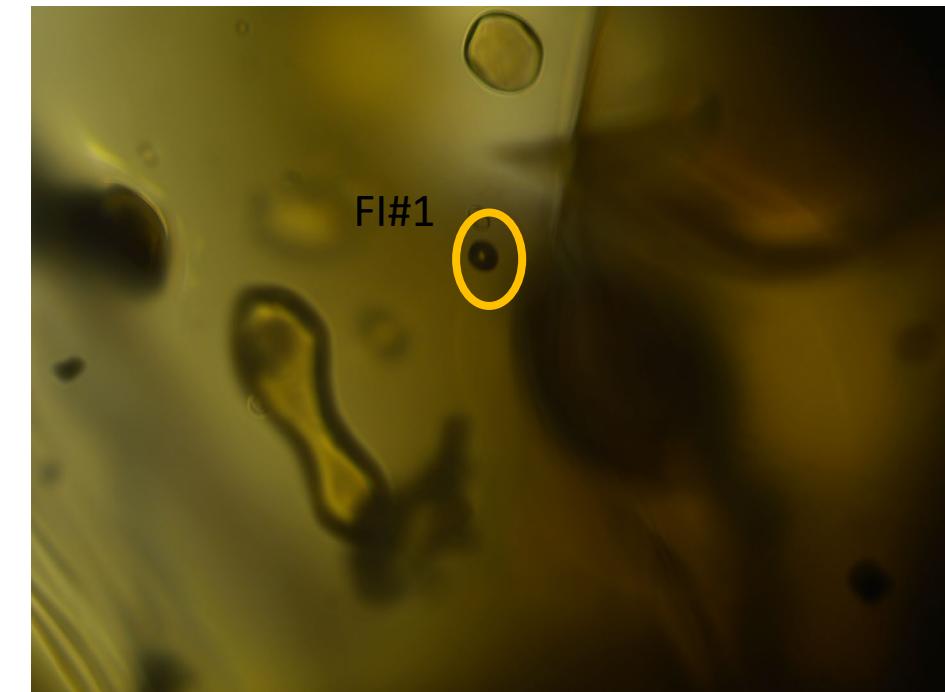
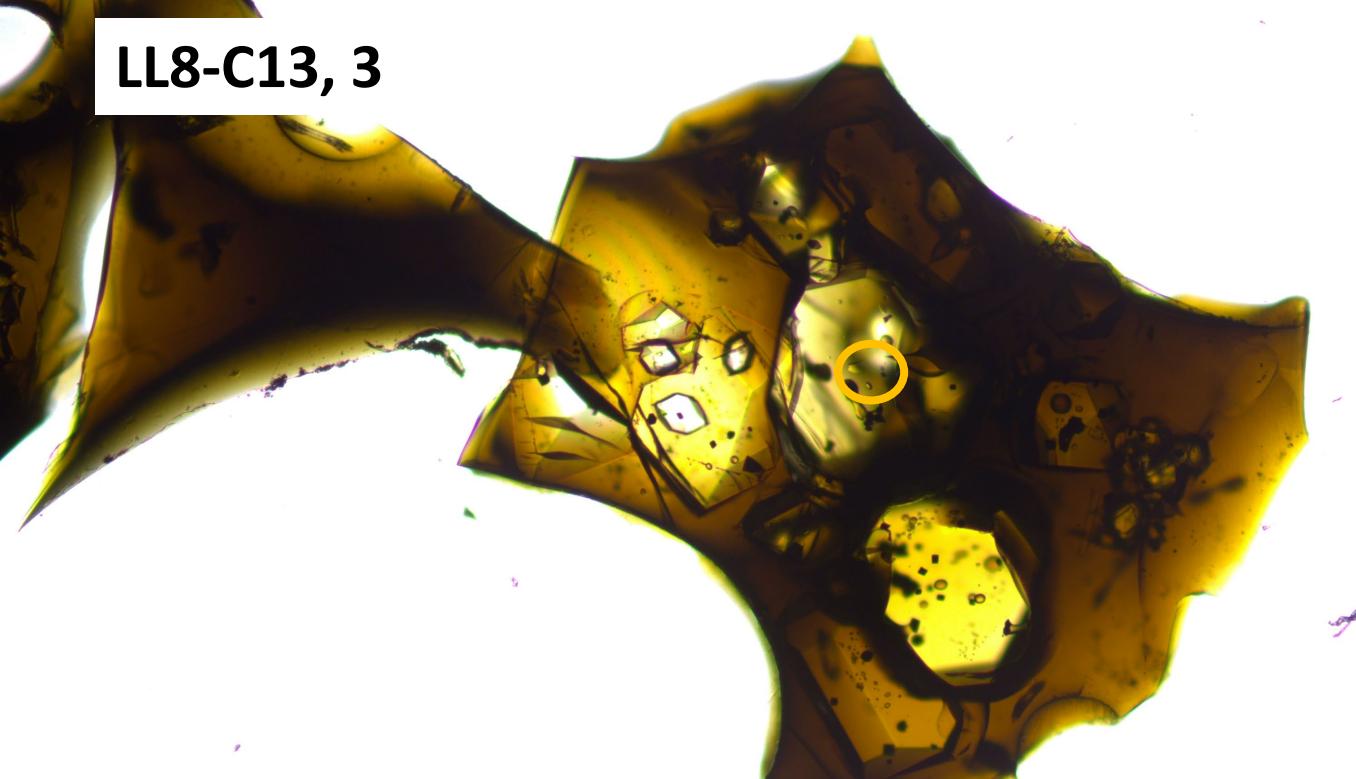
LL8-C11, 3; probe is trash



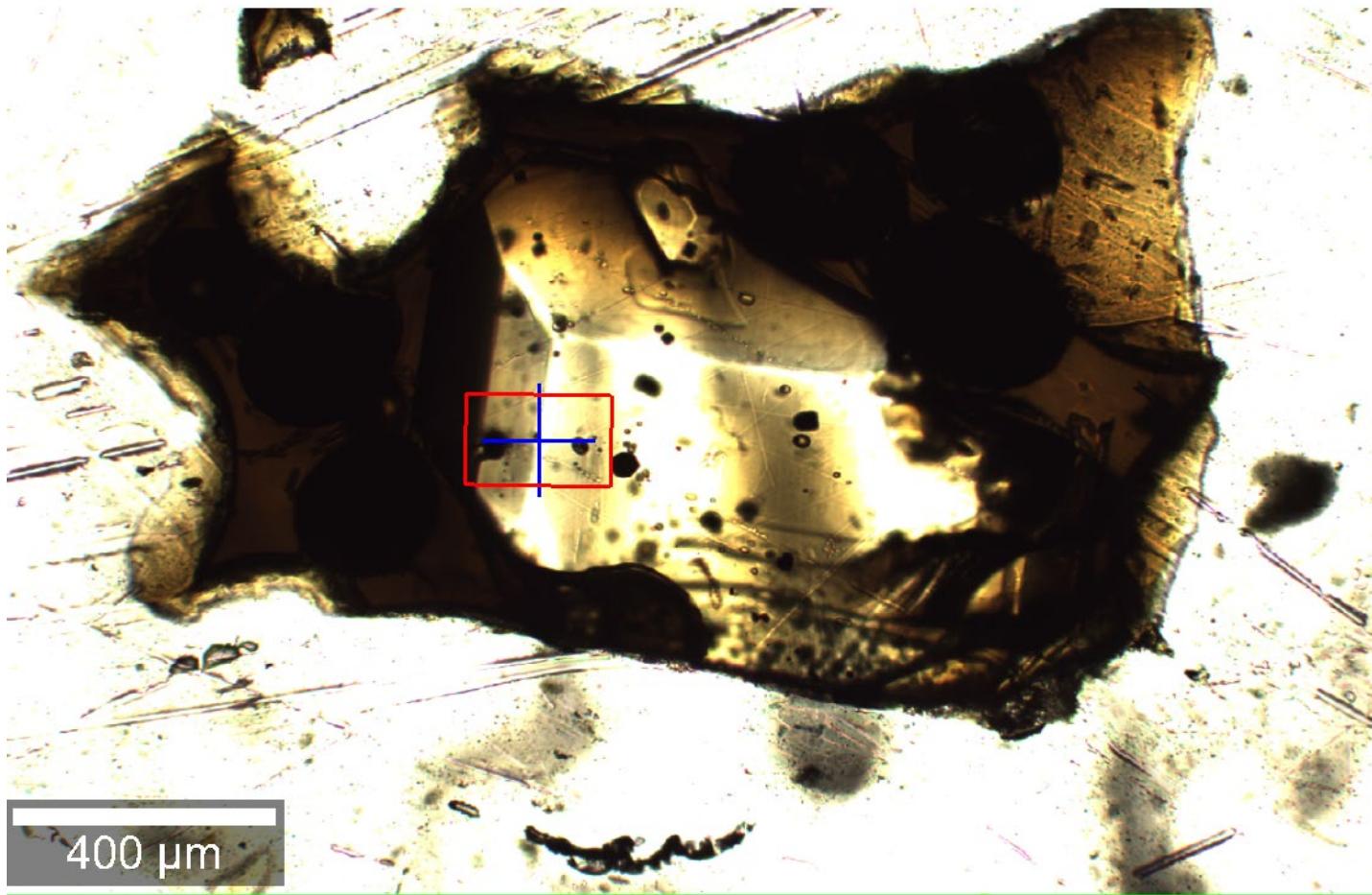
LL8-C12, 3, probe is trash



LL8-C13, 3



LL8-C18, 3



400 μm

FI#1

