

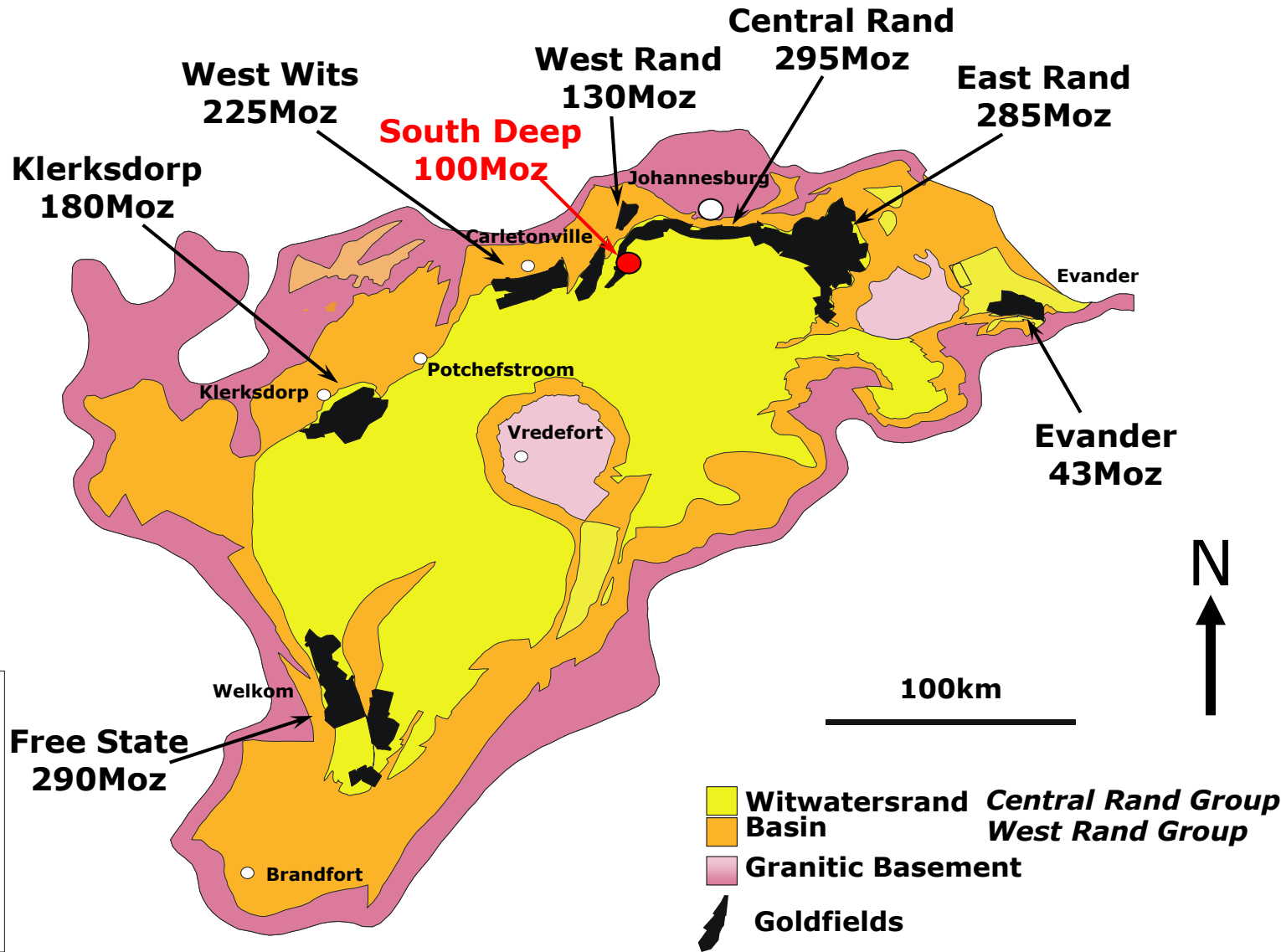


PIMA study of South Deep

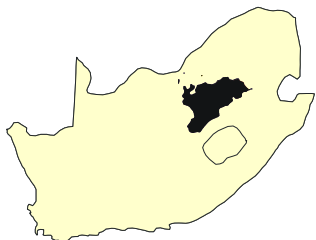
Scott Halley

May, 2006

Rand Group Geology Witwatersrand Basin

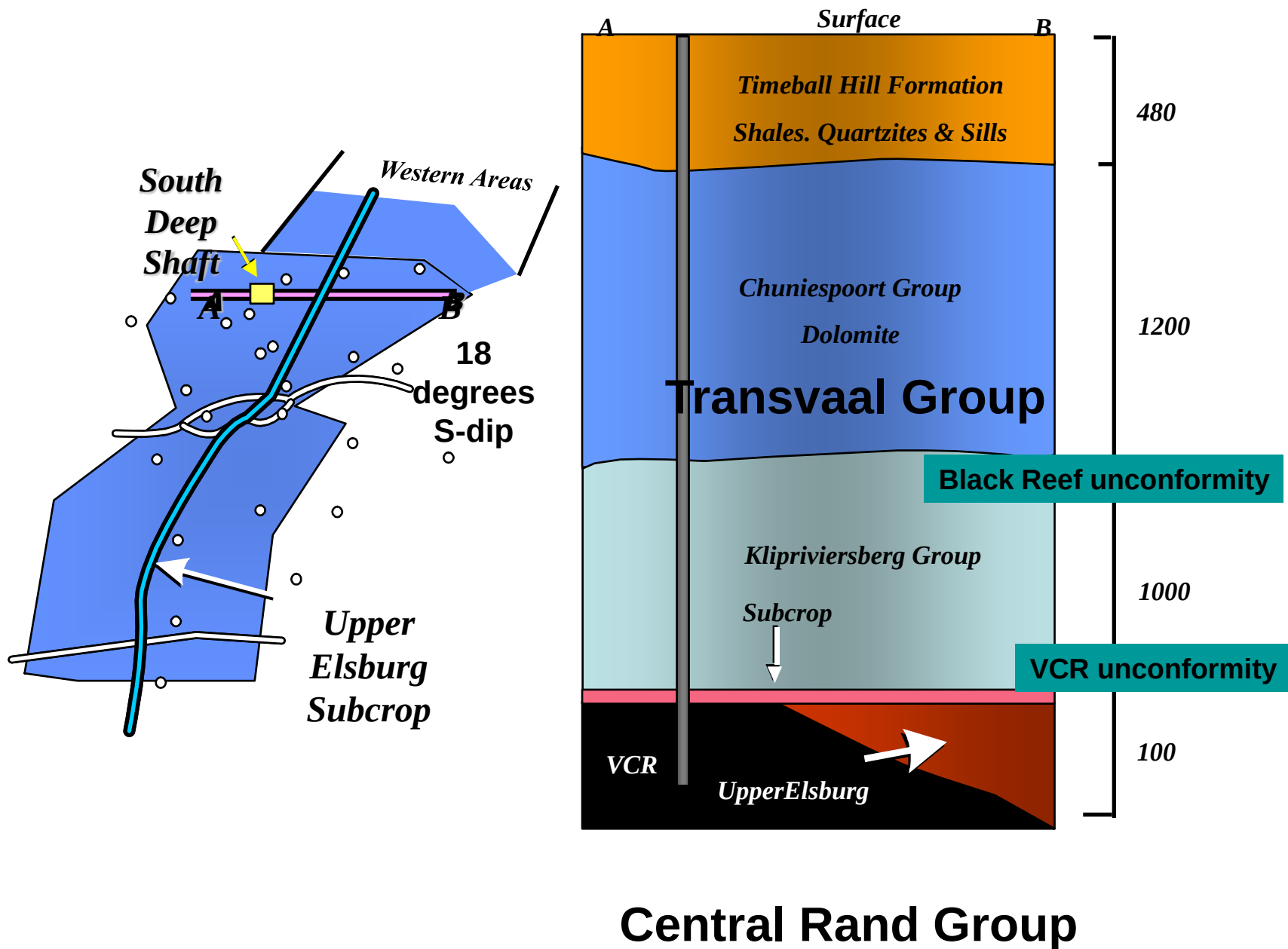


Location Plan

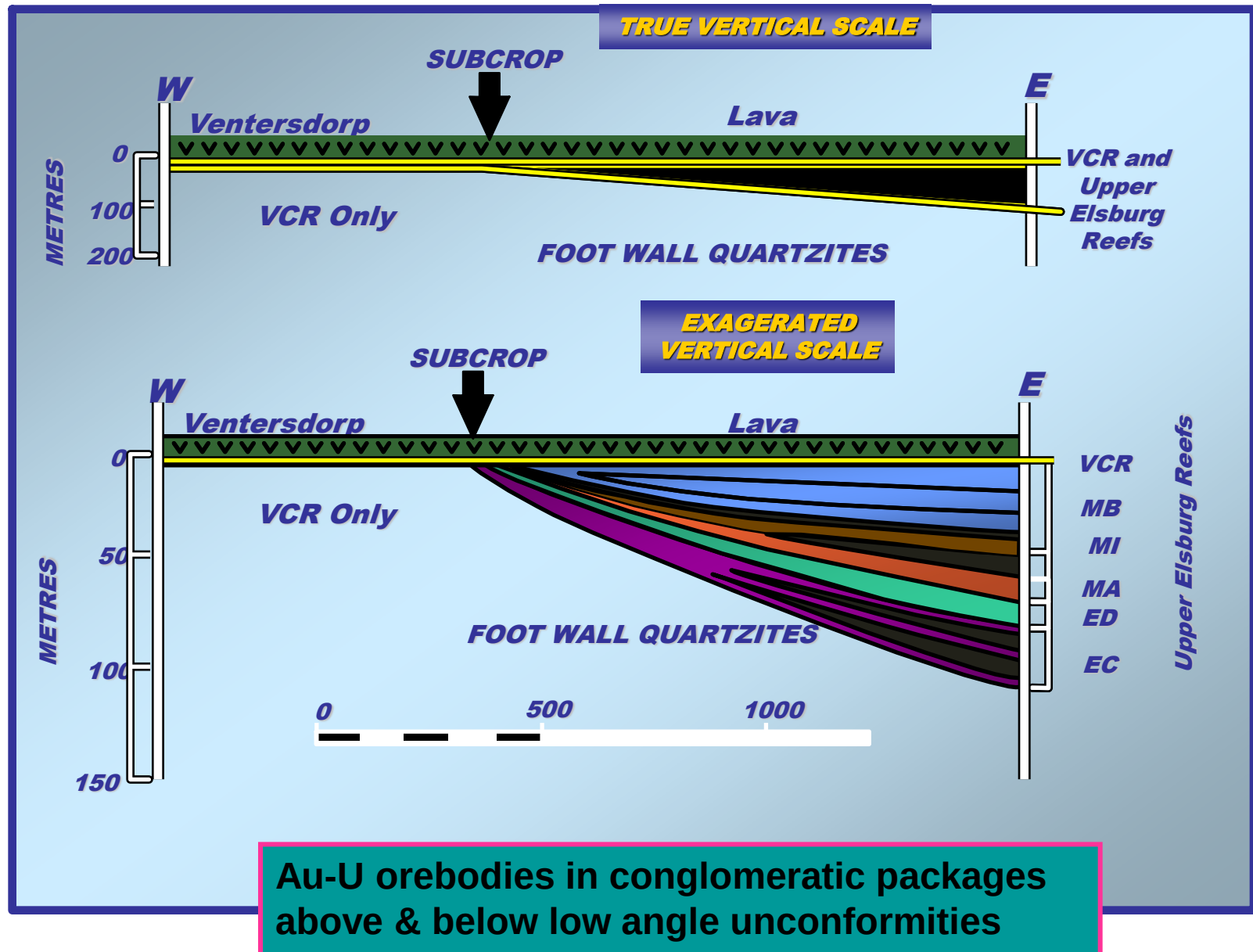


SOUTH AFRICA

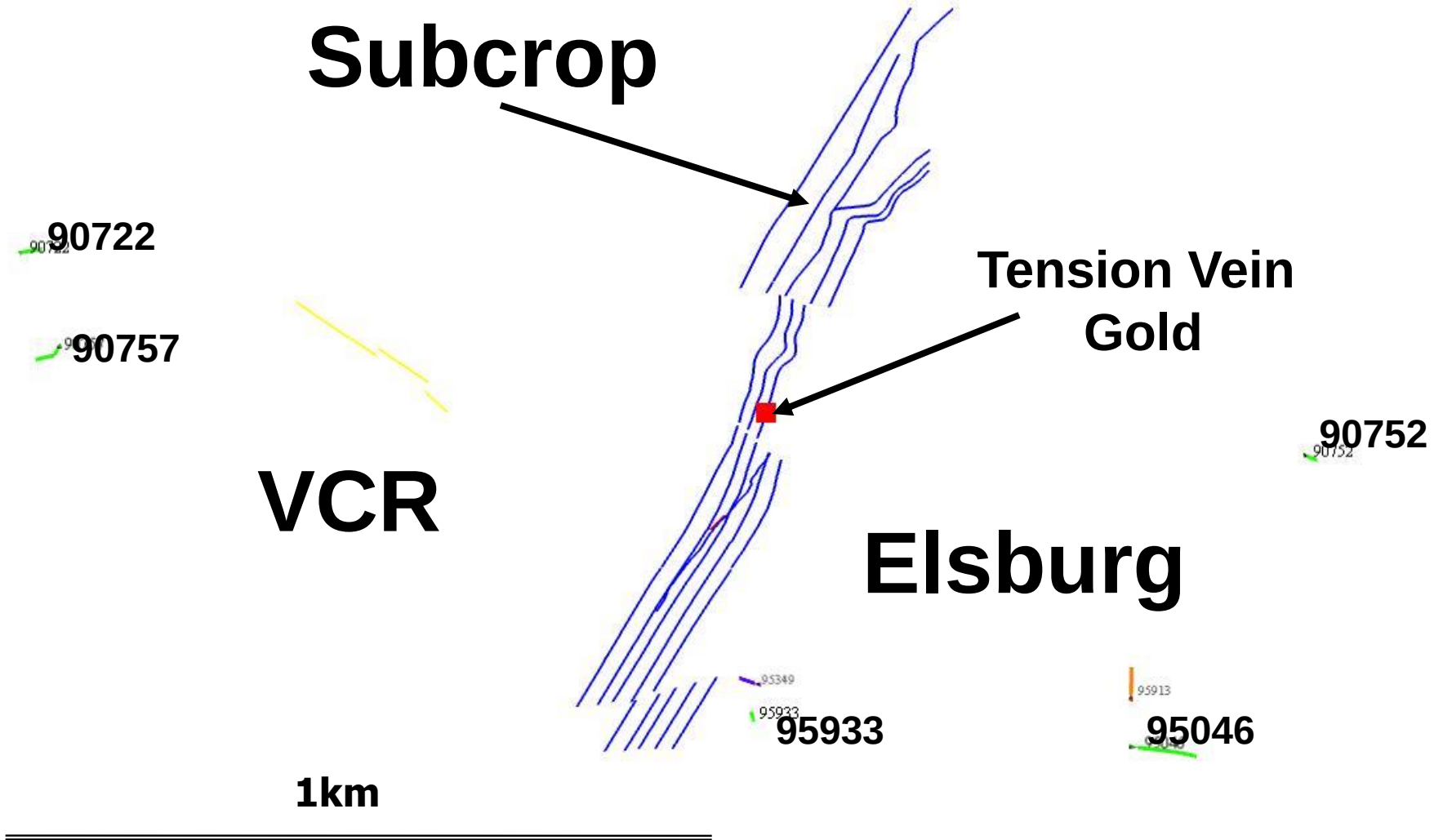
Schematic section: South Deep



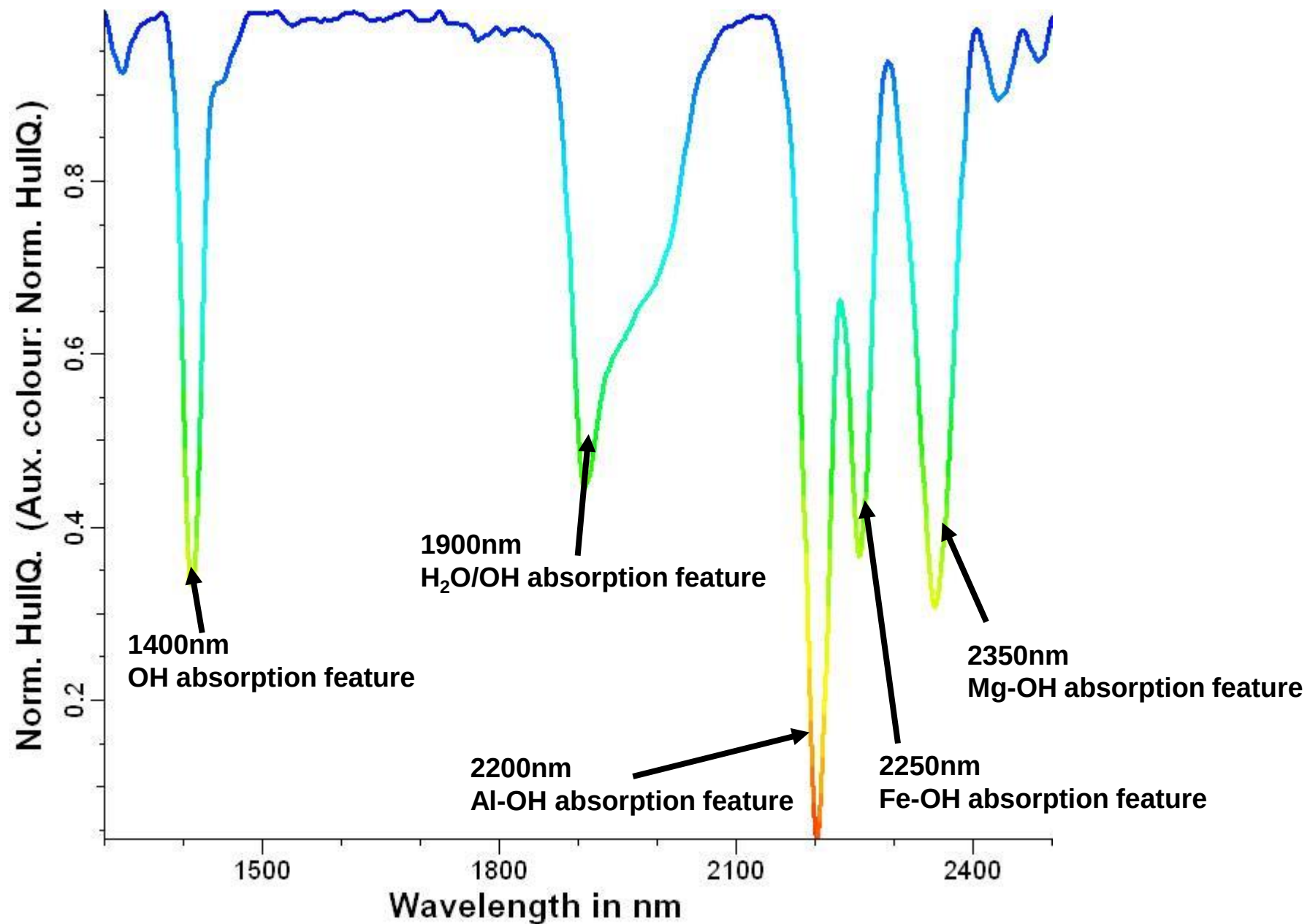
South Deep: West-East schematic section



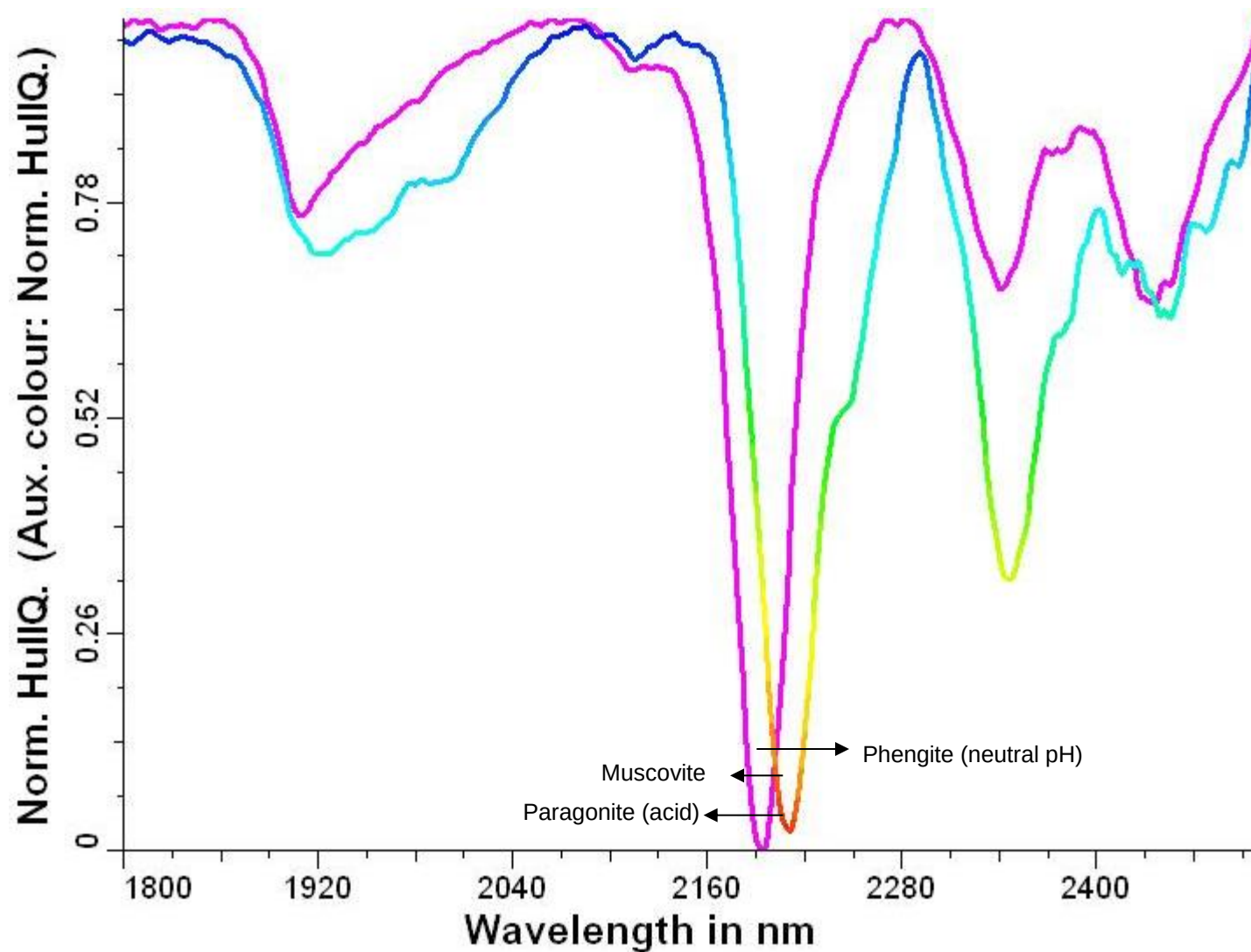
Drill Hole Locations South Deep Mine



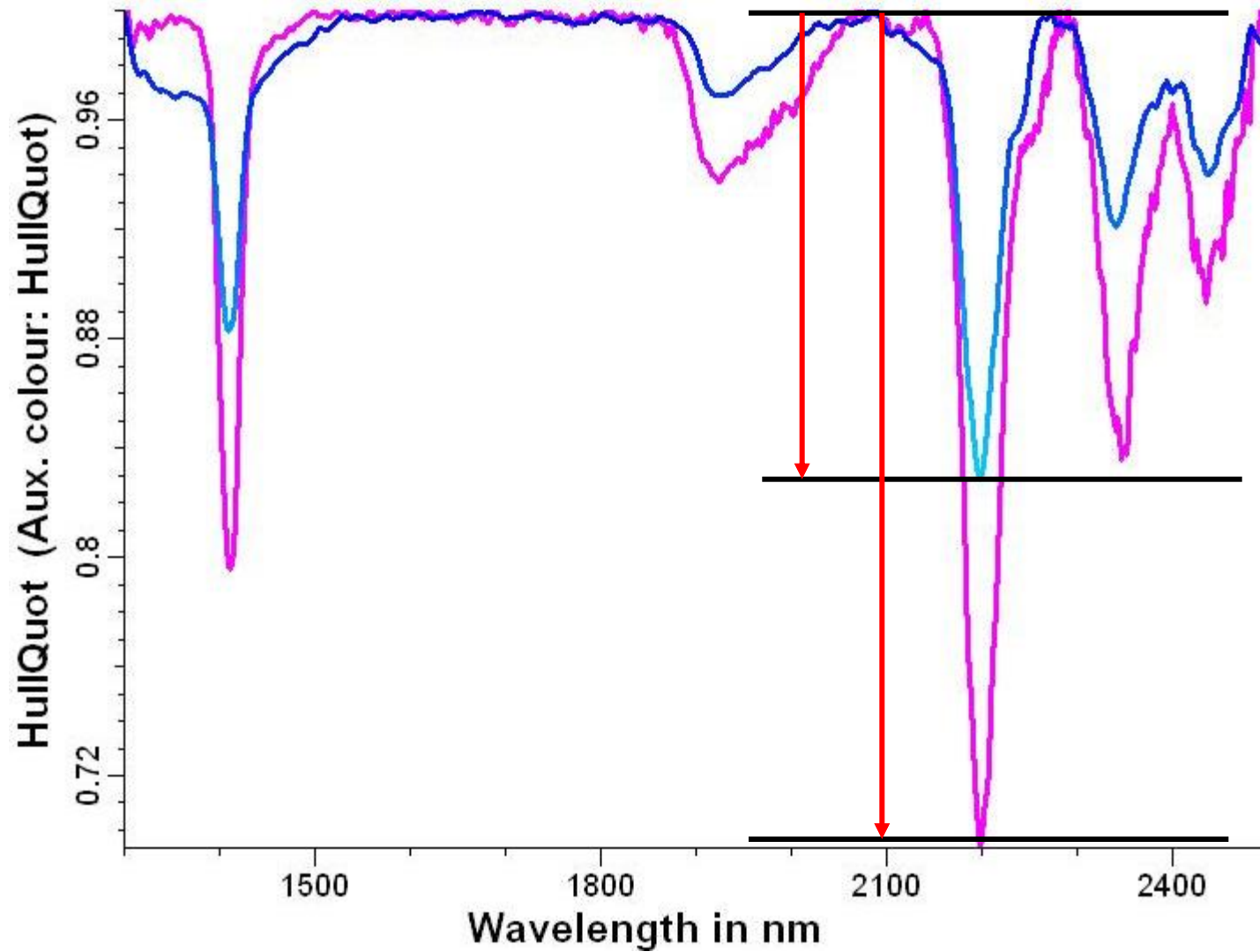
Common Spectral Features



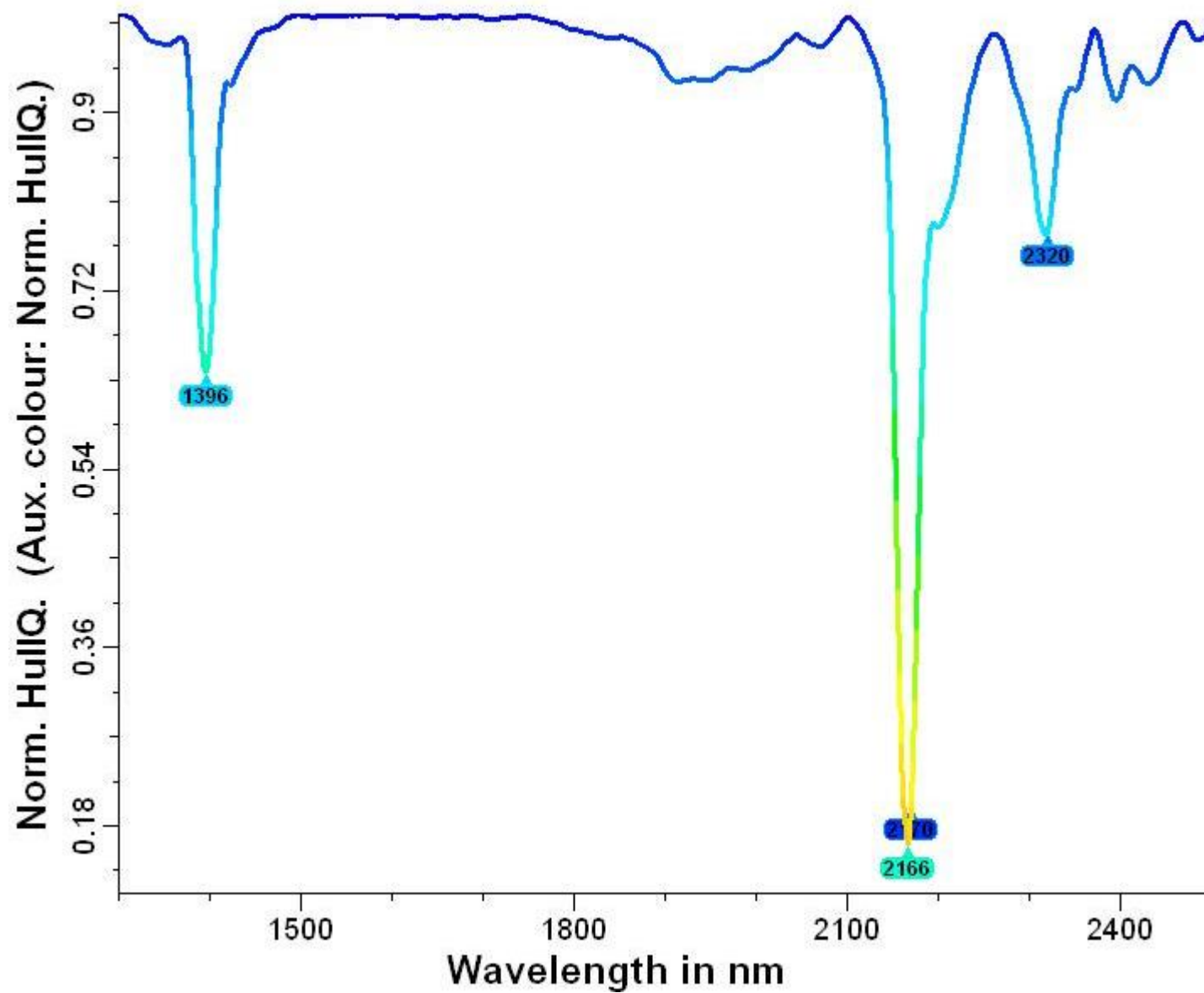
Al-OH 2200 wavelength – Mica Composition



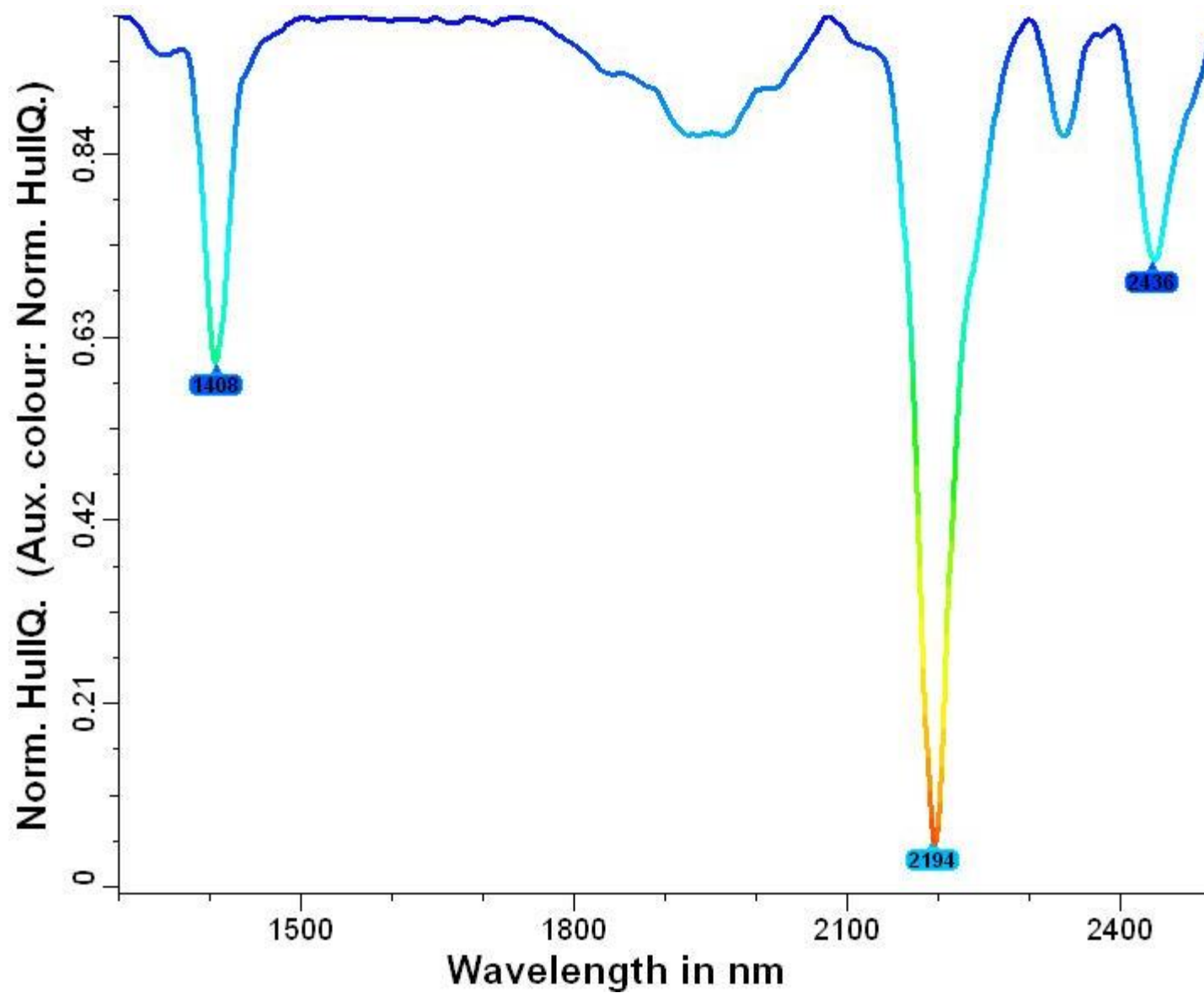
Mica Abundance

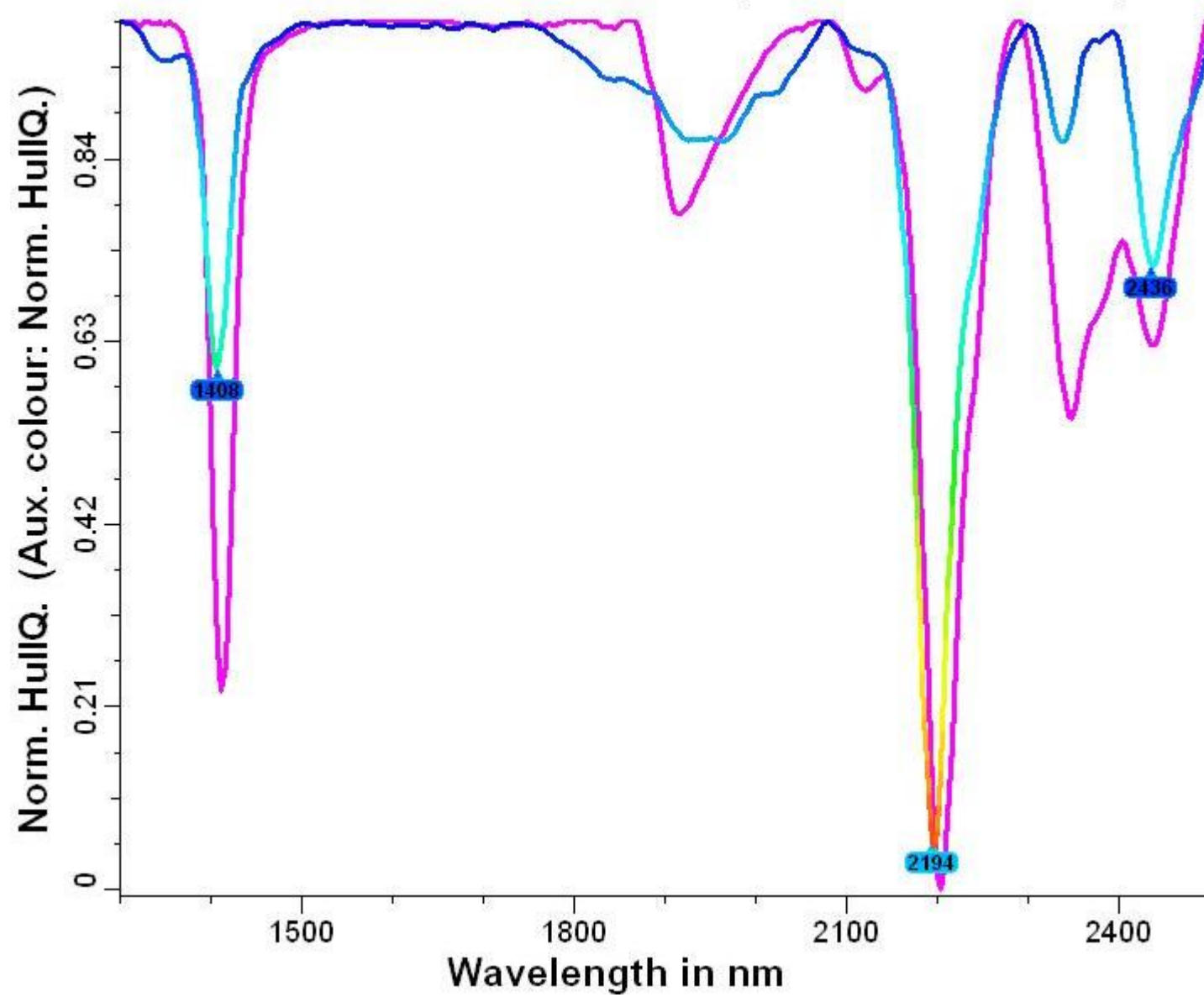


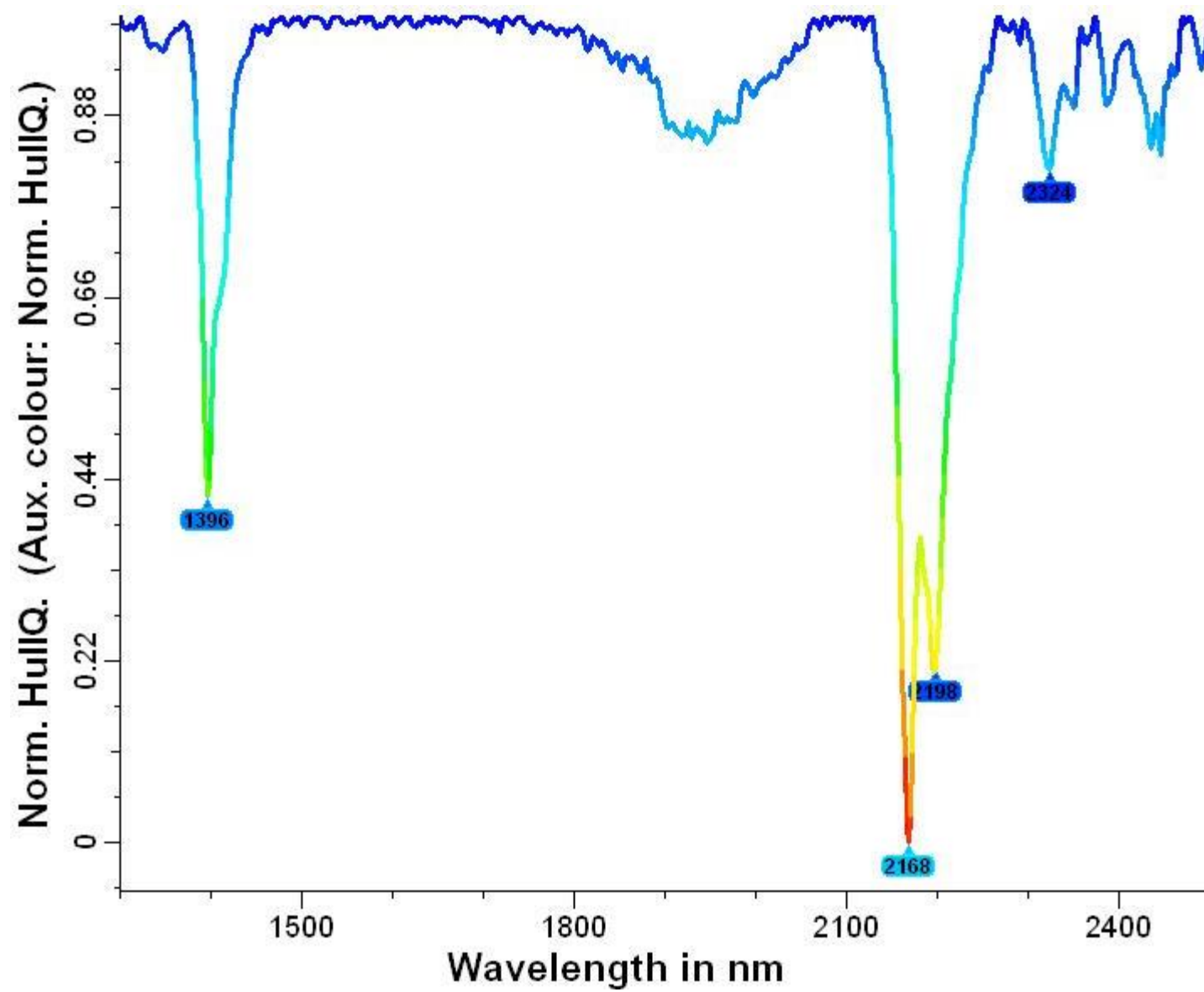
South Deep – typical pyrophyllite spectrum



South Deep – typical white mica spectrum



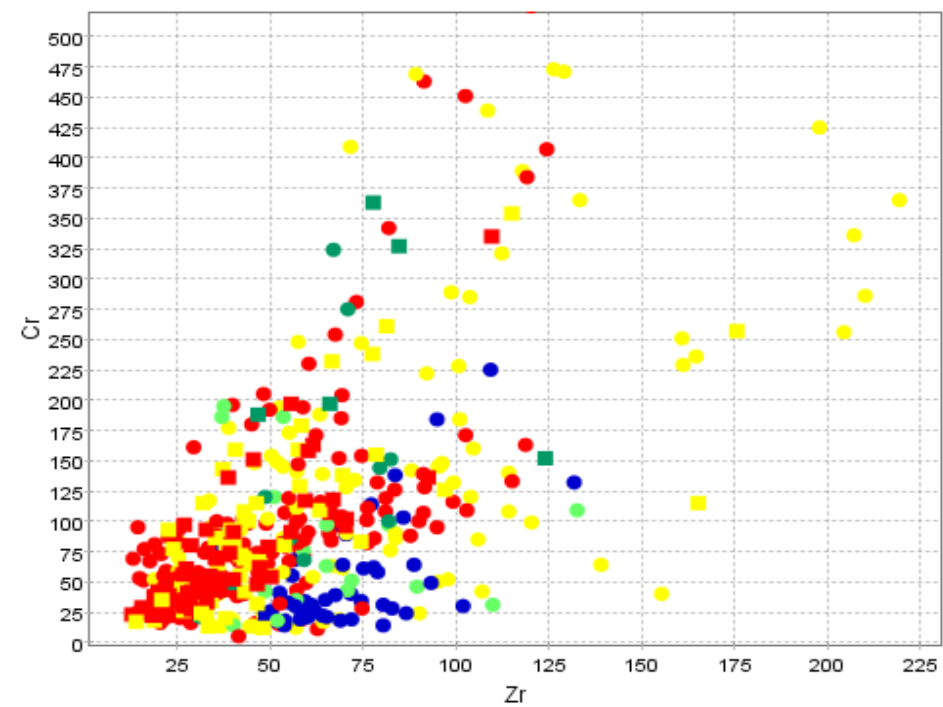
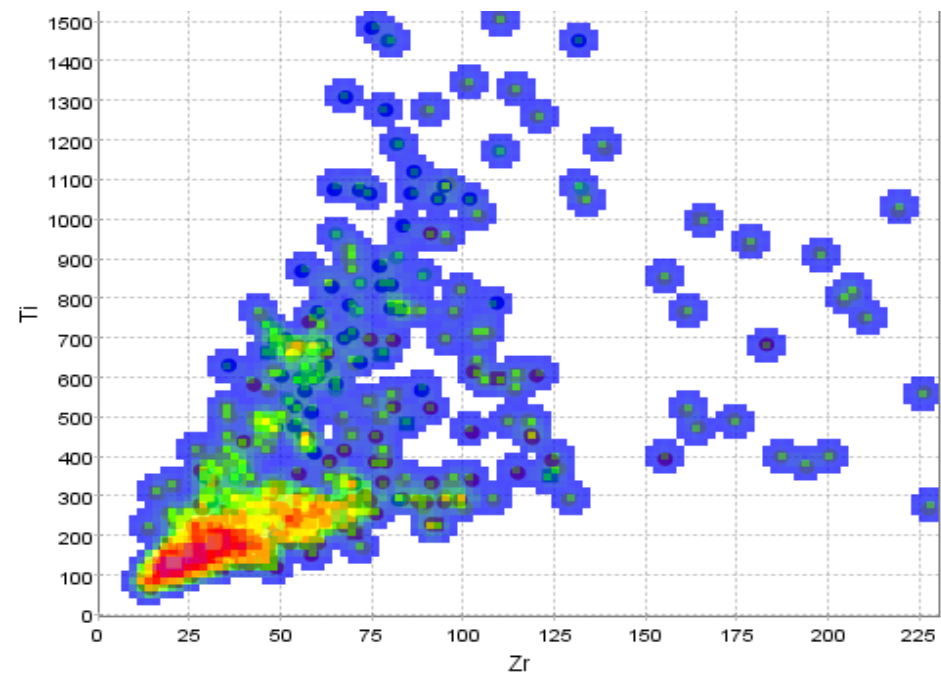
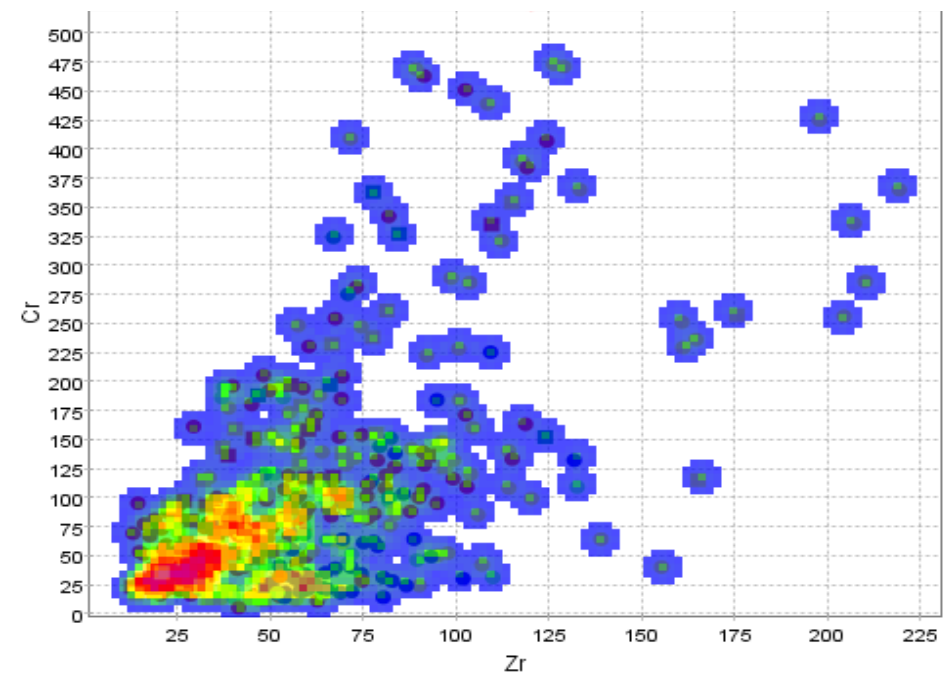
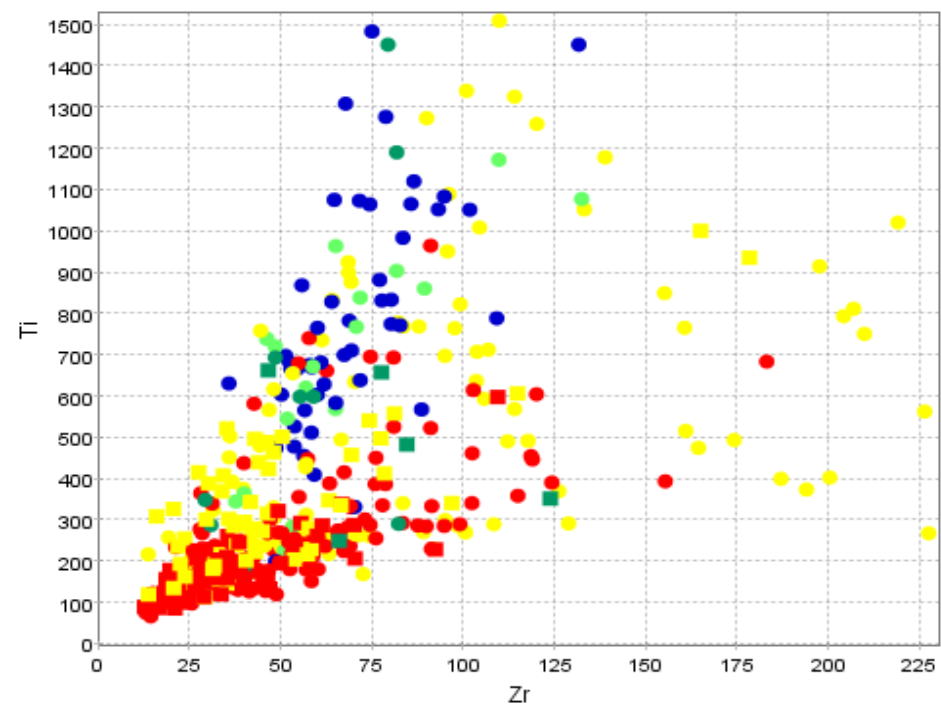




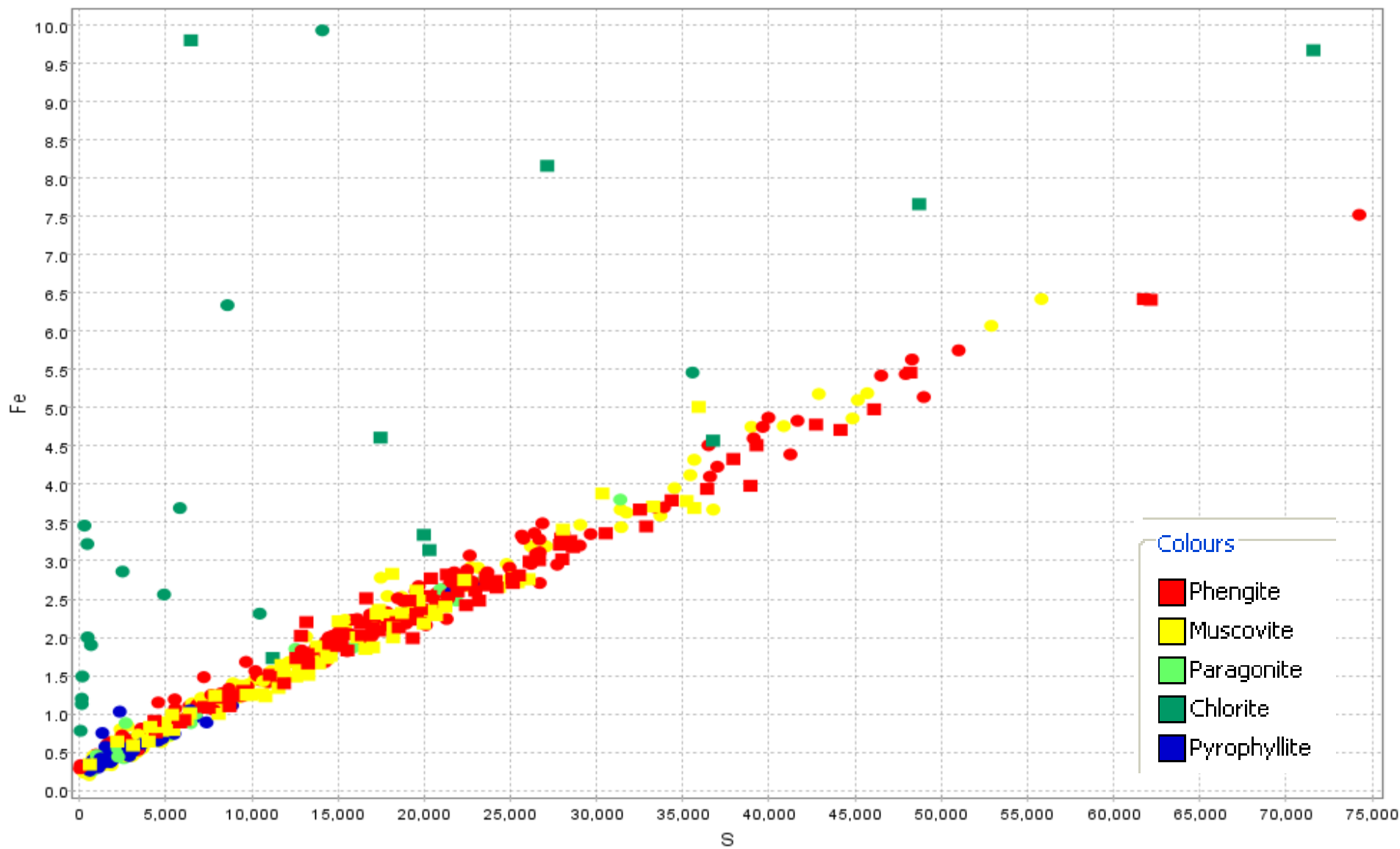
Legend for following charts;
Coloured by dominant sheet silicate mineral.

Colours

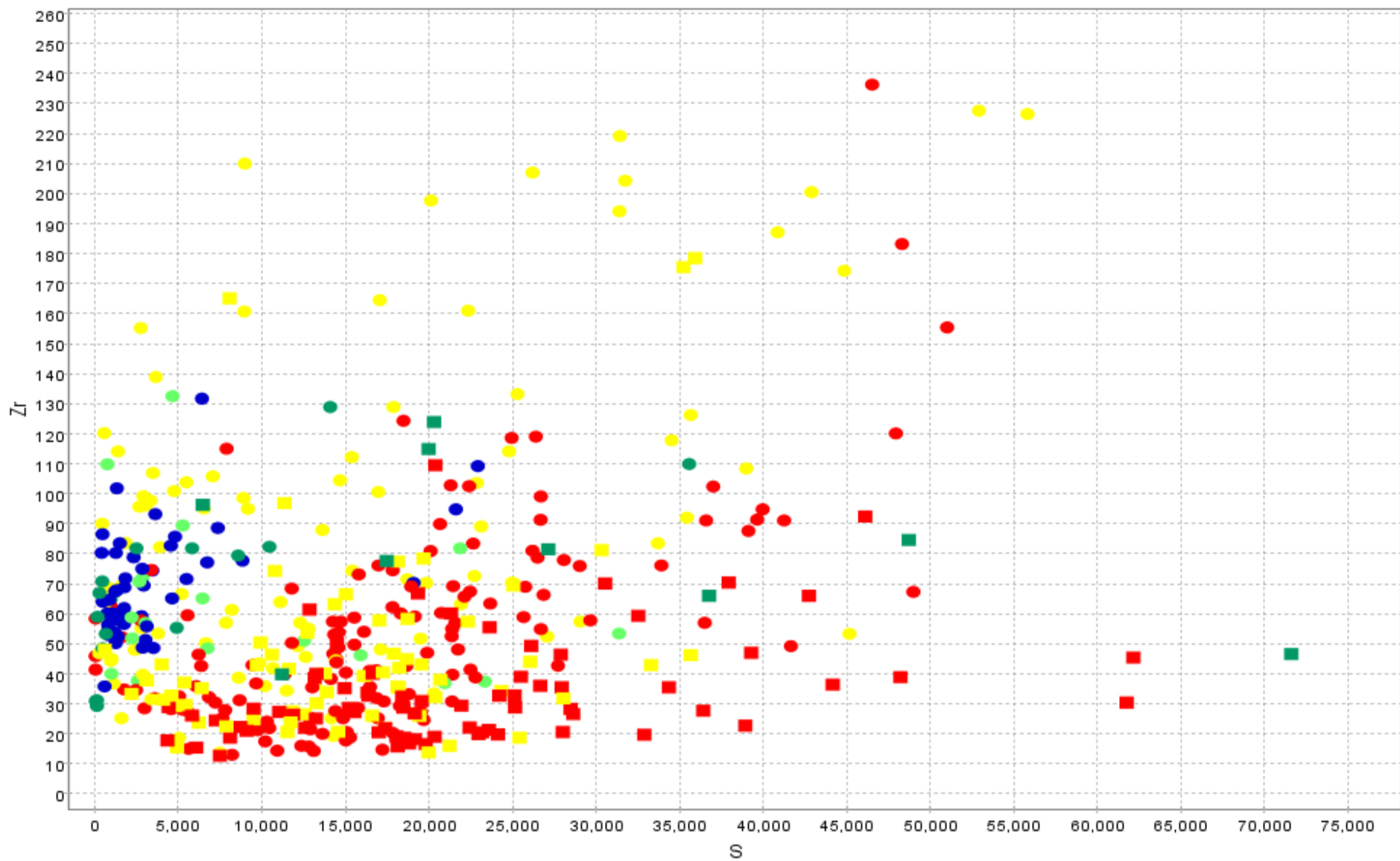
-  Phengite
-  Muscovite
-  Paragonite
-  Chlorite
-  Pyrophyllite

Zr:Cr**Zr:Ti**

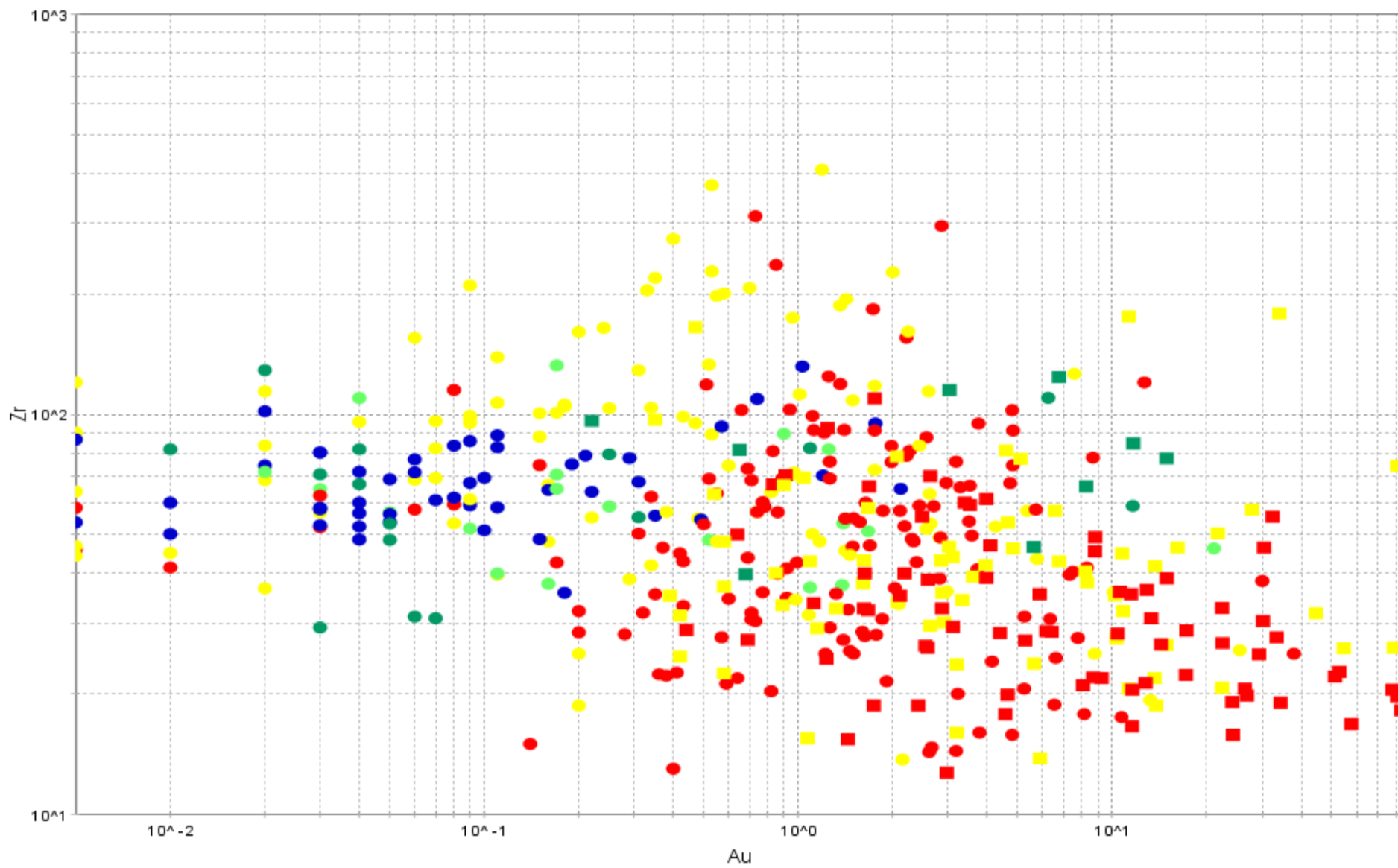
S:Fe

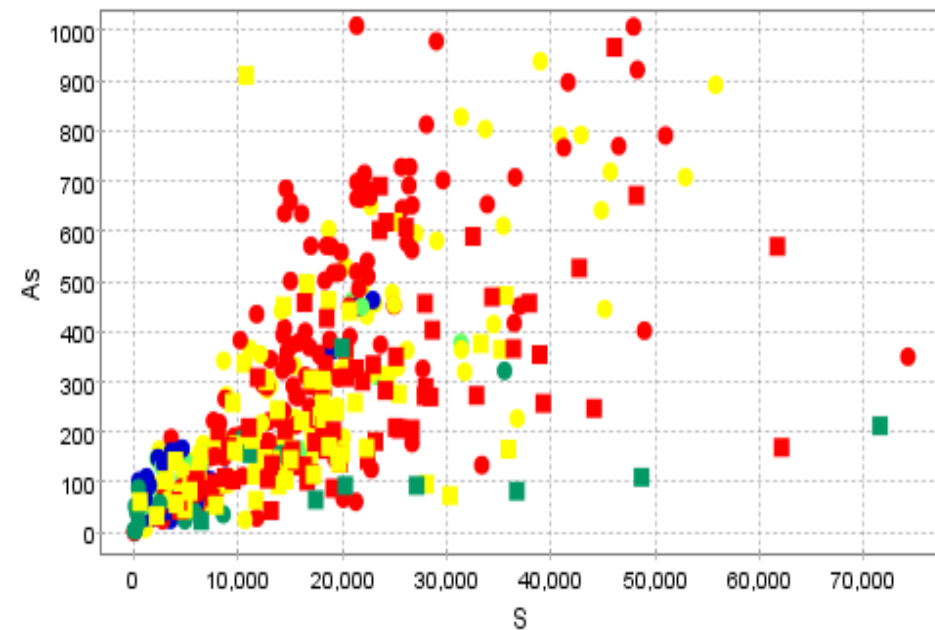
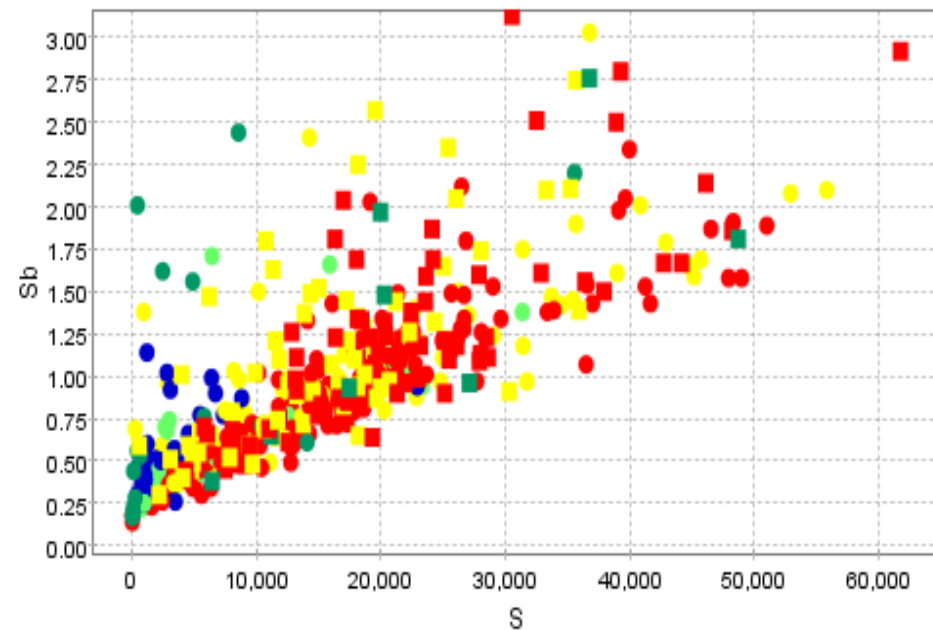
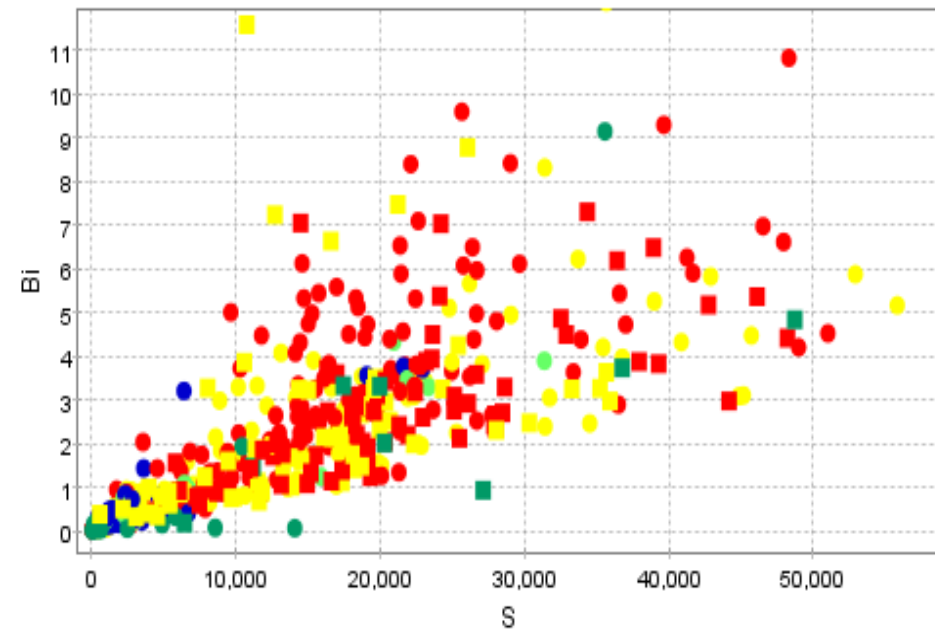
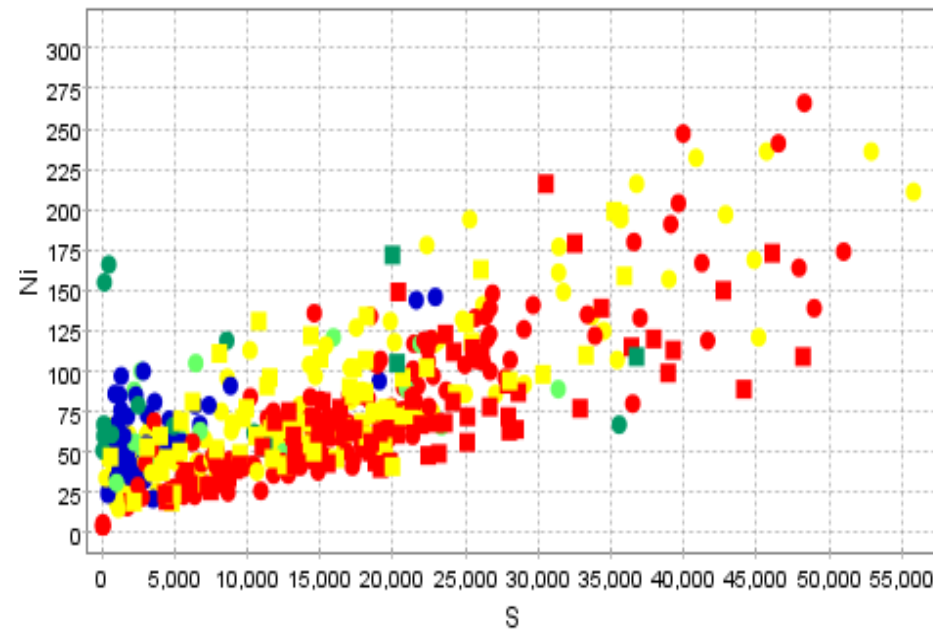


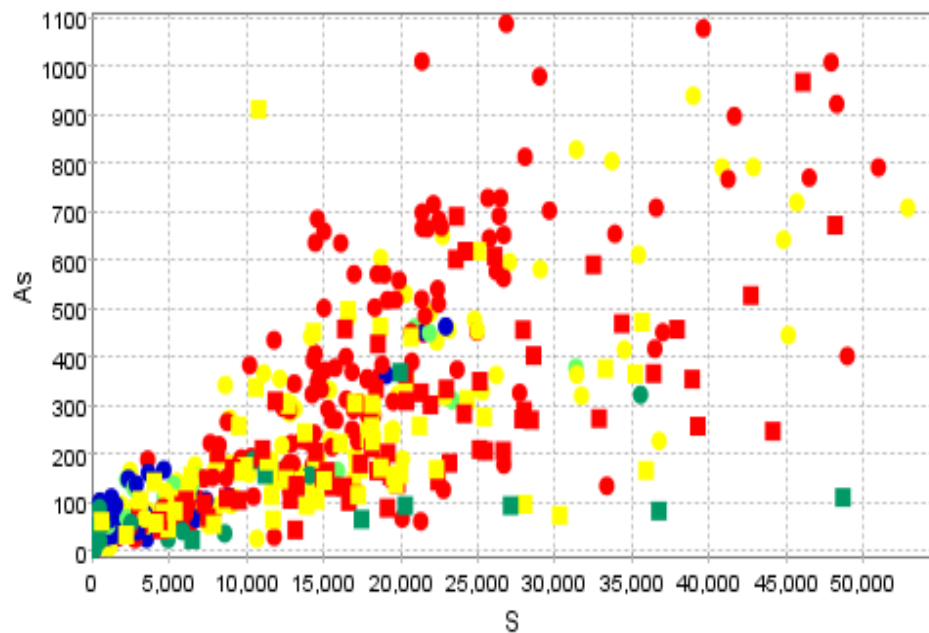
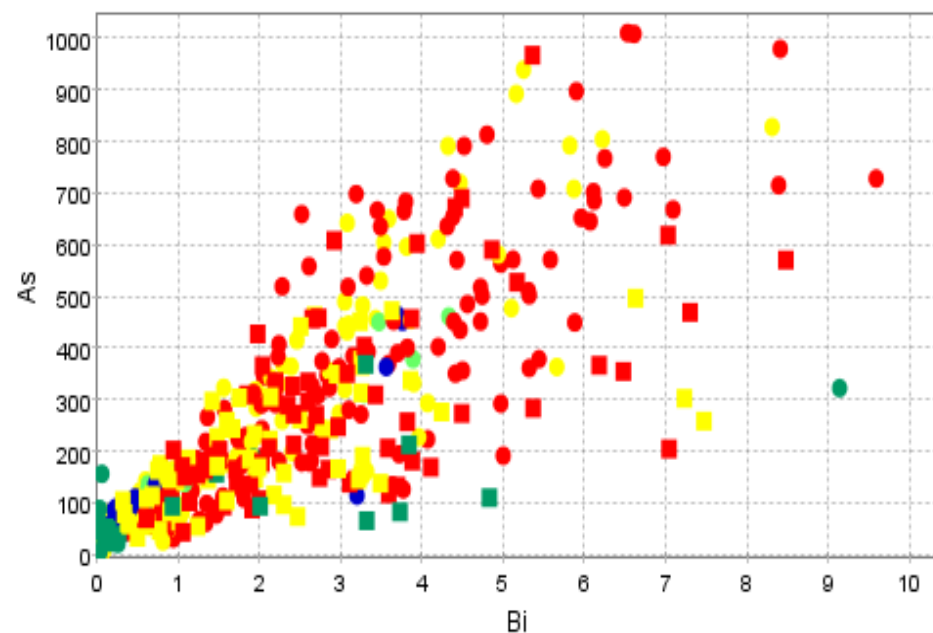
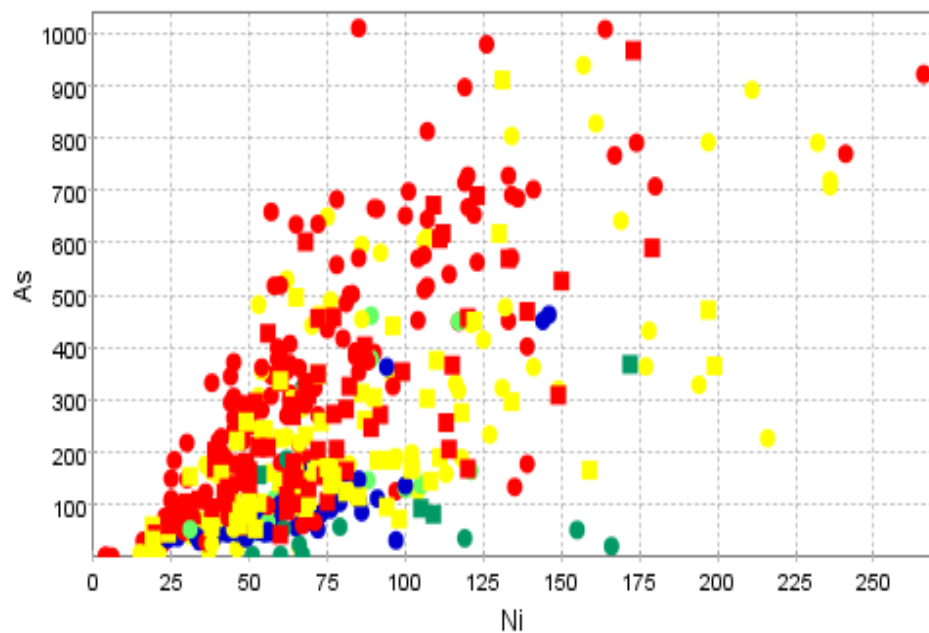
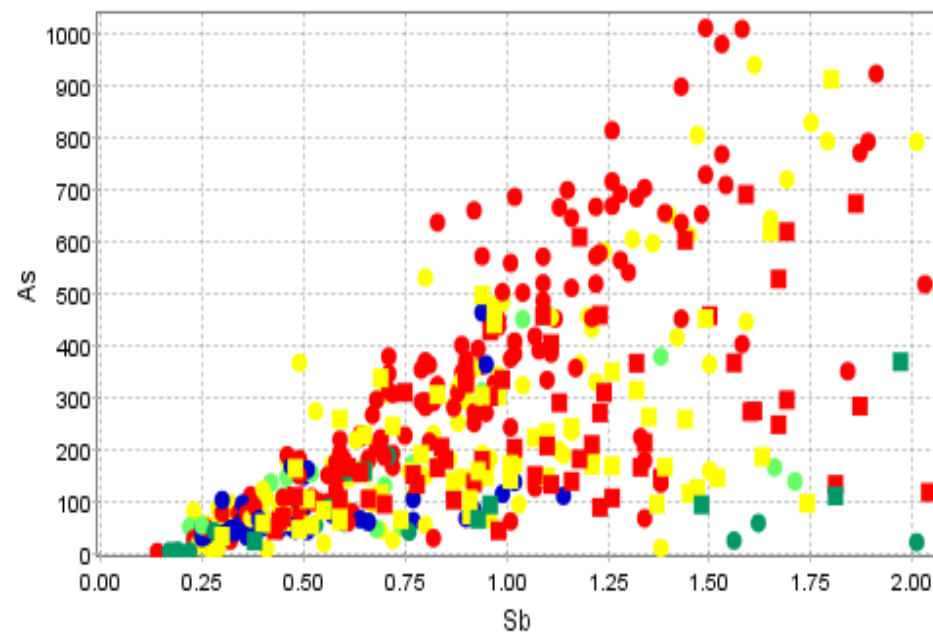
S:Zr

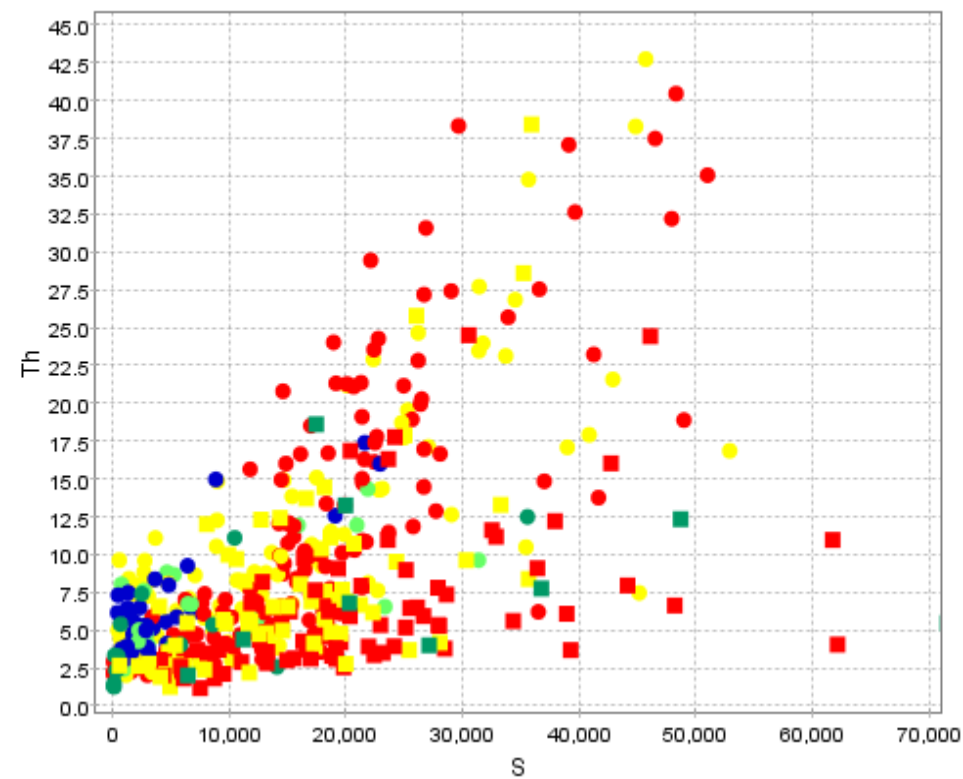
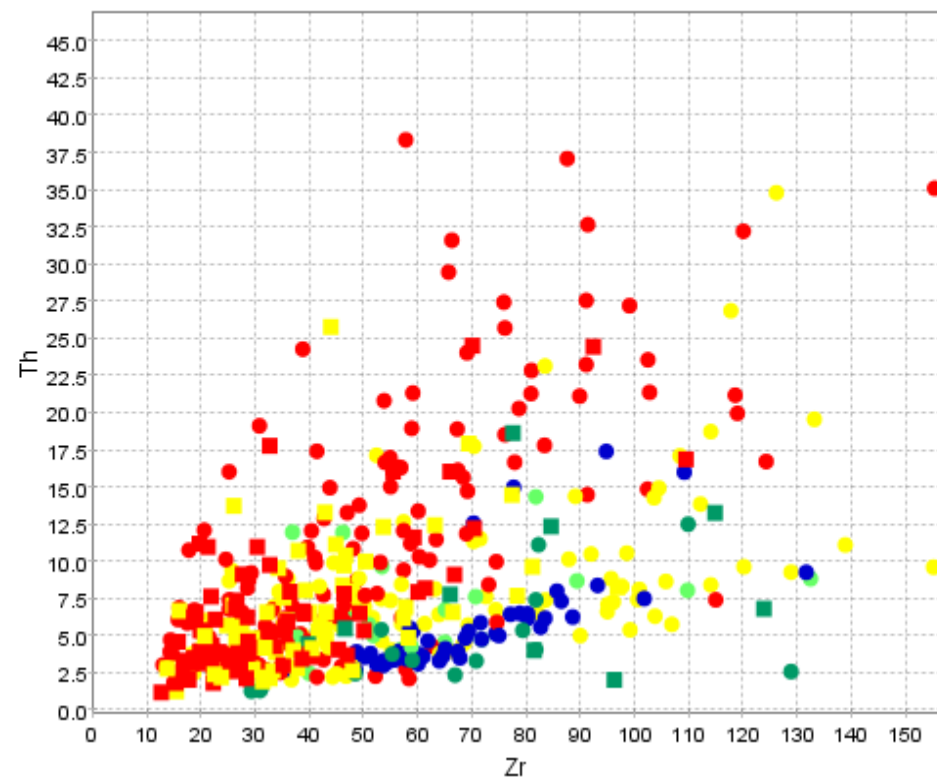


Au:Zr

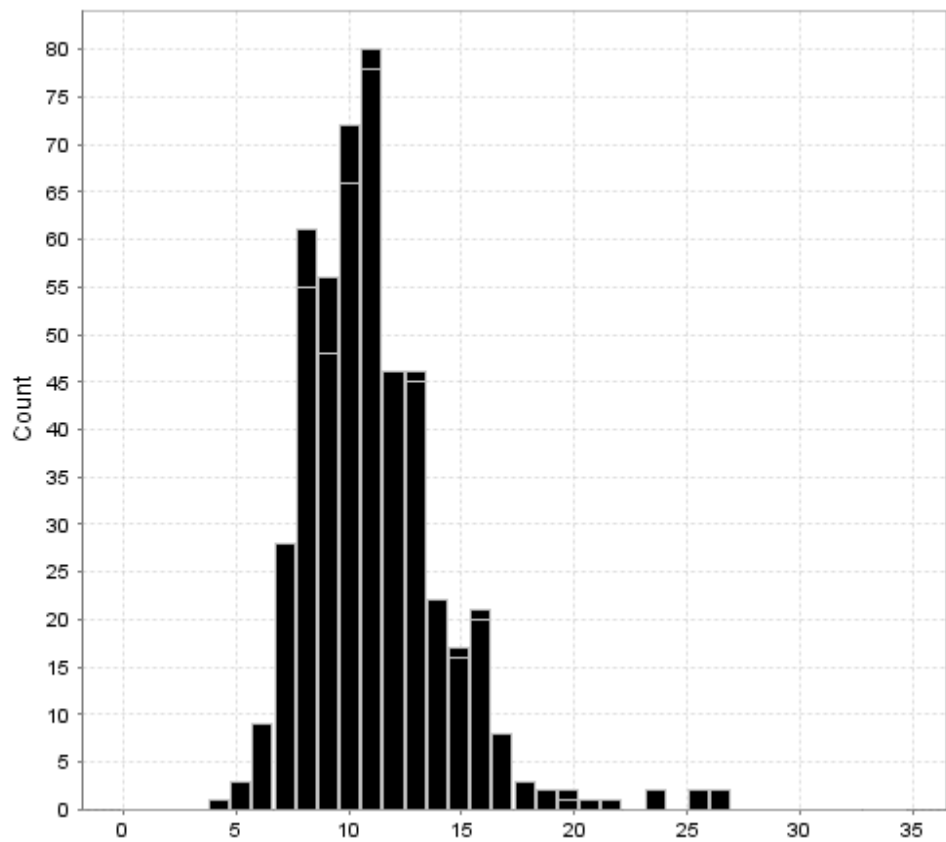


S:As**S:Sb****S:Bi****S:Ni**

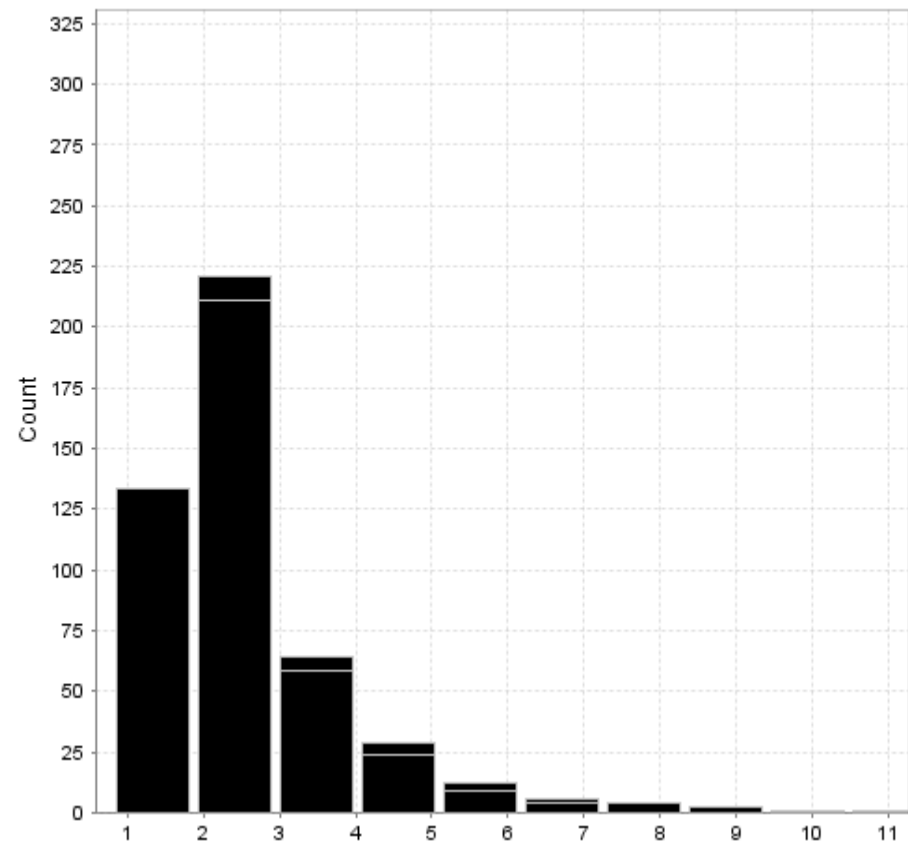
S:As**Bi:As****Ni:As****Sb:As**

S:Th**Zr:Th**

W

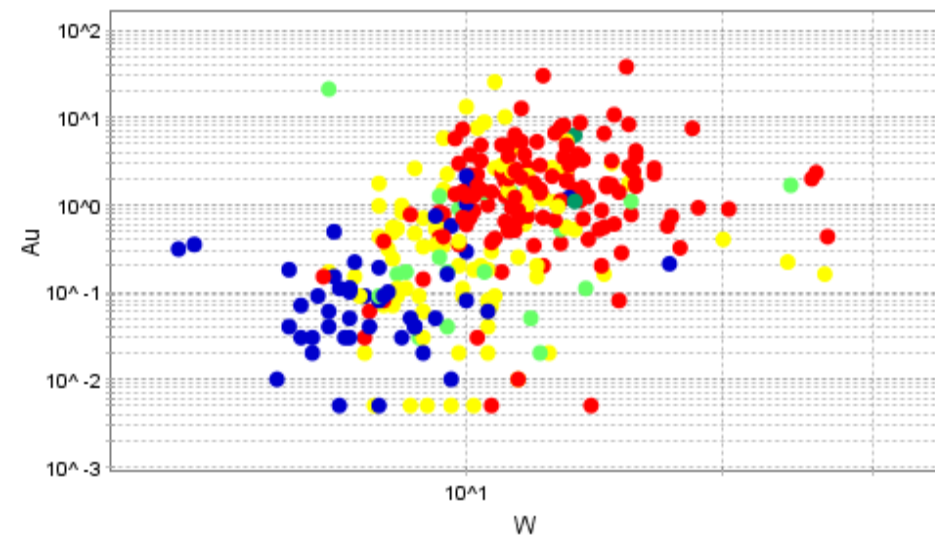


Mo

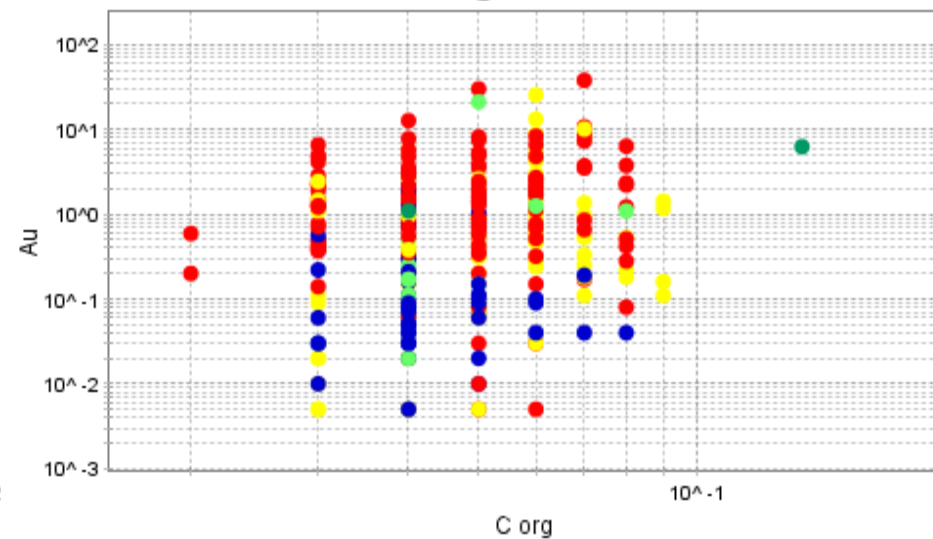


Au correlations; Hole 90-752

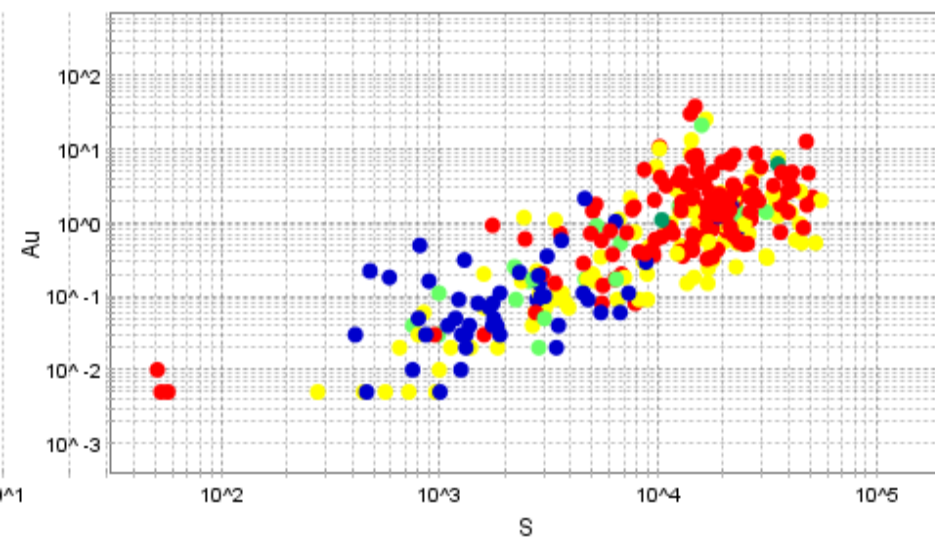
W:Au



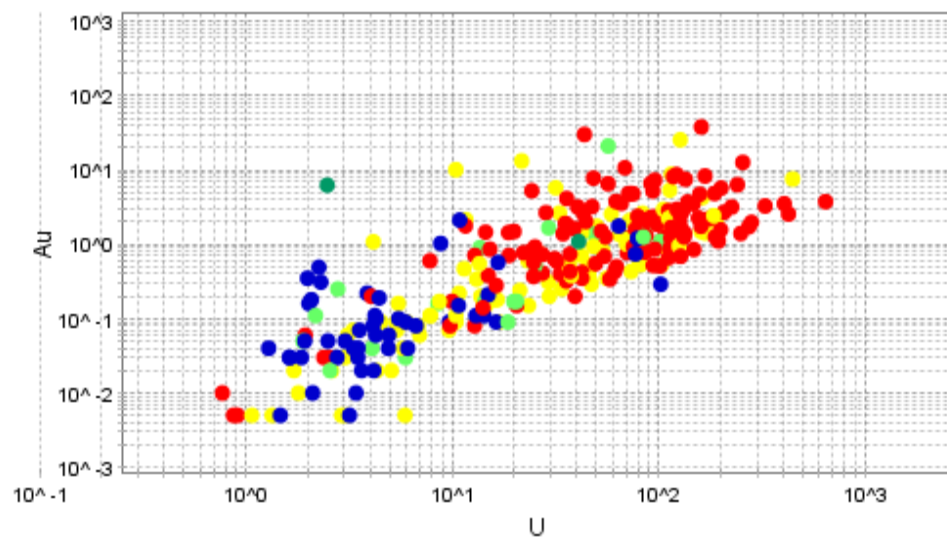
C org:Au



S:Au

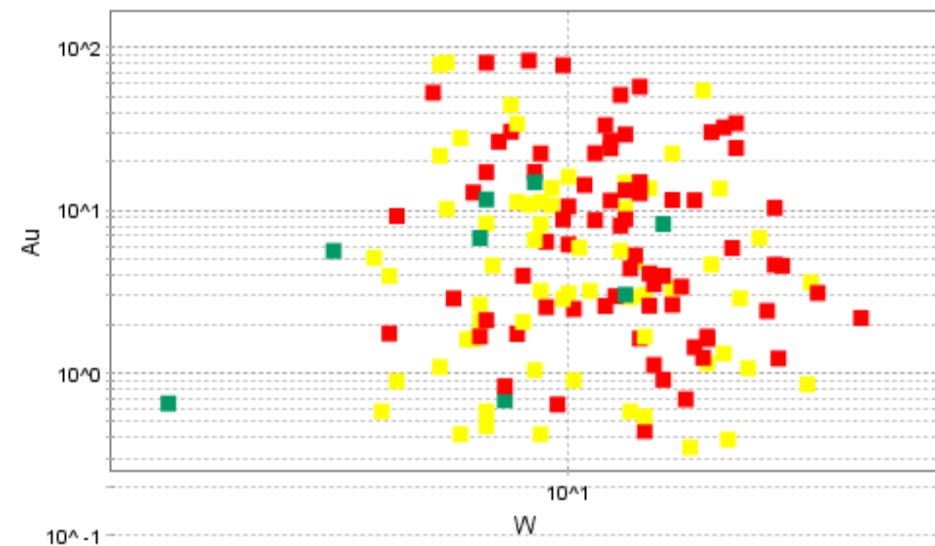


U:Au

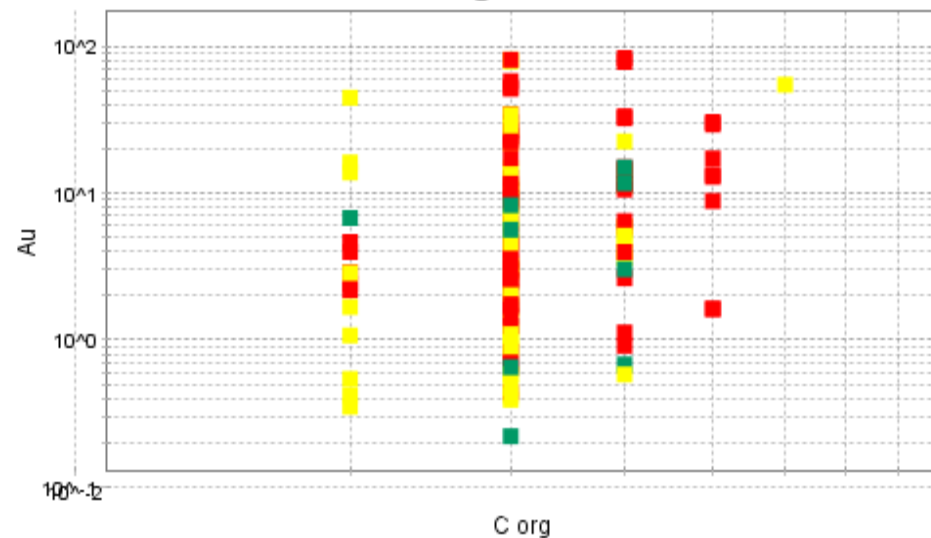


Au correlations; Hole 95-934

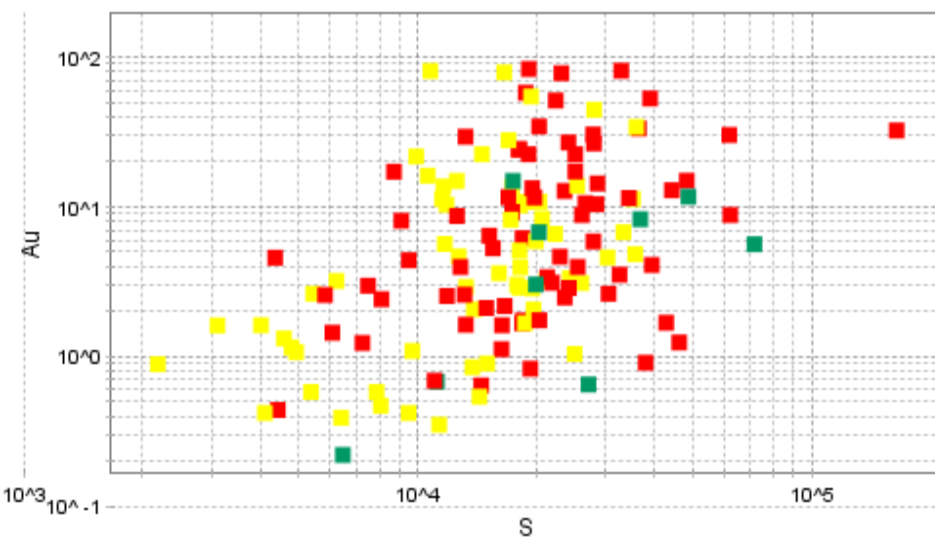
W:Au



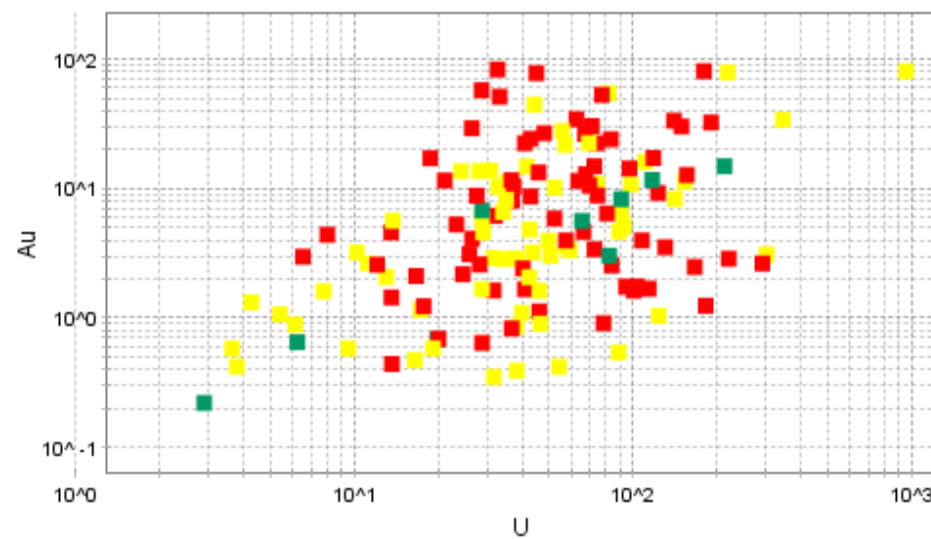
C org:Au



S:Au



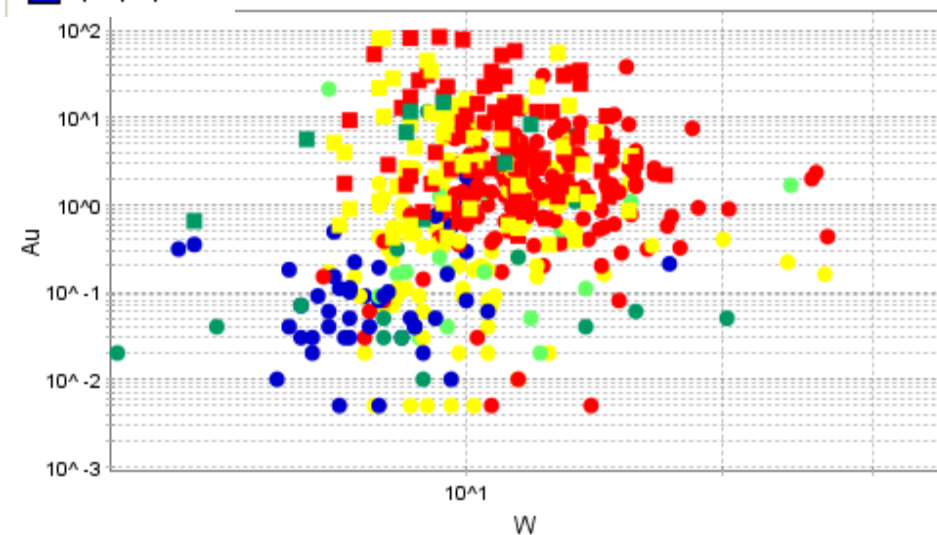
U:Au



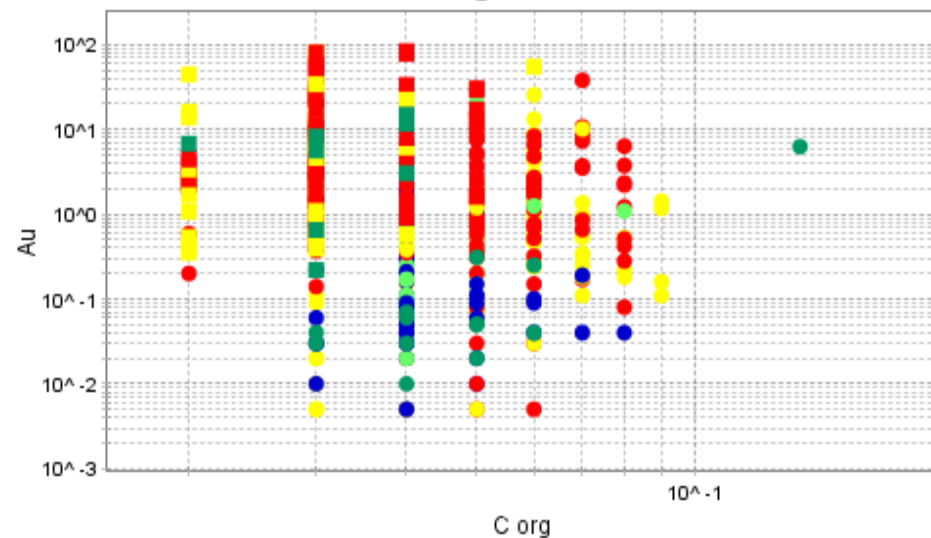
- Phengite
- Muscovite
- Paragonite
- Chlorite
- Pyrophyllite

Au correlations; all holes

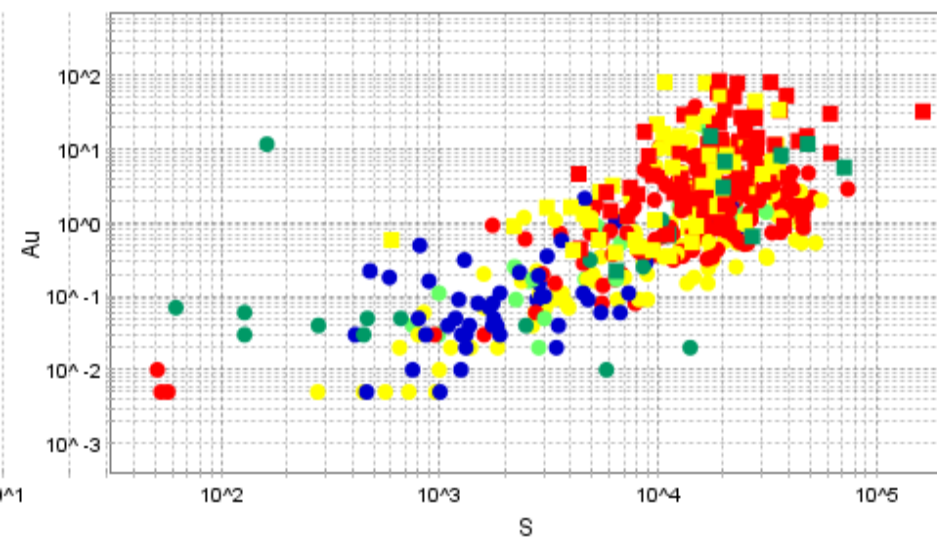
W:Au



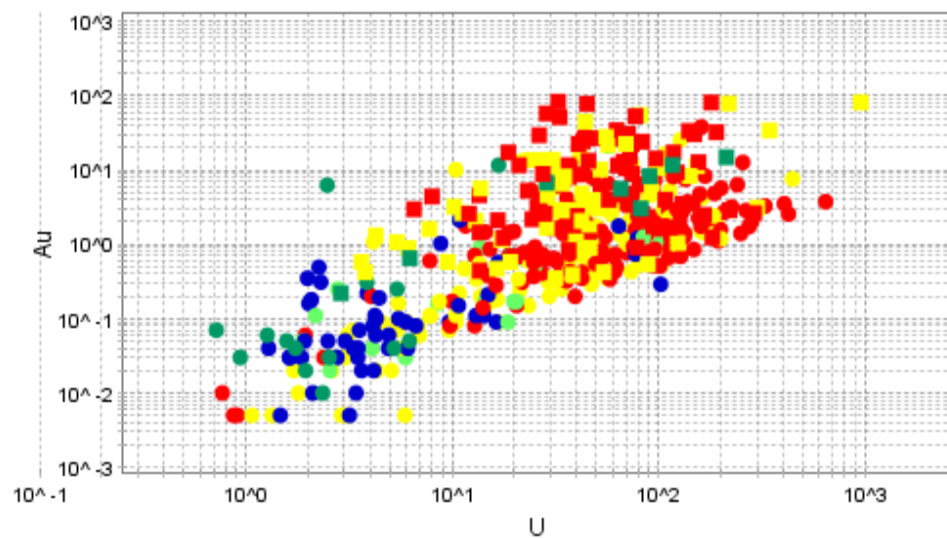
C org:Au



S:Au



U:Au



Aluminium

Hole 90-752

Pyrophyllite Abundance

Mica Abundance

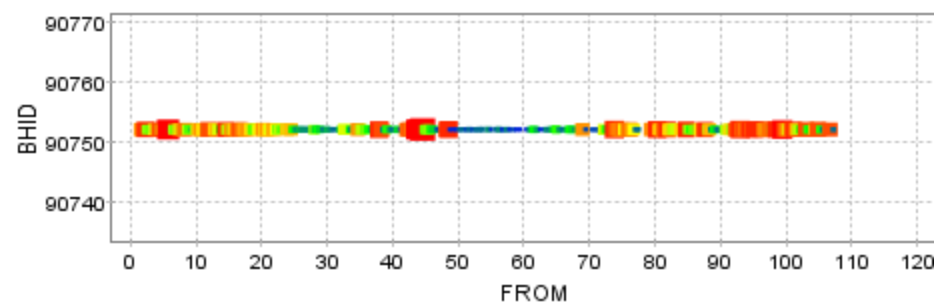
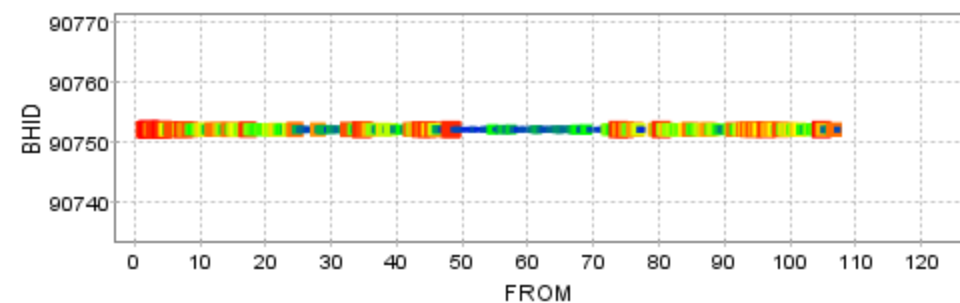
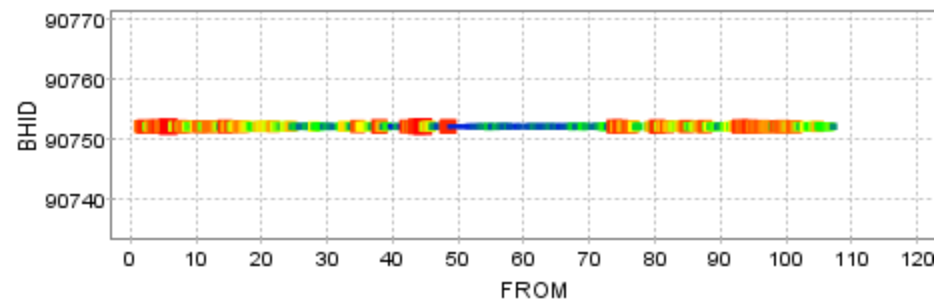
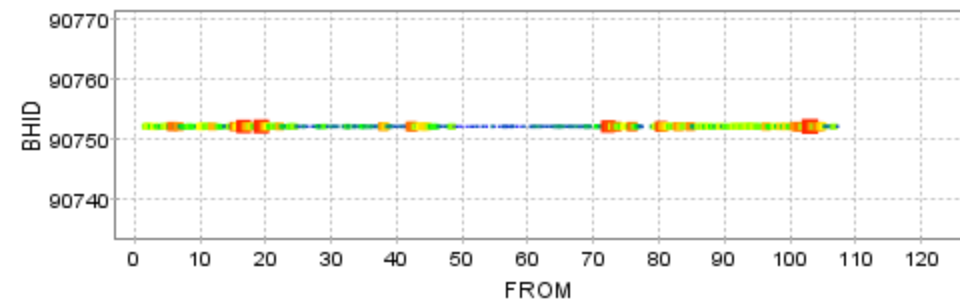
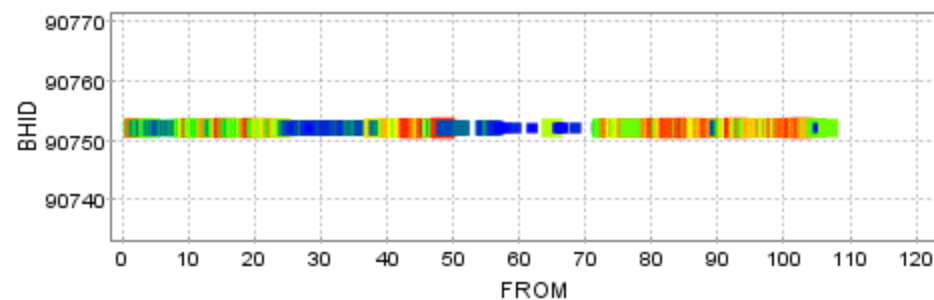
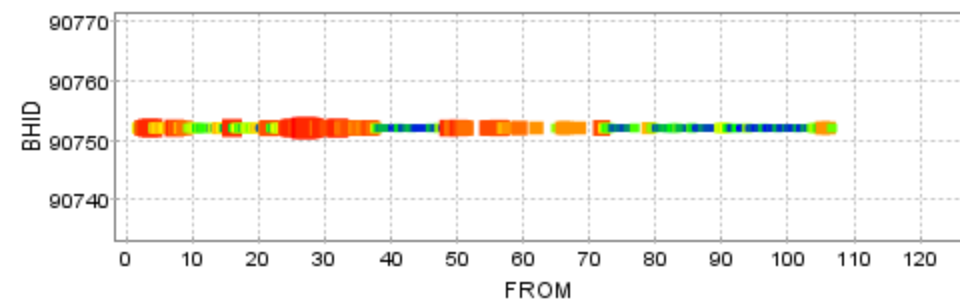
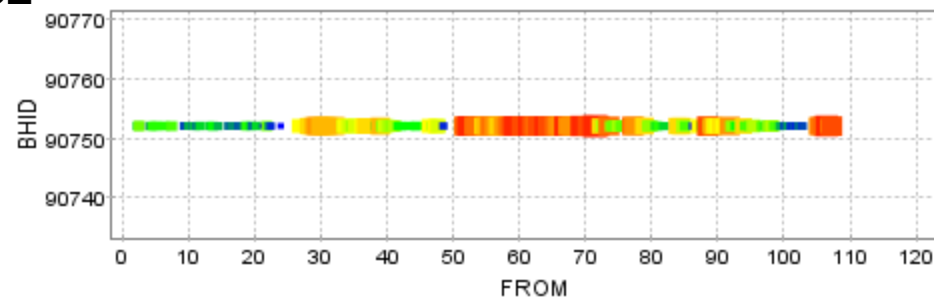
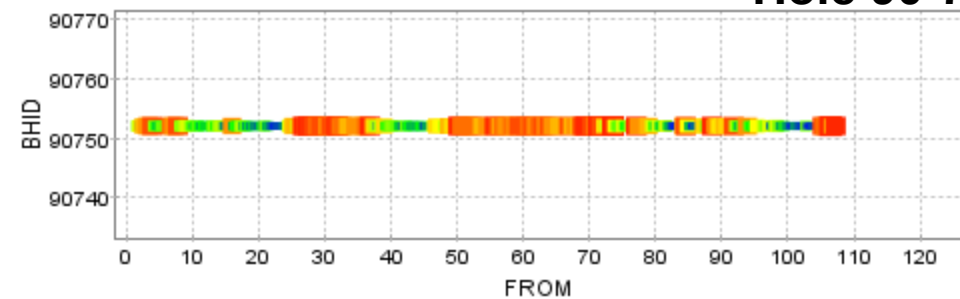
Mica Composition

Au

As

S

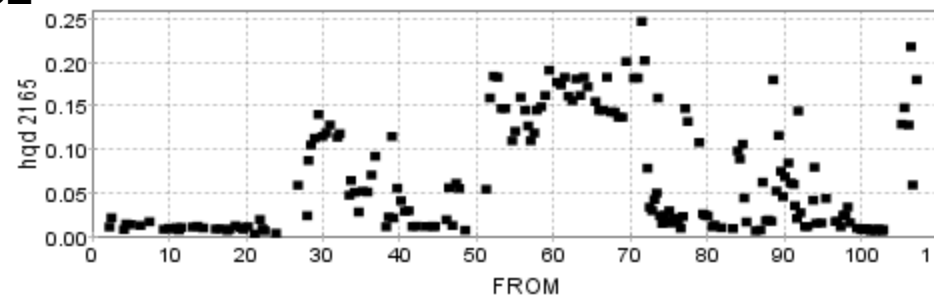
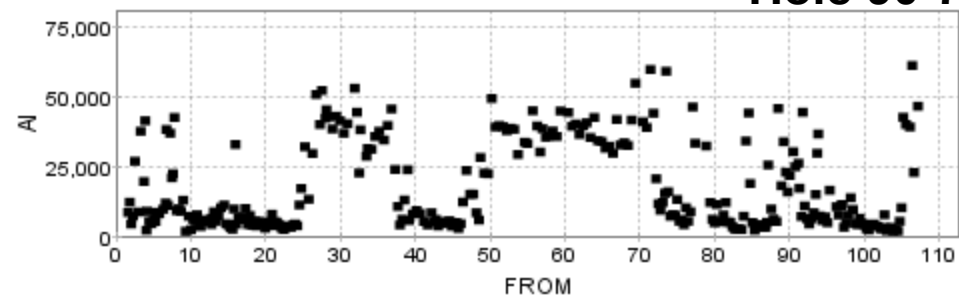
U



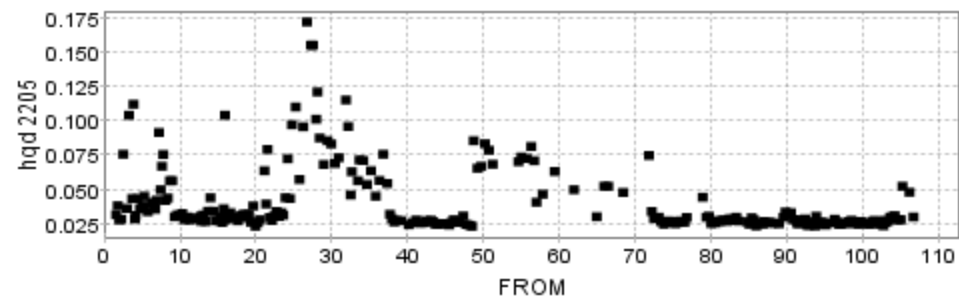
Aluminium

Hole 90-752

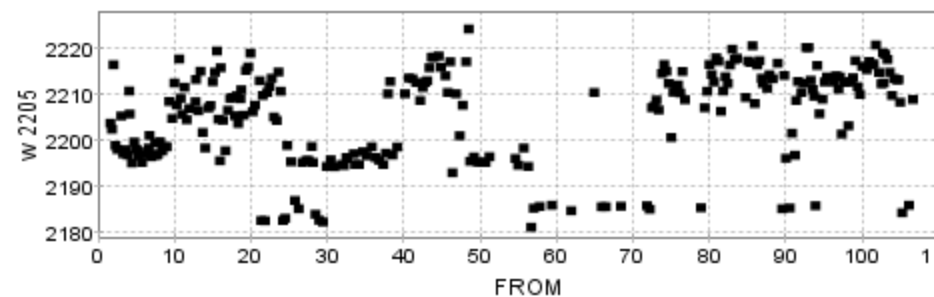
Pyrophyllite Abundance



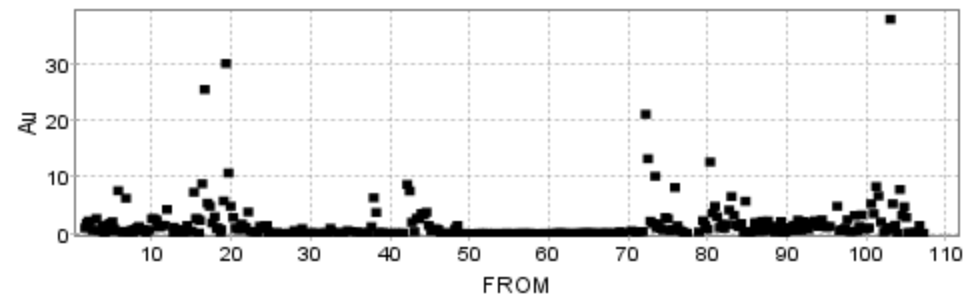
Mica Abundance



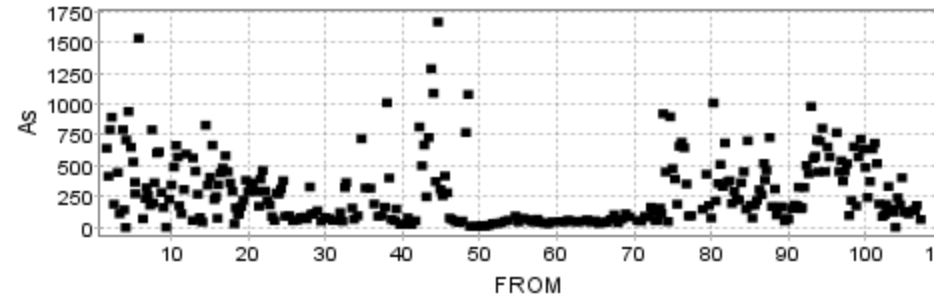
Mica Composition



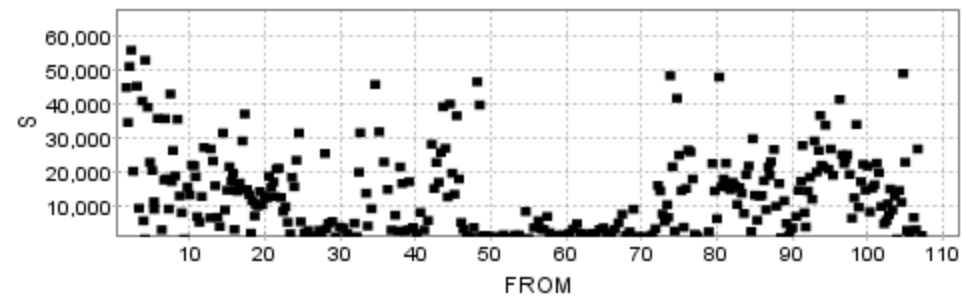
Au



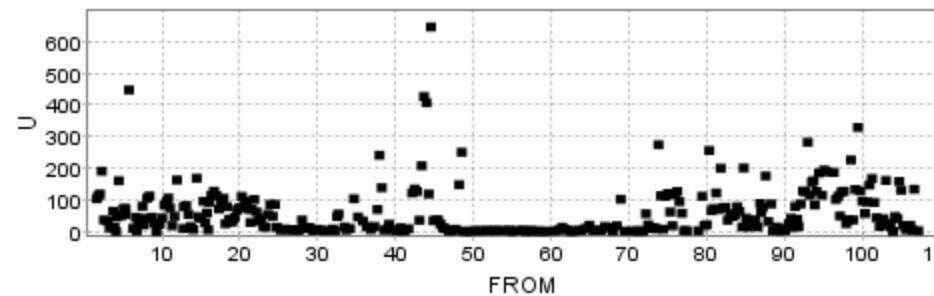
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S



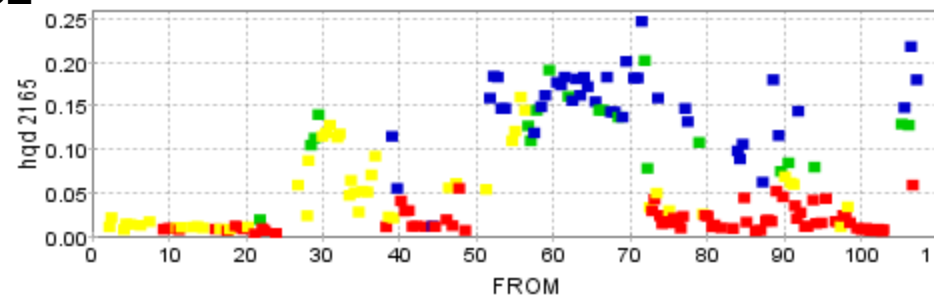
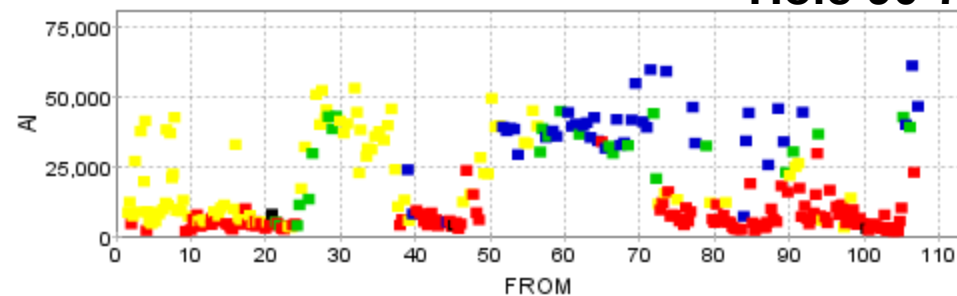
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Aluminium

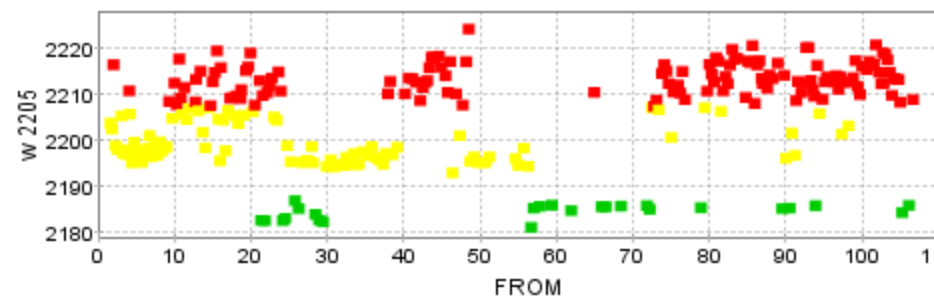
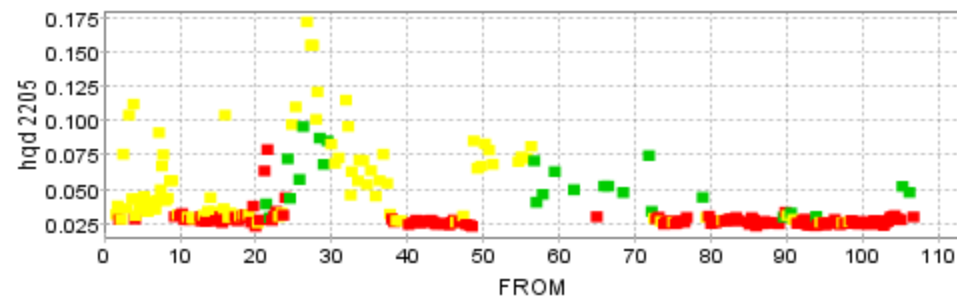
Hole 90-752

Pyrophyllite Abundance



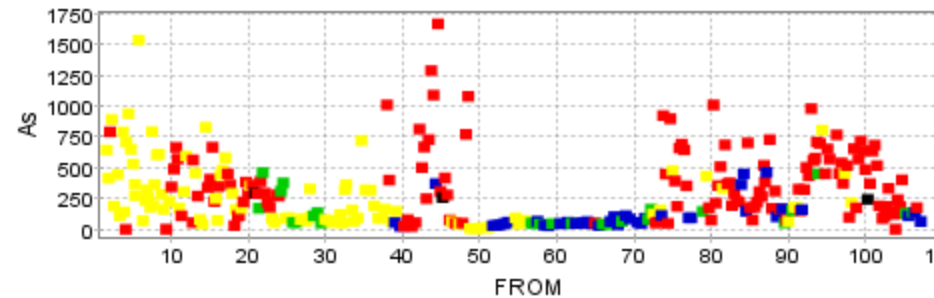
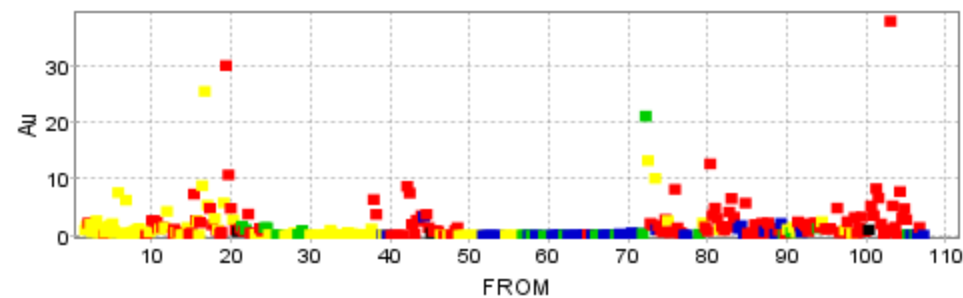
Mica Abundance

Mica Composition



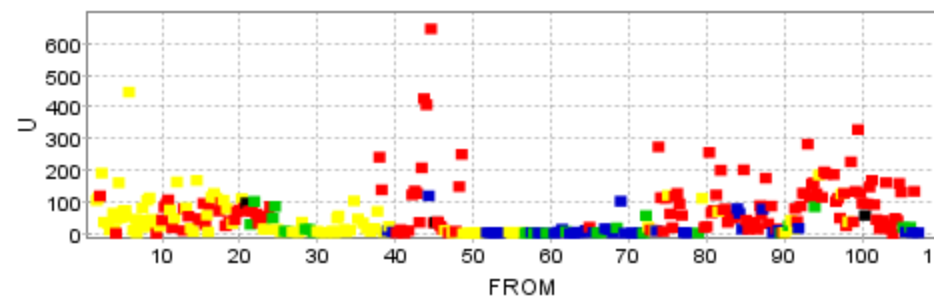
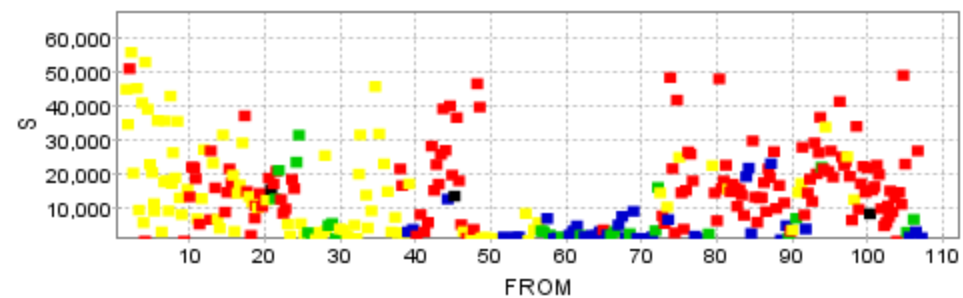
Au

As

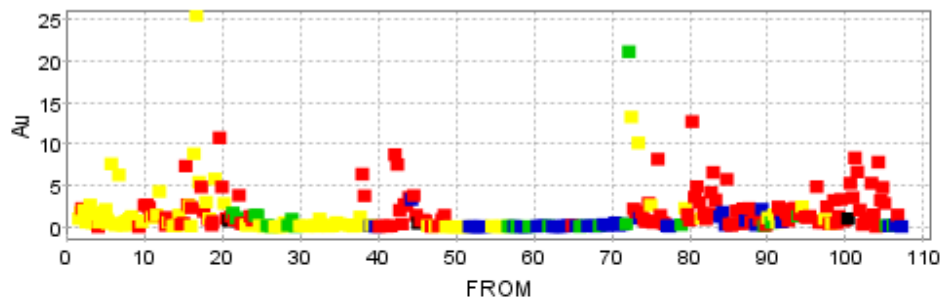


S

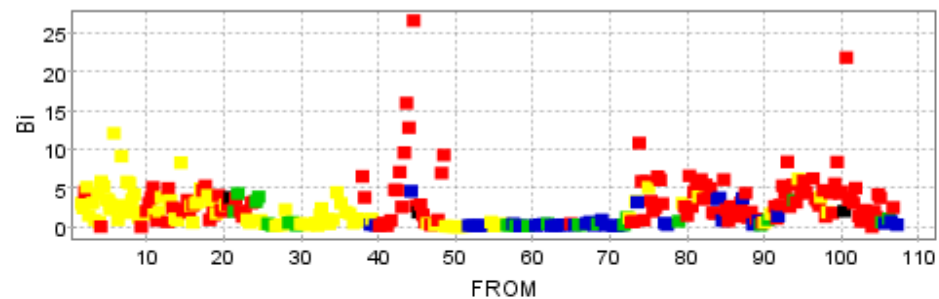
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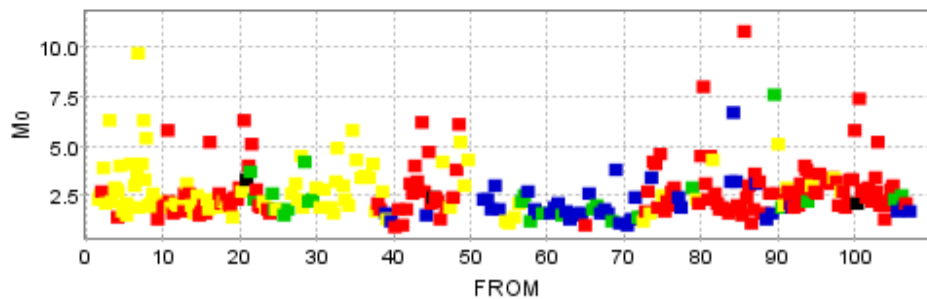
FROM: Au



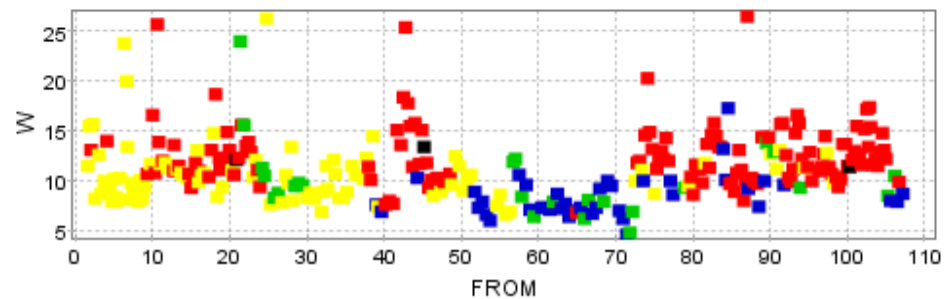
FROM: Bi



FROM: Mo



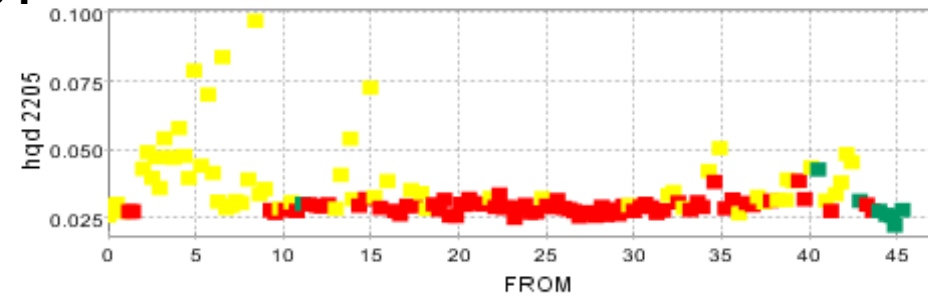
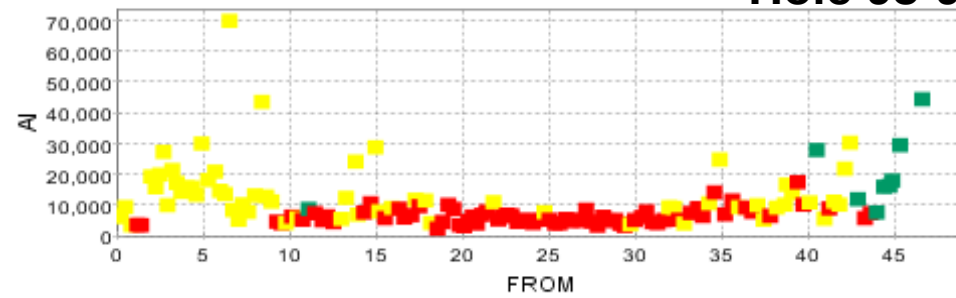
FROM: W



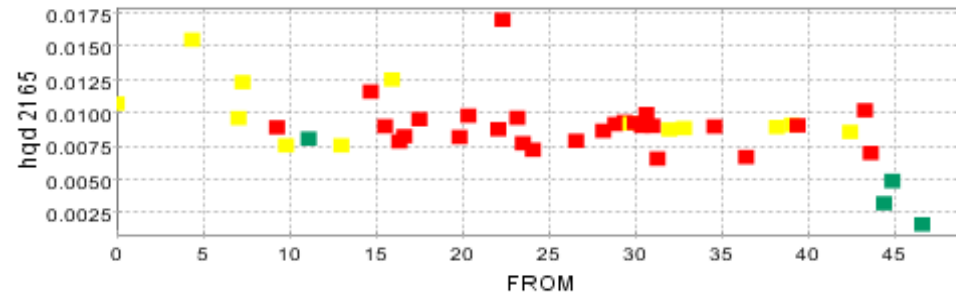
Aluminium

Hole 95-934

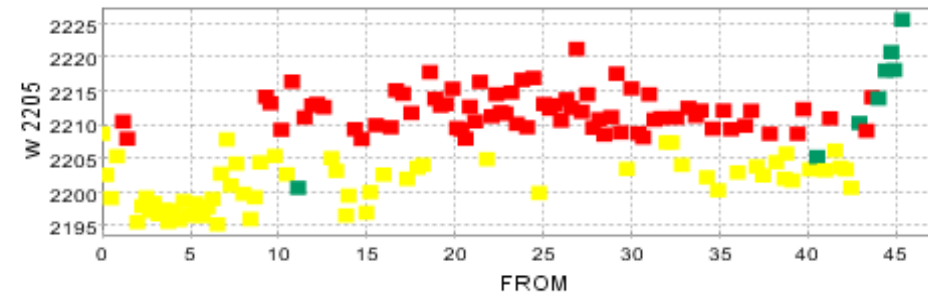
Pyrophyllite Abundance



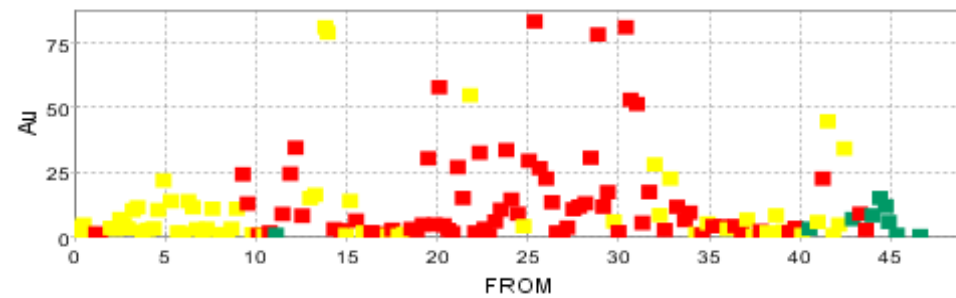
Mica Abundance



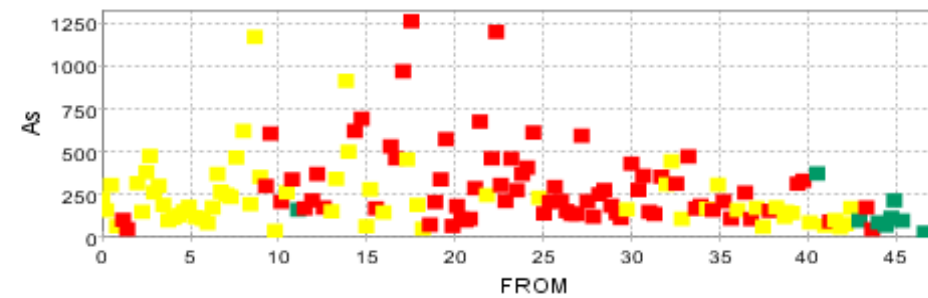
Mica Composition



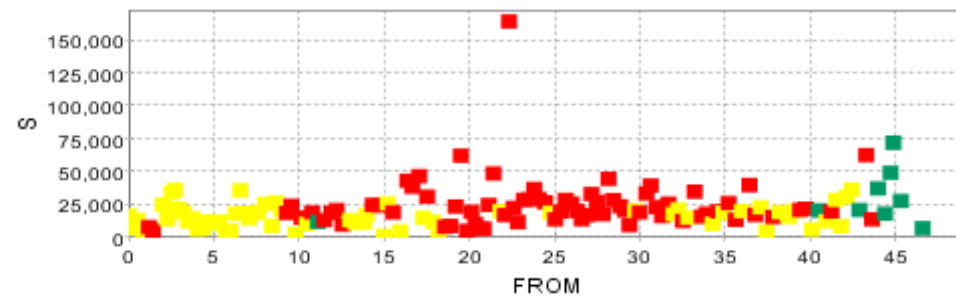
Au



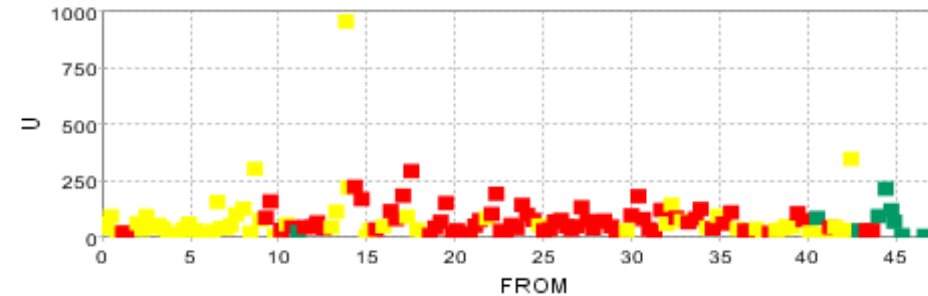
As



S



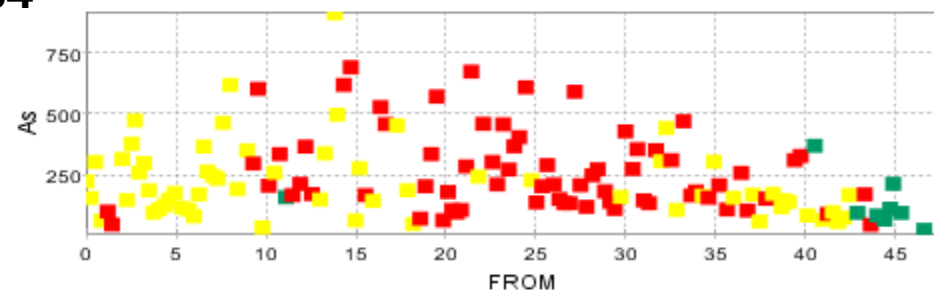
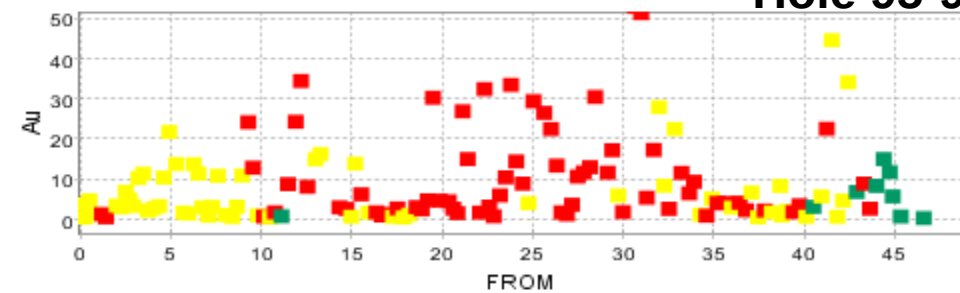
U



FROM: Au

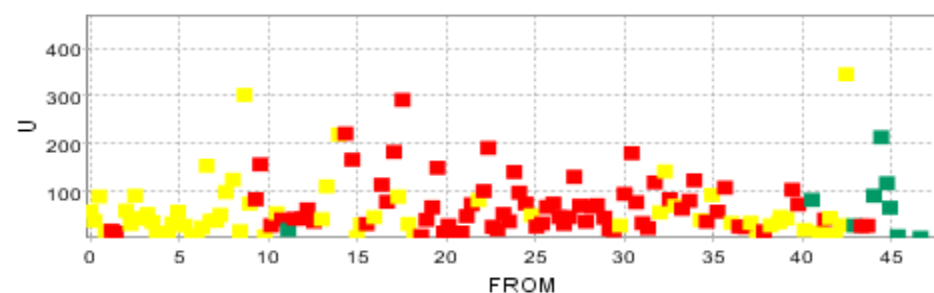
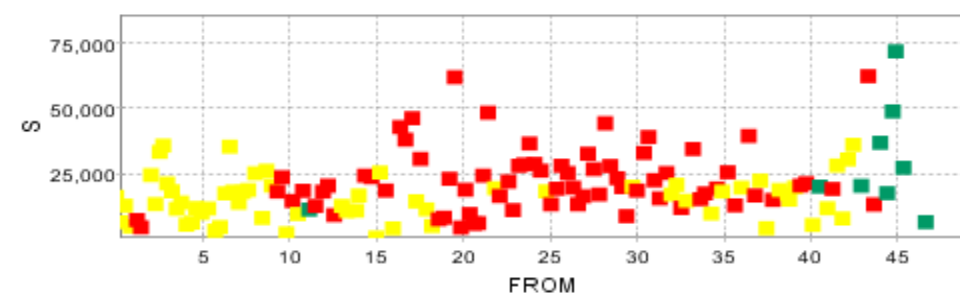
Hole 95-934

FROM: As



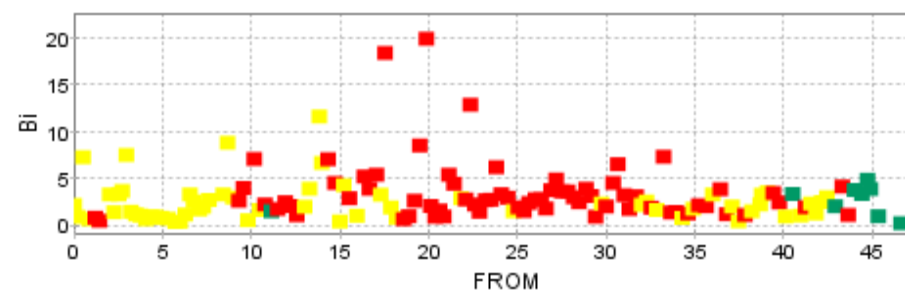
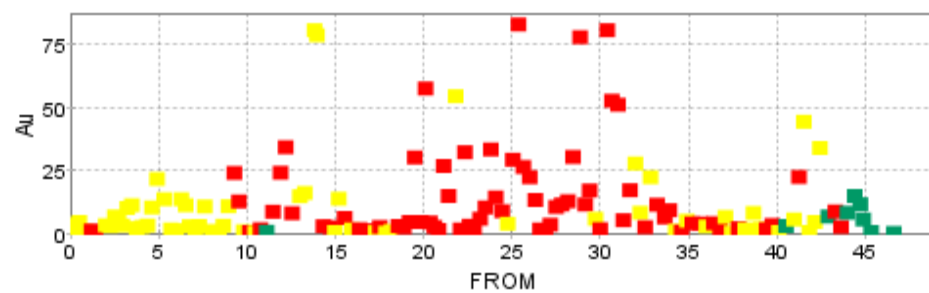
FROM: S

FROM: U



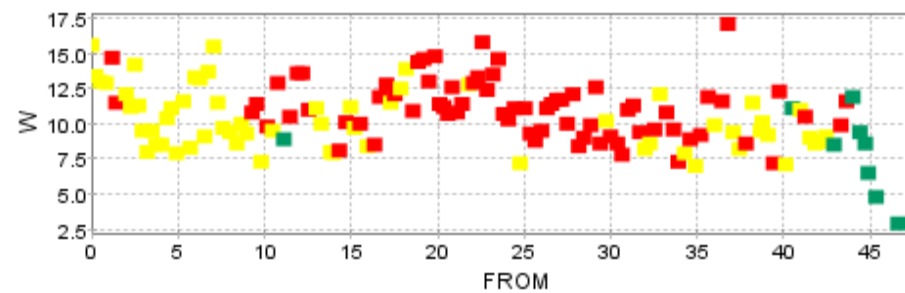
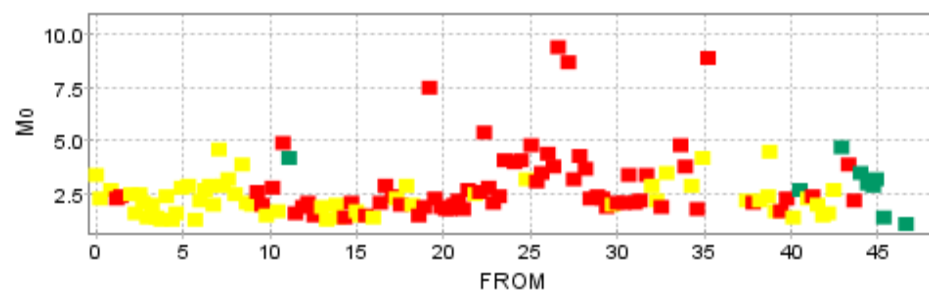
FROM: Au

FROM: Bi



FROM: Mo

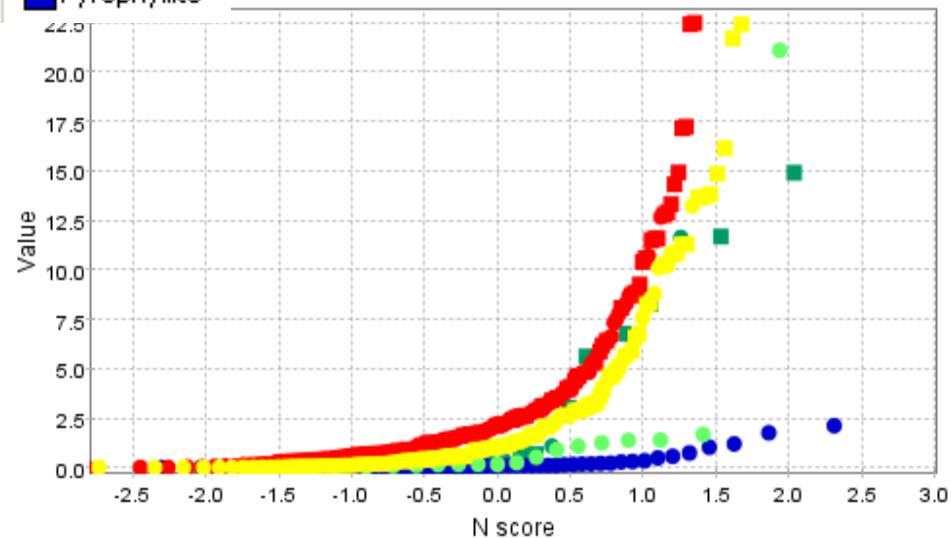
FROM: W



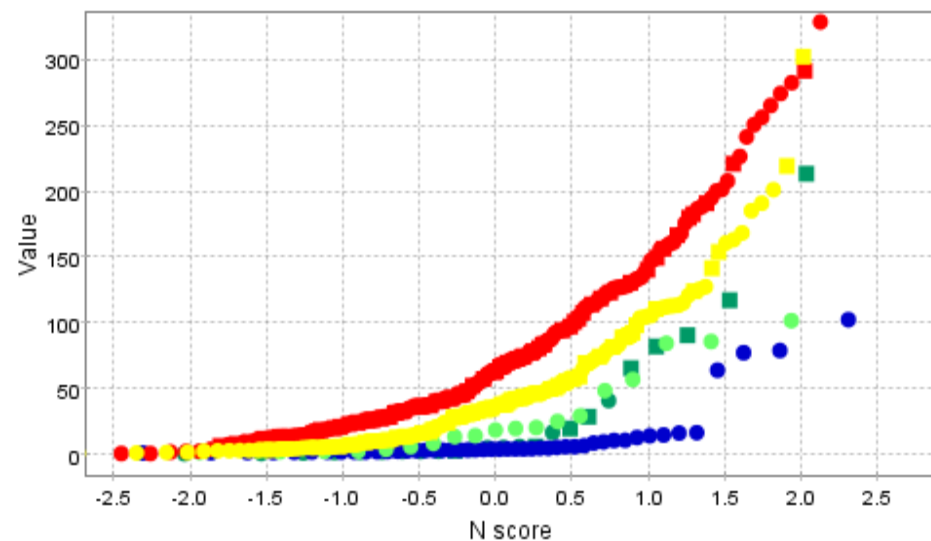
Colours

- Phengite
- Muscovite
- Paragonite
- Chlorite
- Pyrophyllite

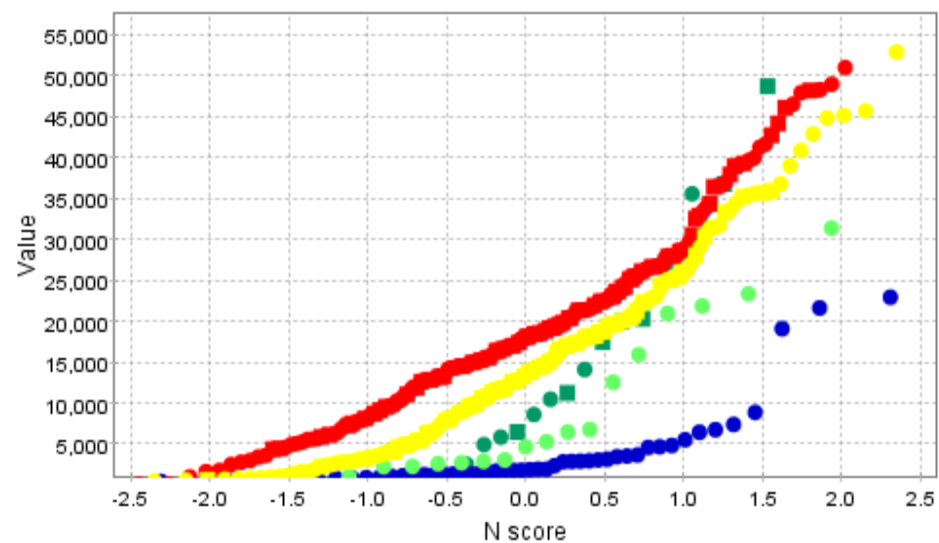
Au



U



S



W

