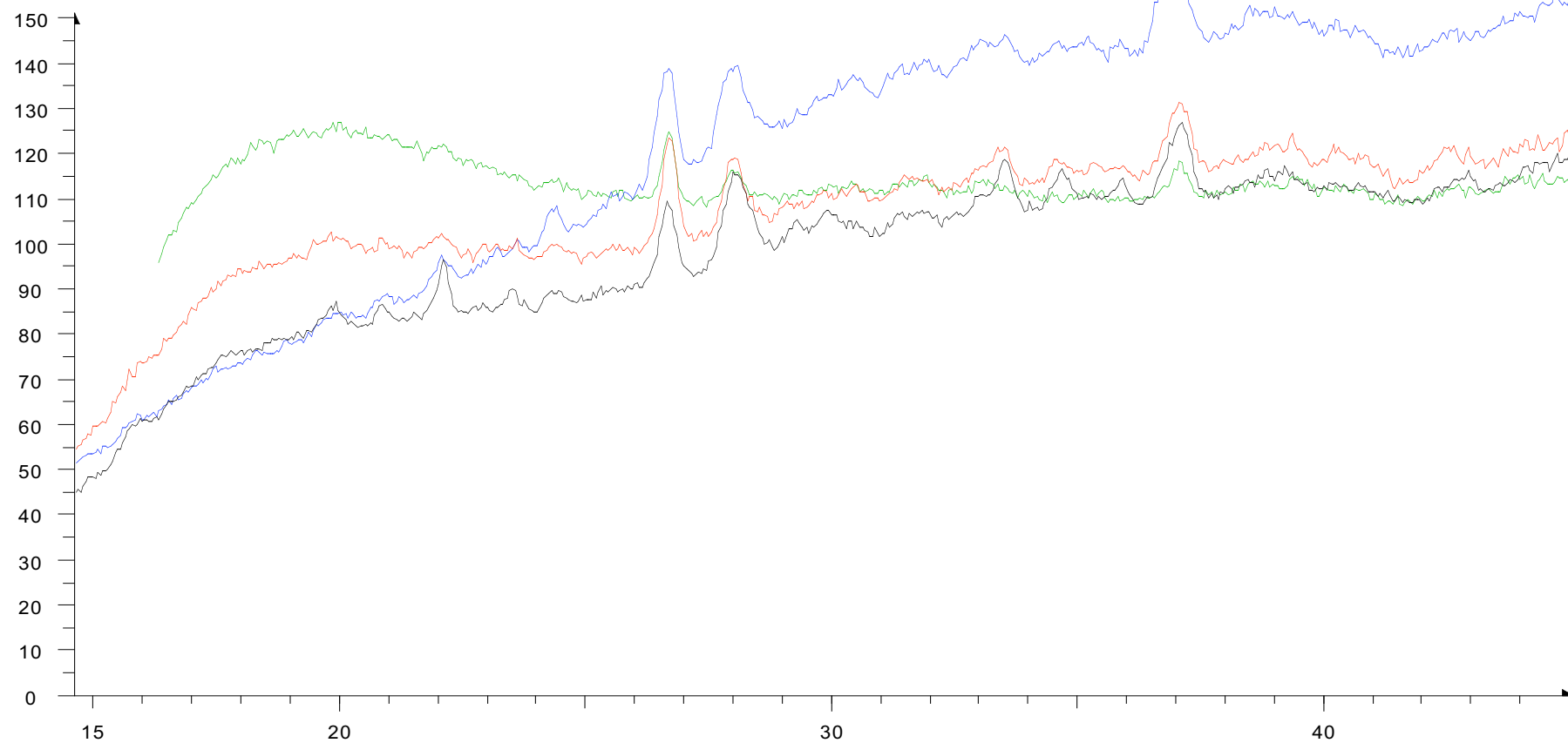


Sample ID:	TM2-2-2
Zone:	Upper alteration zone
Material identified:	Scorodite, primary silicates, primary sulfides
Type of radiation	CuK_1+K_2 = 1.54184Å
Power	40 kV x 40 mA
Type of scan	2_ (2 Omega)
Beam diameter	500 um
2_ range	6° - 21.5°
Time	20 minutes

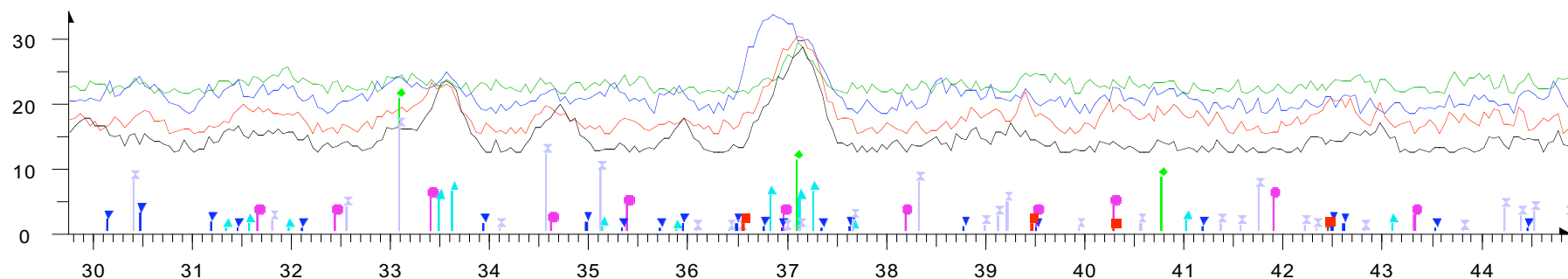
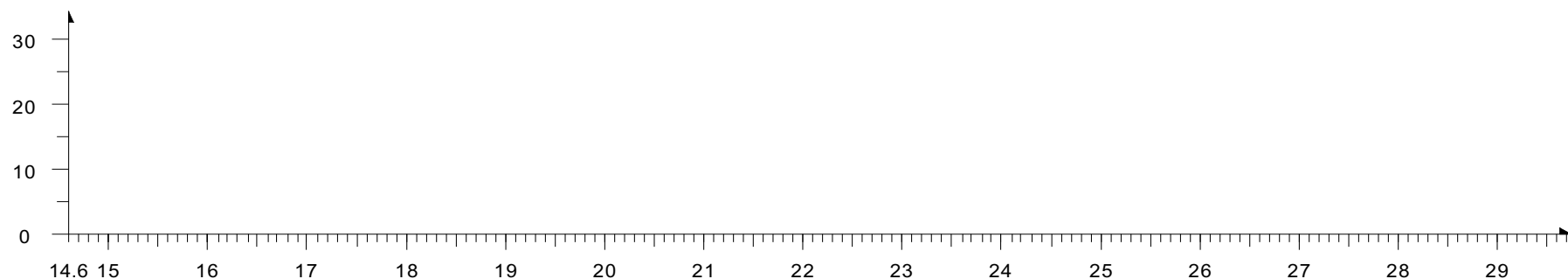
# SAMPLE / DIFFRACTOGRAM INVENTORY

Sample ID	Spot ID	Zone	Notes
TM2-2	1	1	Greyish brown, semi altered sulfides with black spots.
TM2-2	2	1	Greyish brown, semi altered sulfides with black spots.
TM2-2	3	1	Heterogeneous greyish red brown material.
TM2-2	4	1	Greyish brown material surrounded by reddish material.
TM2-2	5	2	Reddish brown material surrounded by grey material.
TM2-2	6	2	Heterogeneous, greyish brown material.
TM2-2	7	2	Melange of grey and red material.
TM2-2	8	2	Heterogeneous greyish red brown material.
TM2-2	9	3	Red ball with yellow, red and medium brown components.
TM2-2	10	3	Reddish brown material with some grey.
TM2-2	11	3	Greyish brown material with some red.

Sample ID	Spot ID	Zone	Notes
TM2-2	12	3	Yellowish brown material surrounded by red material.
TM2-2	13	3	Muted red brown material in a crack.
TM2-2	14	4	Heterogeneous AISA spherule
TM2-2	15	4	Heterogeneous AISA spherule
TM2-2	16	4	Heterogeneous AISA spherule
TM2-2	17	4	Heterogeneous AISA spherule
TM2-2	18	4	Heterogeneous AISA spherule
TM2-2	19	4	Grey material.
TM2-2	20	4	Heterogeneous AISA spherule
TM2-2	21	4	Heterogeneous AISA spherule
TM2-2	22	5	Heterogeneous AISA spherule
TM2-2	23	5	Diffuse yellowish AISA.
TM2-2	24	5	Medium brown AISA.
TM2-2	25	5	Greyish, semi altered material.



File: KristinTM2 2 20 01.raw  
Y + 3.0 mm - File: KristinTM2 2 20 02.raw  
Y + 6.0 mm - File: KristinTM2 2 20 03.raw  
Y + 9.0 mm - File: KristinTM2 2 20 04.raw



### 2-Theta - Scale

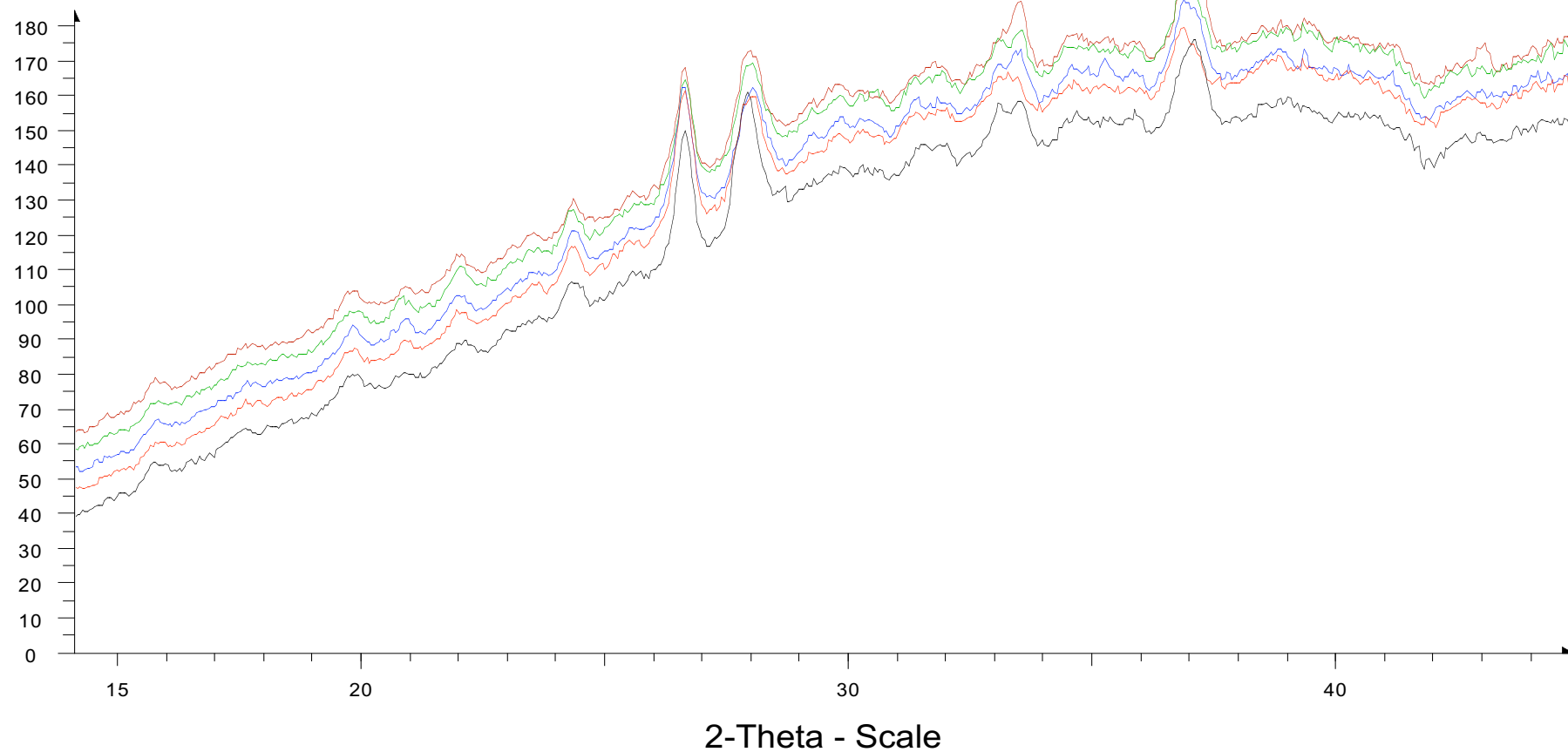
- Y + 12.0 mm - File: KristinTM2 2 20 01.raw
- Y + 15.0 mm - File: KristinTM2 2 20 02.raw
- Y + 18.0 mm - File: KristinTM2 2 20 03.raw
- Y + 21.0 mm - File: KristinTM2 2 20 04.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pyrite - FeS<sub>2</sub>
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 42-1320 (I) - Arsenopyrite - FeAsS

- 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>
- 73-1135 (C) - Amphibole - Al<sub>3.2</sub>Ca<sub>3.4</sub>Fe<sub>4.0</sub>K<sub>0.6</sub>Mg<sub>6.0</sub>Na<sub>1.0</sub>Si<sub>12.8</sub>O<sub>44</sub>(OH)

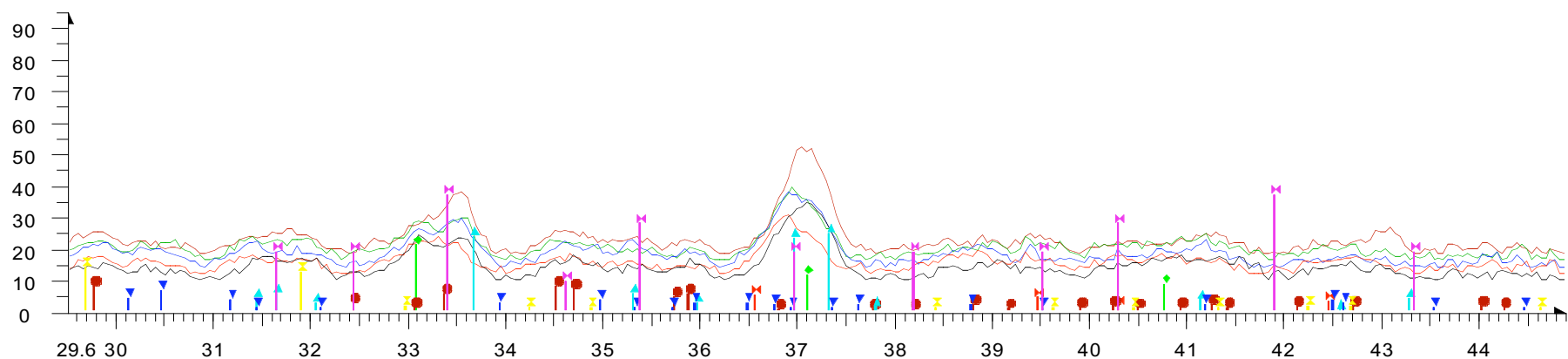
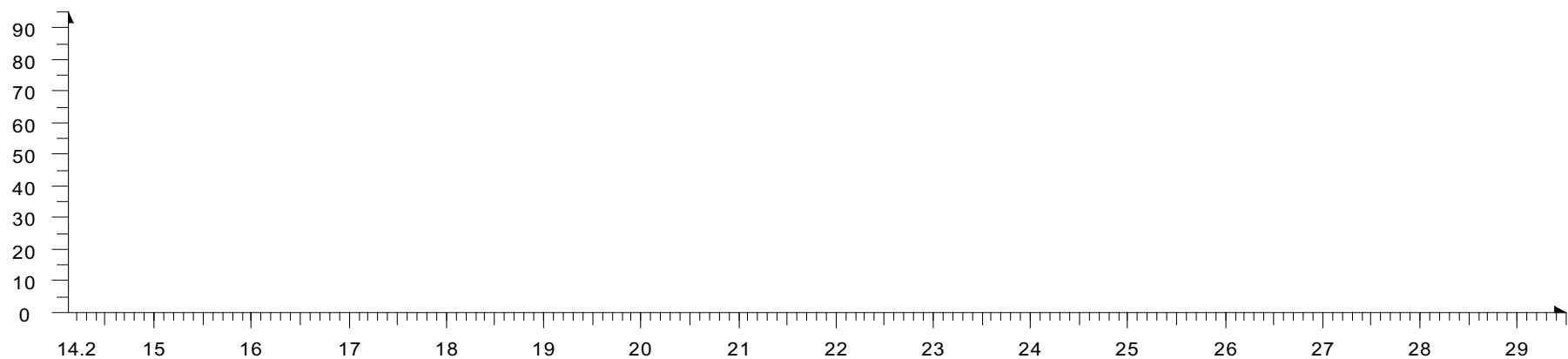


Y + 20.0 mm - File: KristinTM2 2 20 01.raw  
 Y + 25.0 mm - File: KristinTM2 2 20 02.raw  
 Y + 30.0 mm - File: KristinTM2 2 20 03.raw  
 Y + 35.0 mm - File: KristinTM2 2 20 04.raw  
 85-0796 (C) - Quartz - SiO<sub>2</sub>  
 42-1340 (\*) - Pyrite - FeS<sub>2</sub>  
 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O  
 42-1320 (I) - Arsenopyrite - FeAsS

09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>  
 73-1135 (C) - Amphibole - Al<sub>3.2</sub>Ca<sub>3.4</sub>Fe<sub>4.0</sub>K<sub>0.6</sub>Mg<sub>6.0</sub>Na<sub>1.0</sub>Si<sub>12.8</sub>O<sub>44</sub>(OH)



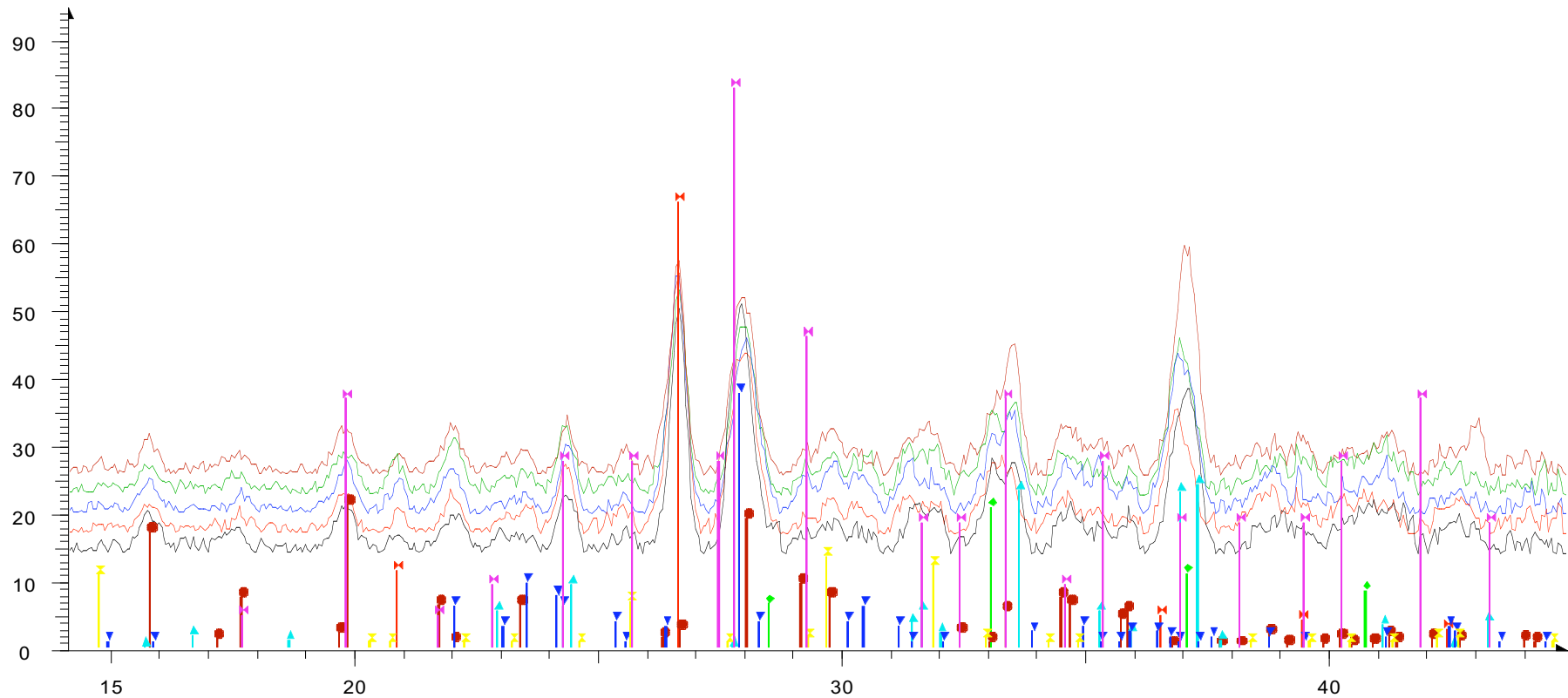
File: KristinTM2 2 20 09.raw  
Y + 3.0 mm - File: KristinTM2 2 20 10.raw  
Y + 6.0 mm - File: KristinTM2 2 20 11.raw  
Y + 9.0 mm - File: KristinTM2 2 20 12.raw  
Y + 12.0 mm - File: KristinTM2 2 20 13.raw



### 2-Theta - Scale

- ▲ Y + 5.0 mm - File: KristinTM2 2 20 09.raw
- ▲ Y + 6.0 mm - File: KristinTM2 2 20 10.raw
- ▲ Y + 7.0 mm - File: KristinTM2 2 20 11.raw
- ▲ Y + 8.0 mm - File: KristinTM2 2 20 12.raw
- ▲ Y + 9.0 mm - File: KristinTM2 2 20 13.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- ◆ 42-1340 (\*) - Pvrite - FeS<sub>2</sub>
- 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O

- ▲ 85-1723 (C) - Arsenopvrite - FeAsS
- ▼ 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>
- ▲ 41-0224 (I) - Bassanite, svn - CaSO<sub>4</sub>·0.5H<sub>2</sub>O
- ✕ 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O

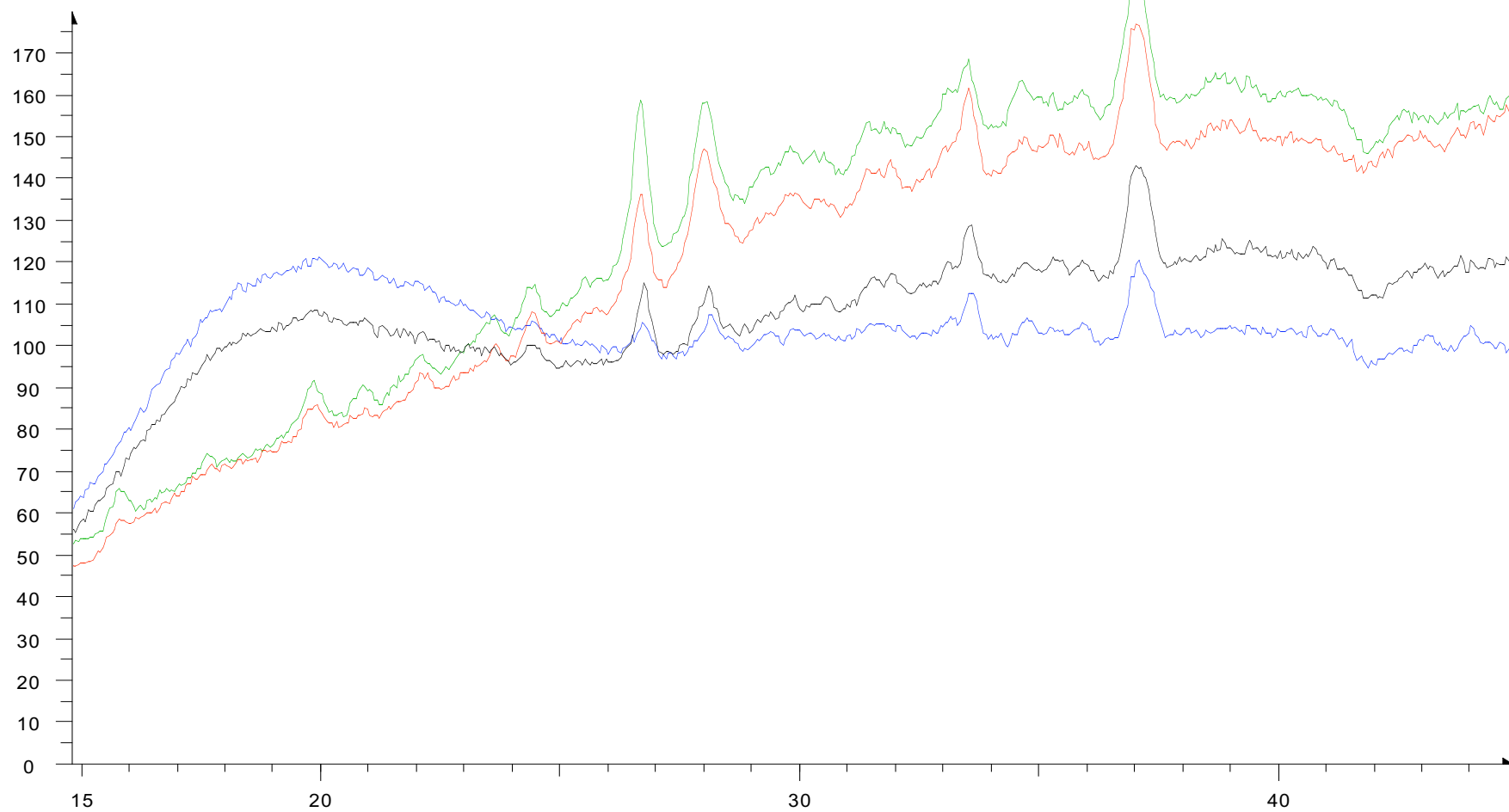


2-Theta - Scale

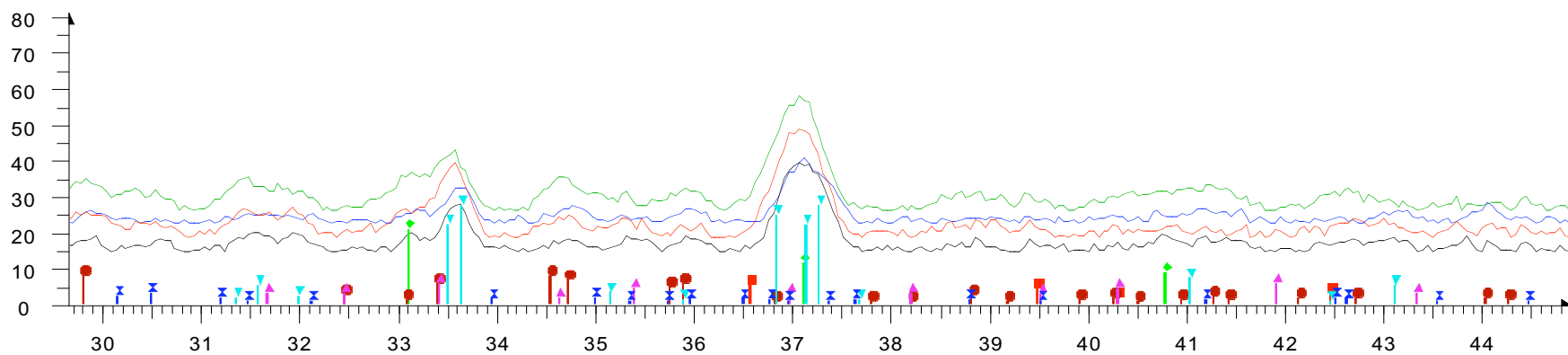
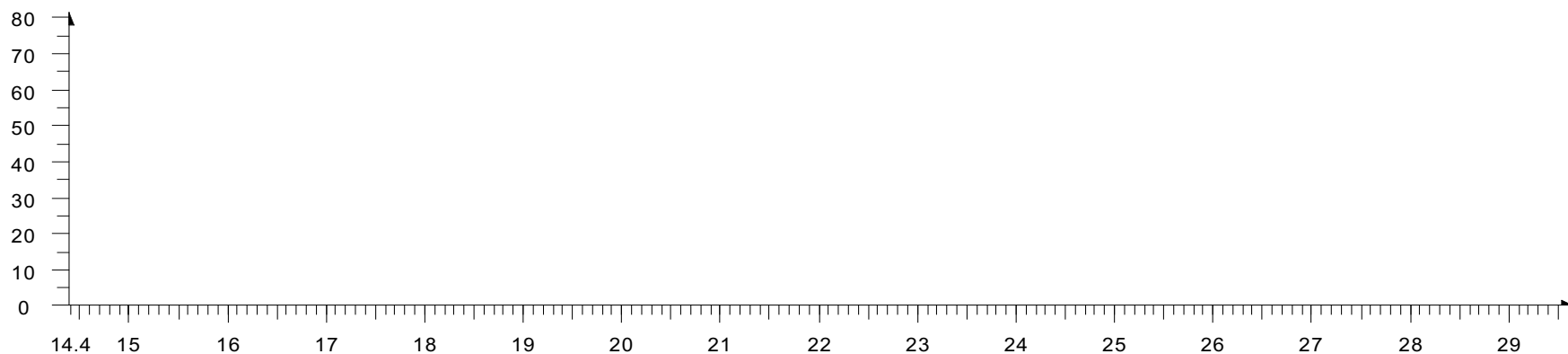
Y + 15.0 mm - File: KristinTM2 2 20 09.raw  
 Y + 18.0 mm - File: KristinTM2 2 20 10.raw  
 Y + 21.0 mm - File: KristinTM2 2 20 11.raw  
 Y + 24.0 mm - File: KristinTM2 2 20 12.raw  
 Y + 27.0 mm - File: KristinTM2 2 20 13.raw  
 85-0796 (C) - Quartz - SiO<sub>2</sub>  
 42-1340 (\*) - Pvrite - FeS<sub>2</sub>  
 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O

85-1723 (C) - Arsenopvrite - FeAsS  
 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>  
 41-0224 (I) - Bassanite, svn - CaSO<sub>4</sub>·0.5H<sub>2</sub>O  
 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O





File: KristinTM2 2 20 05.raw  
Y + 2.0 mm - File: KristinTM2 2 20 06.raw  
Y + 4.0 mm - File: KristinTM2 2 20 07.raw  
Y + 6.0 mm - File: KristinTM2 2 20 08.raw

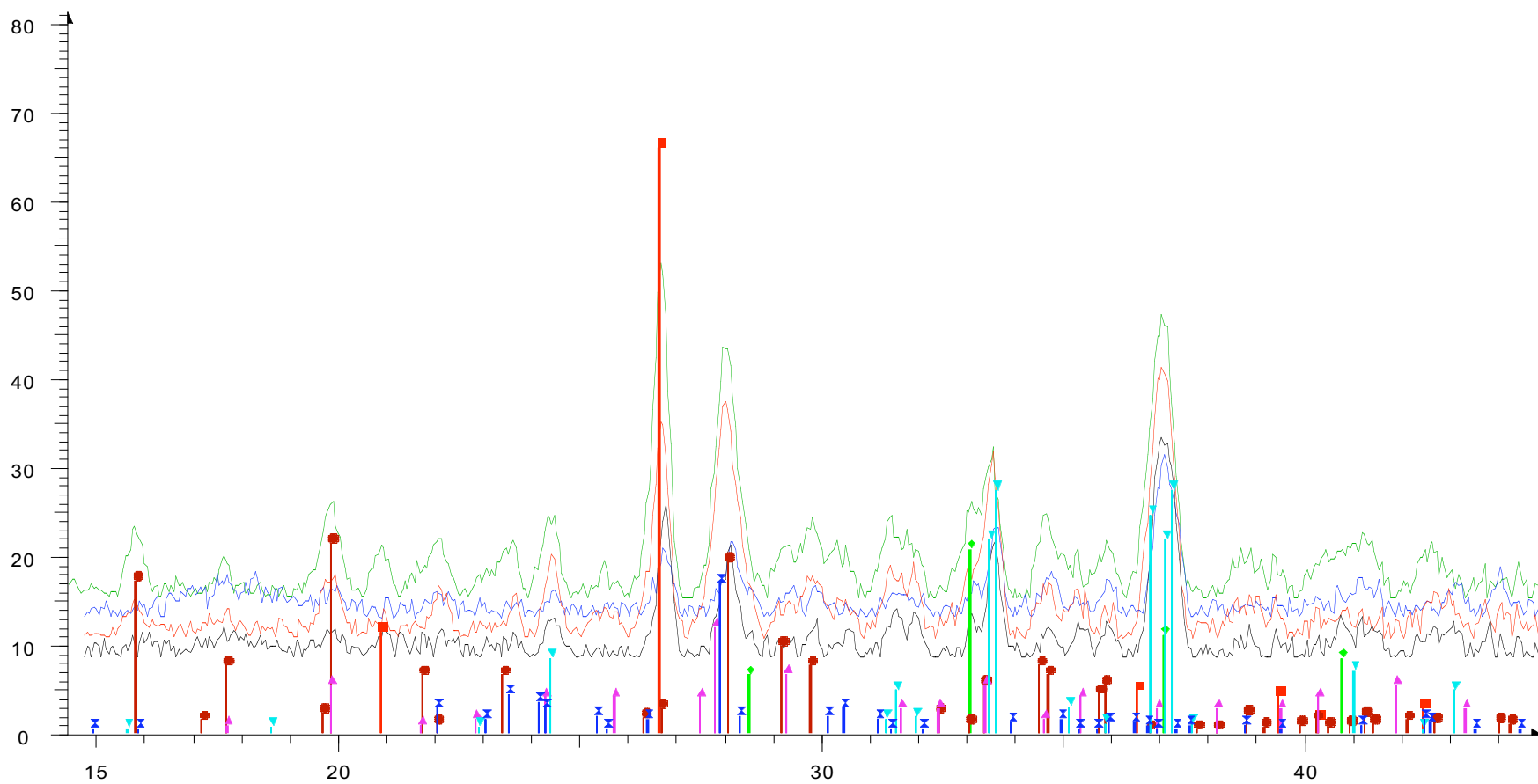


2-Theta - Scale

Y + 8.0 mm - File: KristinTM2 2 20 05.raw  
 Y + 10.0 mm - File: KristinTM2 2 20 06.raw  
 Y + 12.0 mm - File: KristinTM2 2 20 07.raw  
 Y + 14.0 mm - File: KristinTM2 2 20 08.raw

85-0796 (C) - Quartz - SiO<sub>2</sub>  
 42-1340 (\*) - Pvrite - FeS<sub>2</sub>  
 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O  
 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O

42-1320 (I) - Arsenopvrite - FeAsS  
 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>

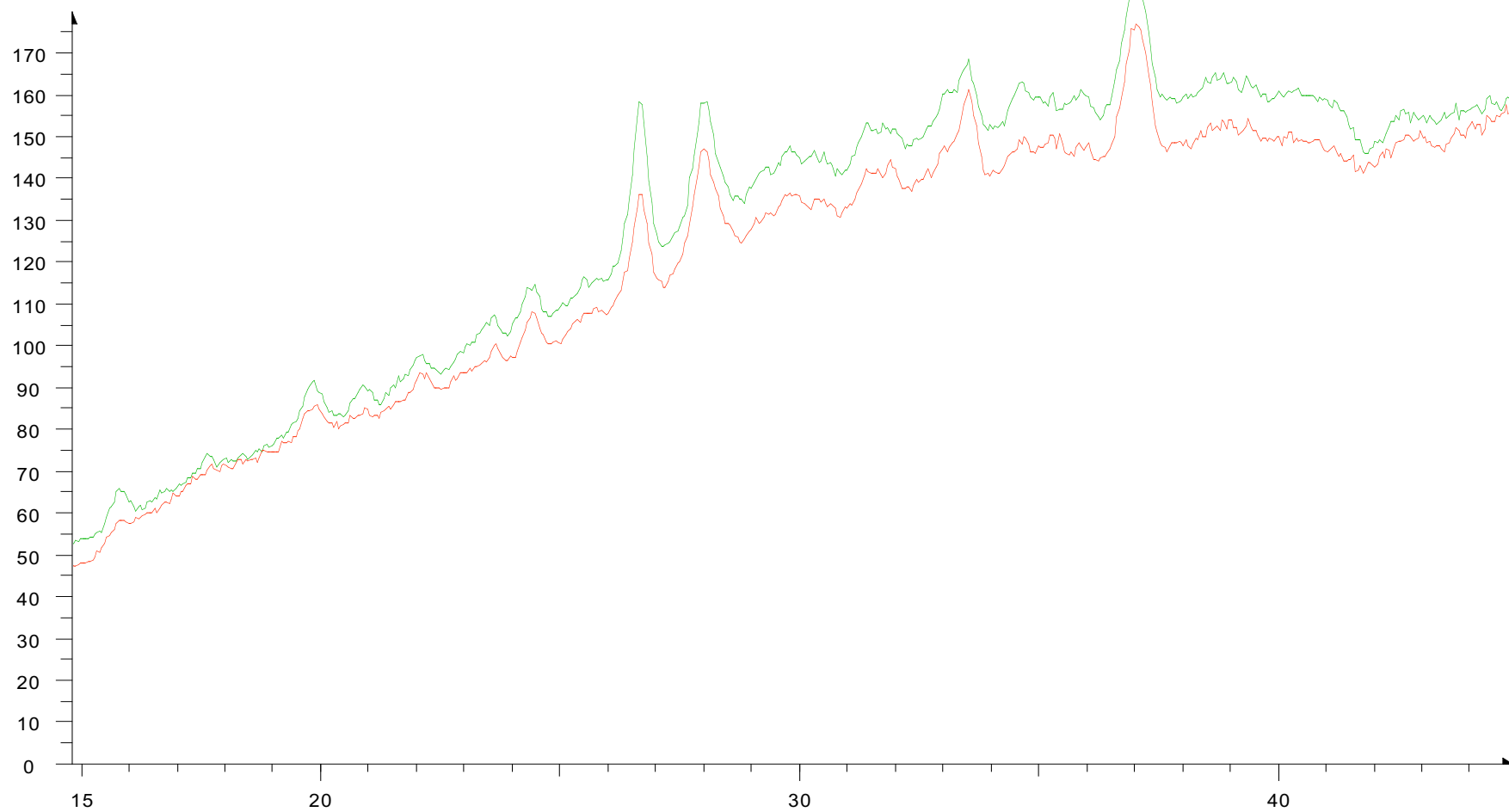


2-Theta - Scale

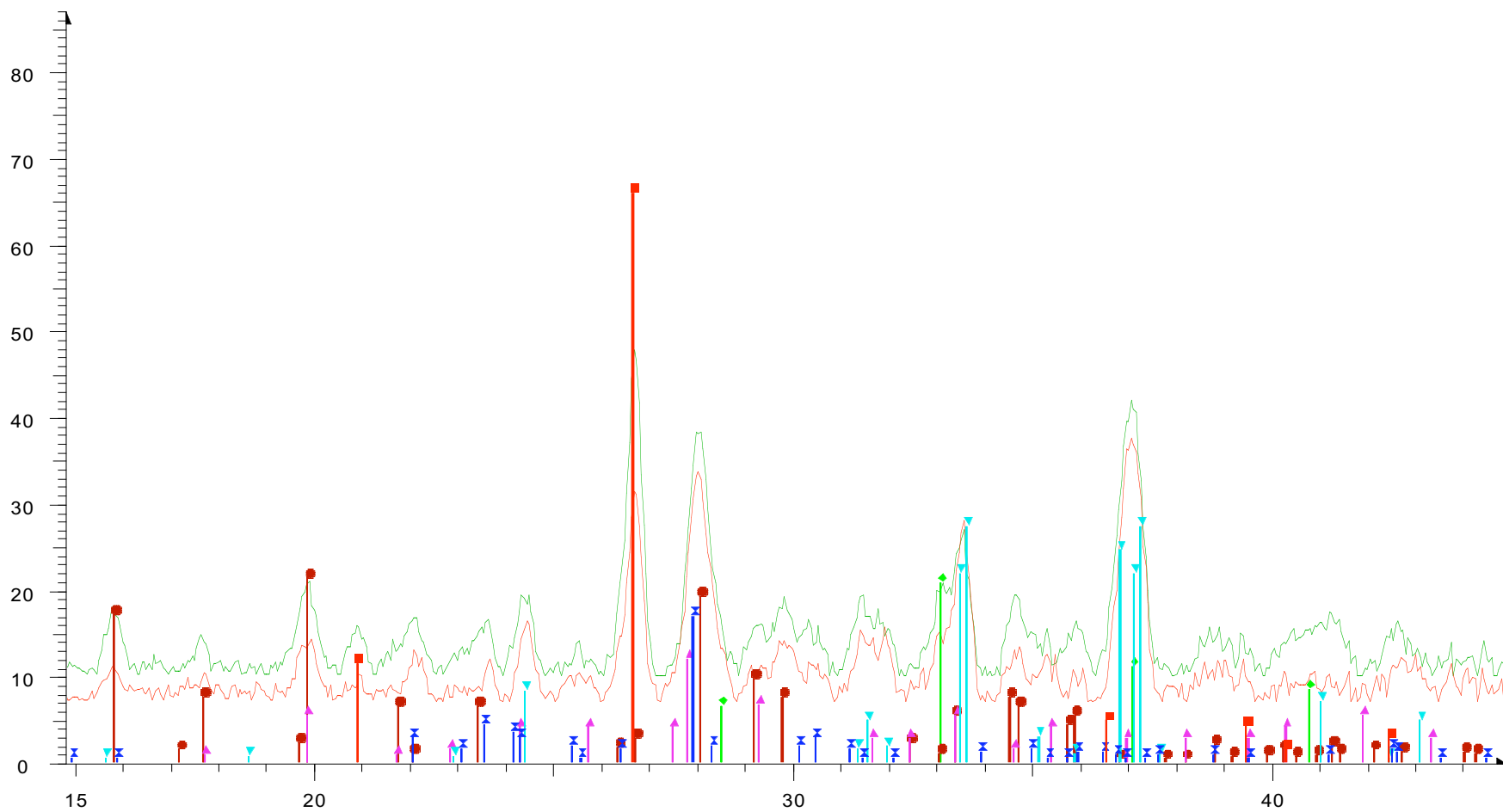
Y + 12.0 mm - File: KristinTM2 2 20 05.raw  
 Y + 15.0 mm - File: KristinTM2 2 20 06.raw  
 Y + 18.0 mm - File: KristinTM2 2 20 07.raw  
 Y + 21.0 mm - File: KristinTM2 2 20 08.raw

85-0796 (C) - Quartz - SiO<sub>2</sub>  
 42-1340 (\*) - Pvrite - FeS<sub>2</sub>  
 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O  
 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O

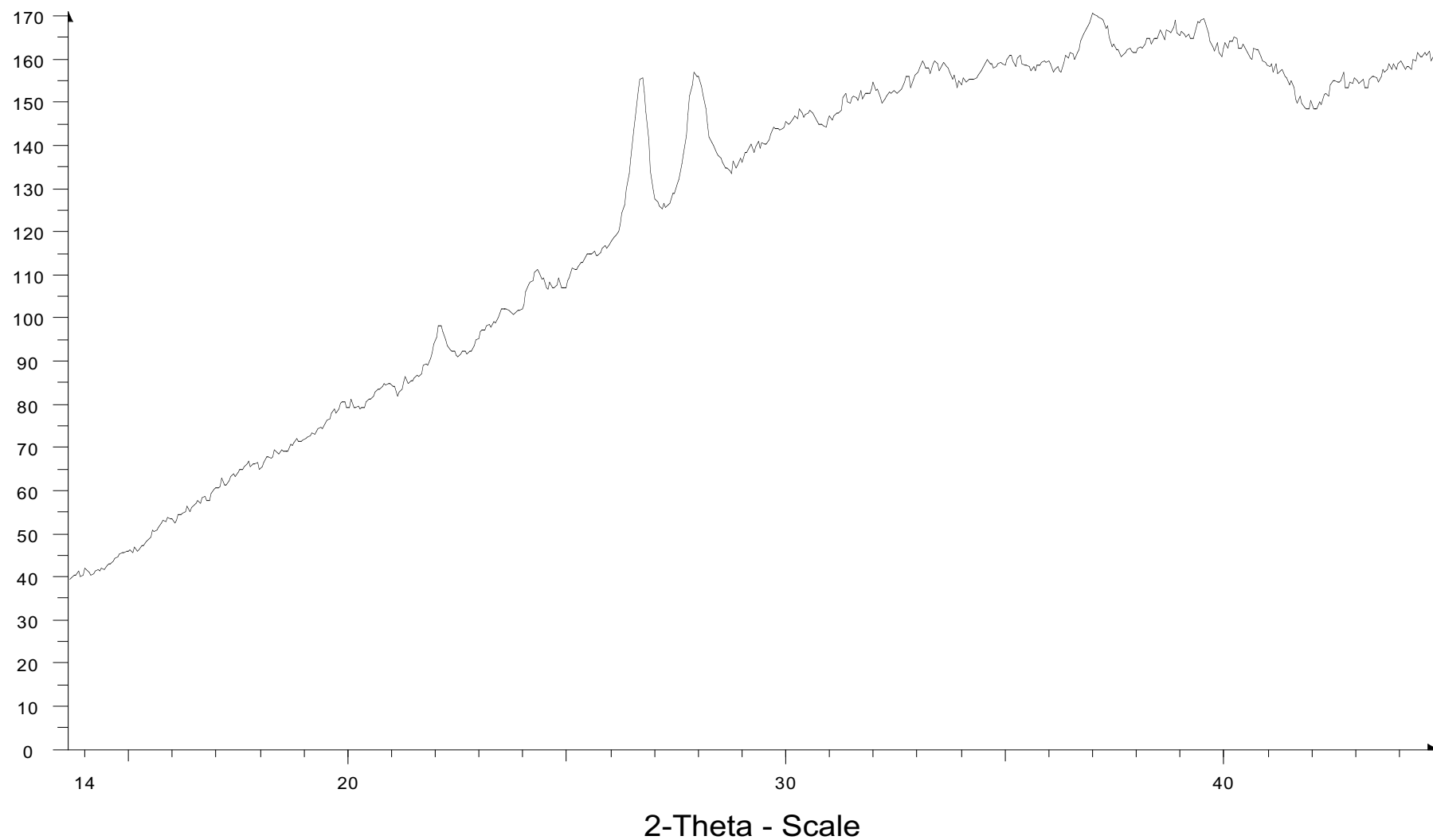
42-1320 (I) - Arsenobovrite - FeAsS  
 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>



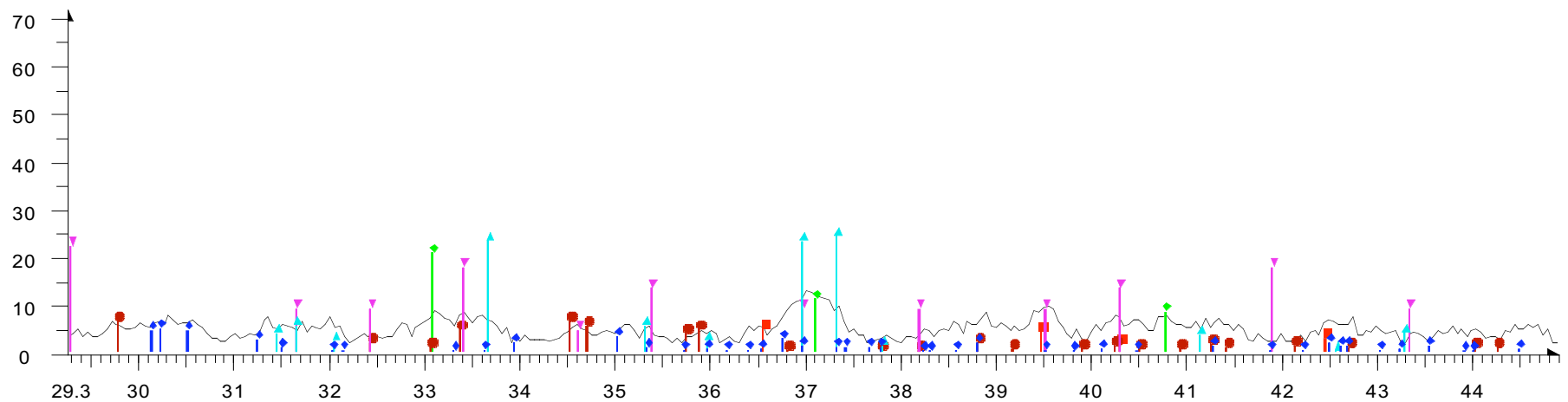
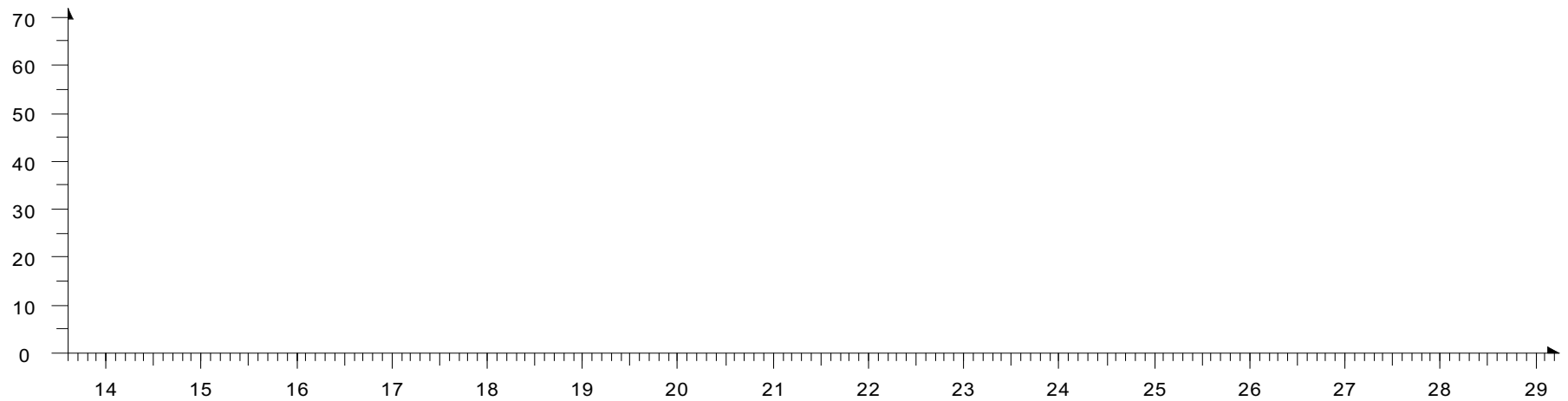
Y + 2.0 mm - File: KristinTM2 2 20 06.raw  
Y + 6.0 mm - File: KristinTM2 2 20 08.raw



- ▬ Y + 10.0 mm - File: KristinTM2 2 20 06.raw
- ▬ Y + 14.0 mm - File: KristinTM2 2 20 08.raw
- 85-0796 (C) - Quartz -  $\text{SiO}_2$
- ◆ 42-1340 (\*) - Pprite -  $\text{FeS}_2$
- 37-0468 (\*) - Scorodite -  $\text{FeAsO}_4 \cdot 2\text{H}_2\text{O}$
- ▲ 44-1468 (N) - Tooeleite -  $\text{Fe}_8(\text{AsO}_4)_6(\text{OH})_6 \cdot 5\text{H}_2\text{O}$
- ▼ 42-1320 (I) - Arsenovprite -  $\text{FeAsS}$
- ⊠ 09-0466 (\*) - Albite, ordered -  $\text{NaAlSi}_3\text{O}_8$

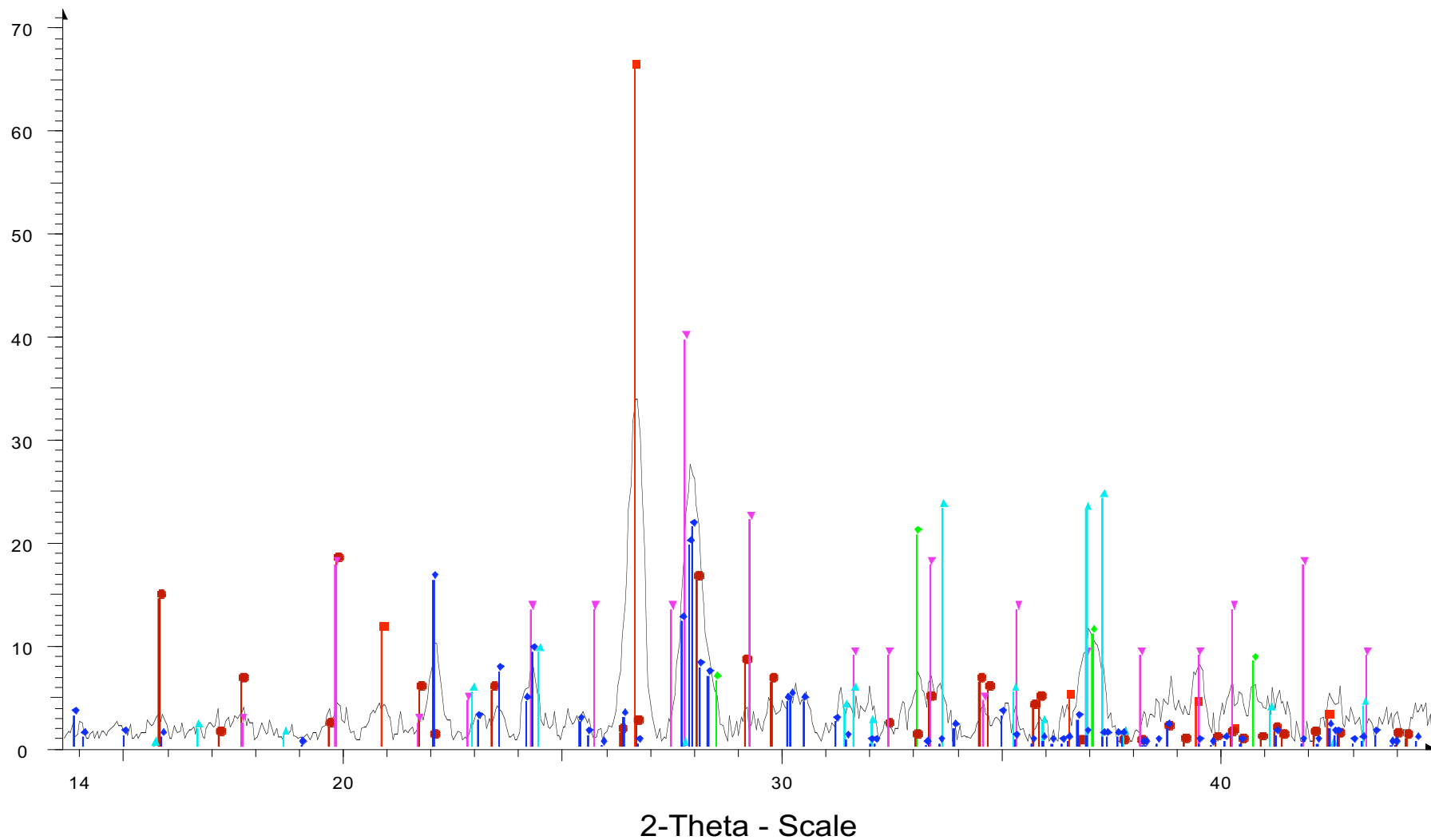


File: KristinTM2 2 20 19.raw



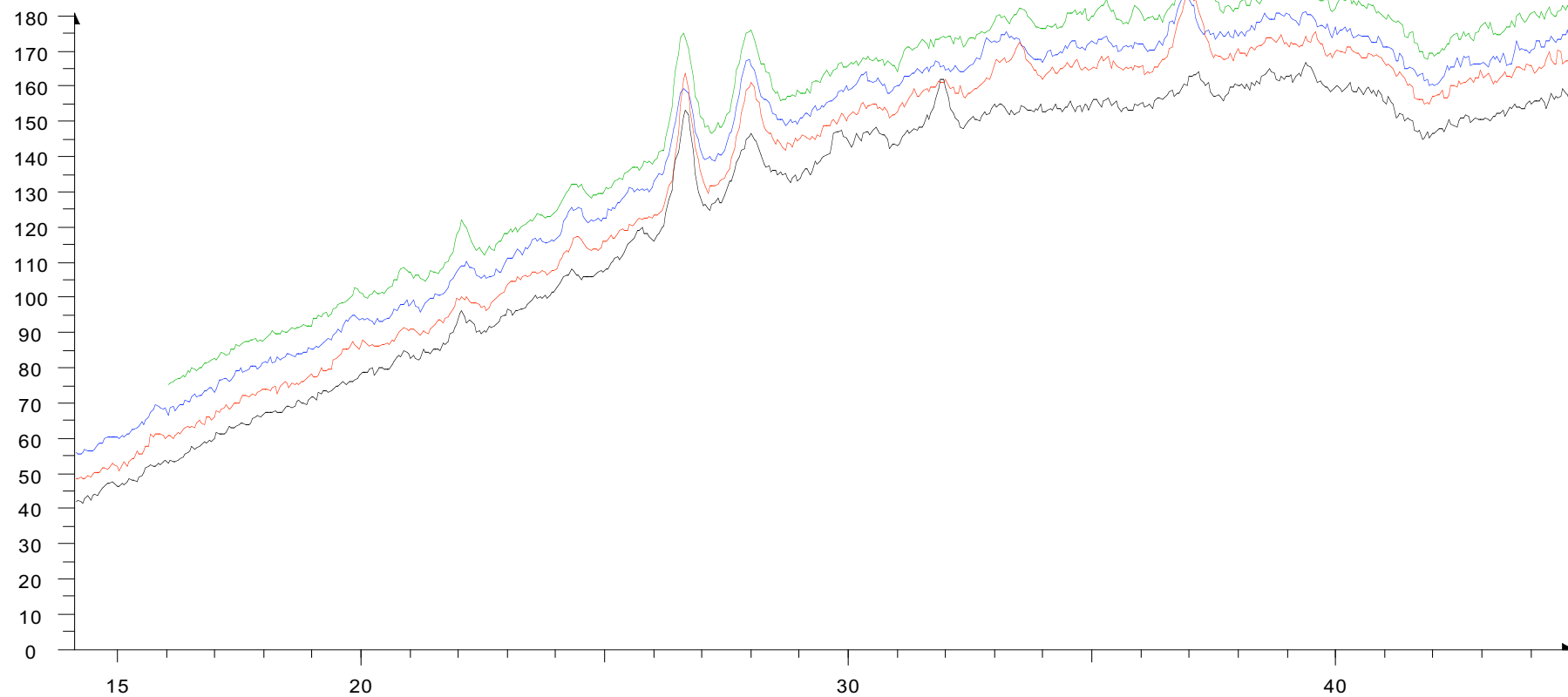
2-Theta - Scale

- Y + 2.0 mm - File: KristinTM2 2 20 19.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pwrite - FeS<sub>2</sub>
- 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 85-1723 (C) - Arsenopyrite - FeAsS
- 80-1094 (C) - Albite low - Na(AlSi<sub>3</sub>O<sub>8</sub>)



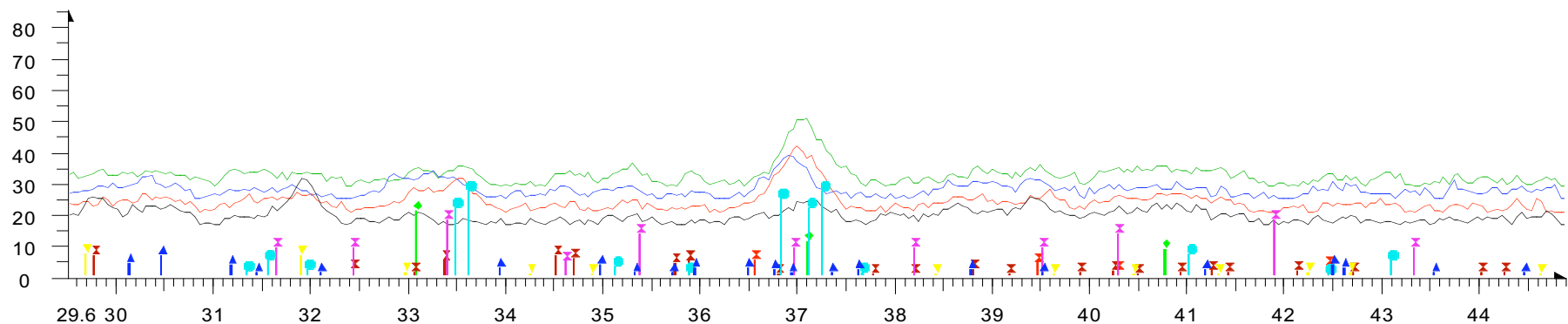
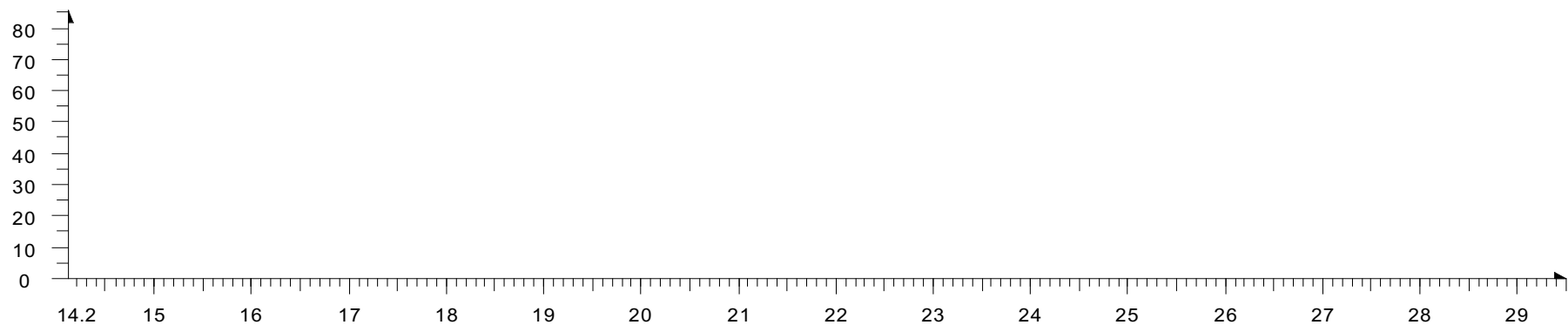
- Y + 2.0 mm - File: KristinTM2 2 20 19.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pwrite - FeS<sub>2</sub>
- 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 85-1723 (C) - Arsenopyrite - FeAsS
- 80-1094 (C) - Albite low - Na(AlSi<sub>3</sub>O<sub>8</sub>)





2-Theta - Scale

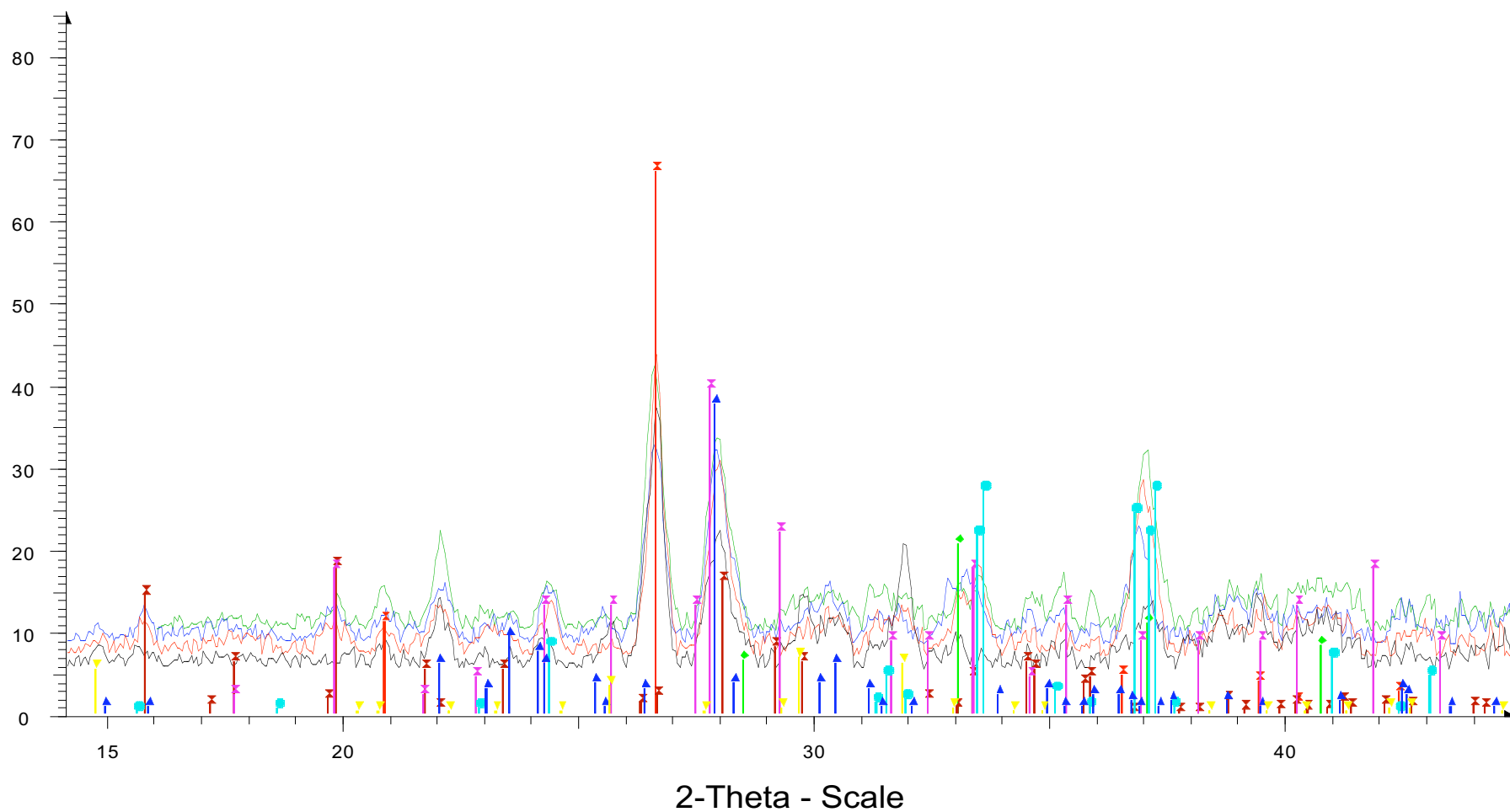
- File: KristinTM2 2 20 14.raw
- Y + 4.0 mm - File: KristinTM2 2 20 15.raw
- Y + 8.0 mm - File: KristinTM2 2 20 17.raw
- Y + 12.0 mm - File: KristinTM2 2 20 18.raw



## 2-Theta - Scale

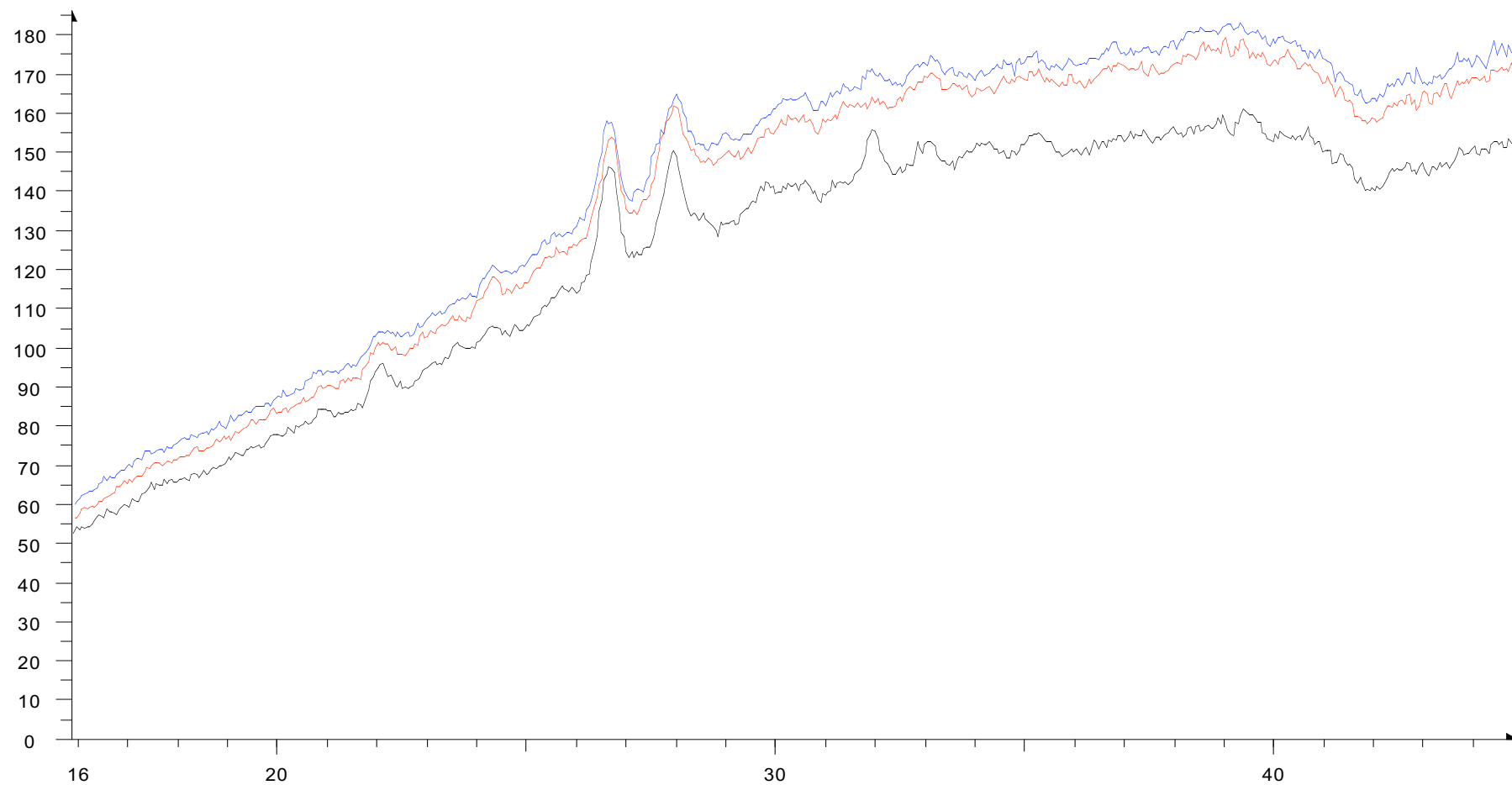
- Y + 8.0 mm - File: KristinTM2 2 20 14.raw
- Y + 10.0 mm - File: KristinTM2 2 20 15.raw
- Y + 12.0 mm - File: KristinTM2 2 20 17.raw
- Y + 14.0 mm - File: KristinTM2 2 20 18.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pprite - FeS<sub>2</sub>
- 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O

- 42-1320 (I) - Arsenobovrite - FeAsS
- 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>
- 41-0224 (I) - Bassanite, svn - CaSO<sub>4</sub>·0.5H<sub>2</sub>O



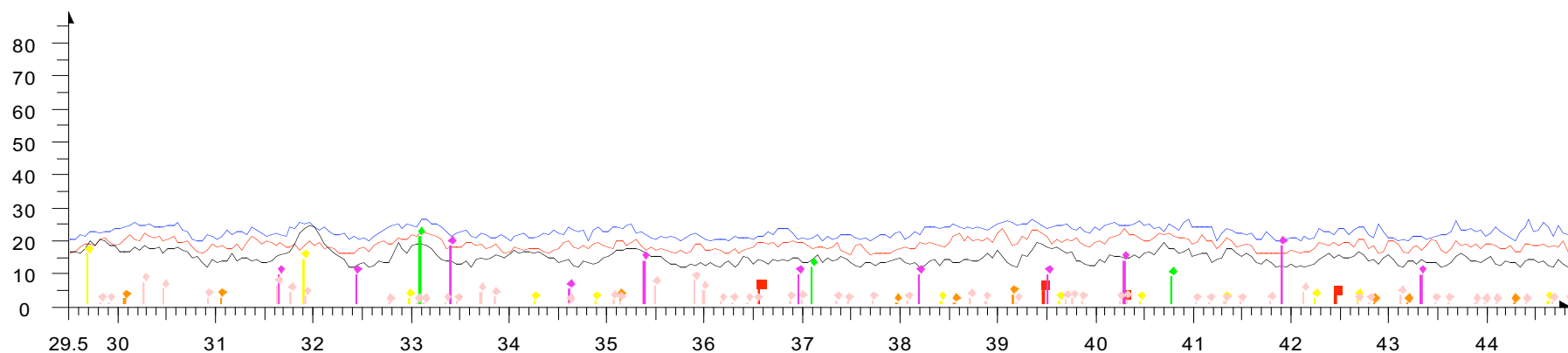
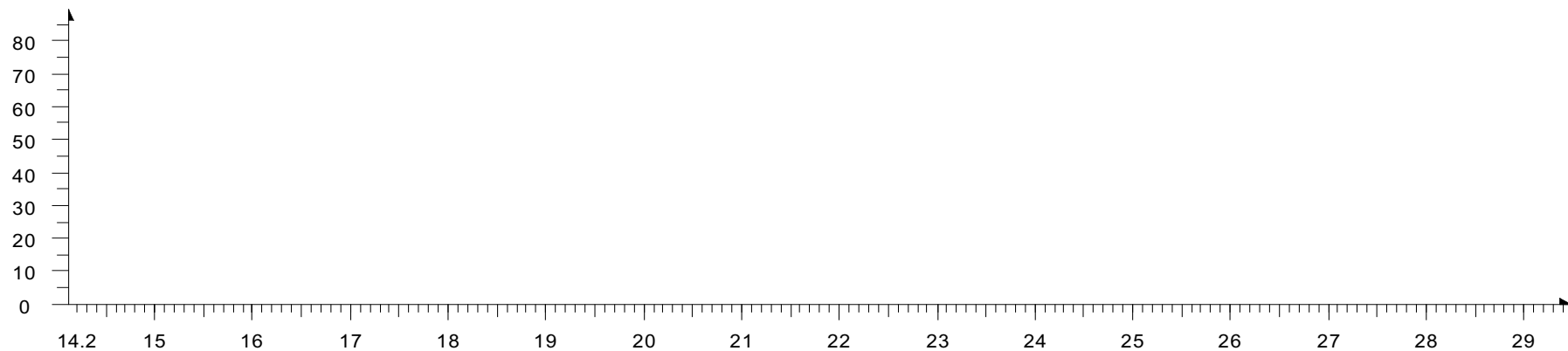
Y + 8.0 mm - File: KristinTM2 2 20 14.raw  
 Y + 10.0 mm - File: KristinTM2 2 20 15.raw  
 Y + 12.0 mm - File: KristinTM2 2 20 17.raw  
 Y + 14.0 mm - File: KristinTM2 2 20 18.raw  
 85-0796 (C) - Quartz - SiO<sub>2</sub>  
 42-1340 (\*) - Pprite - FeS<sub>2</sub>  
 37-0468 (\*) - Scorodite - FeAsO<sub>4</sub>·2H<sub>2</sub>O  
 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O

42-1320 (I) - Arsenobovrite - FeAsS  
 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>  
 41-0224 (I) - Bassanite, svn - CaSO<sub>4</sub>·0.5H<sub>2</sub>O



2-Theta - Scale

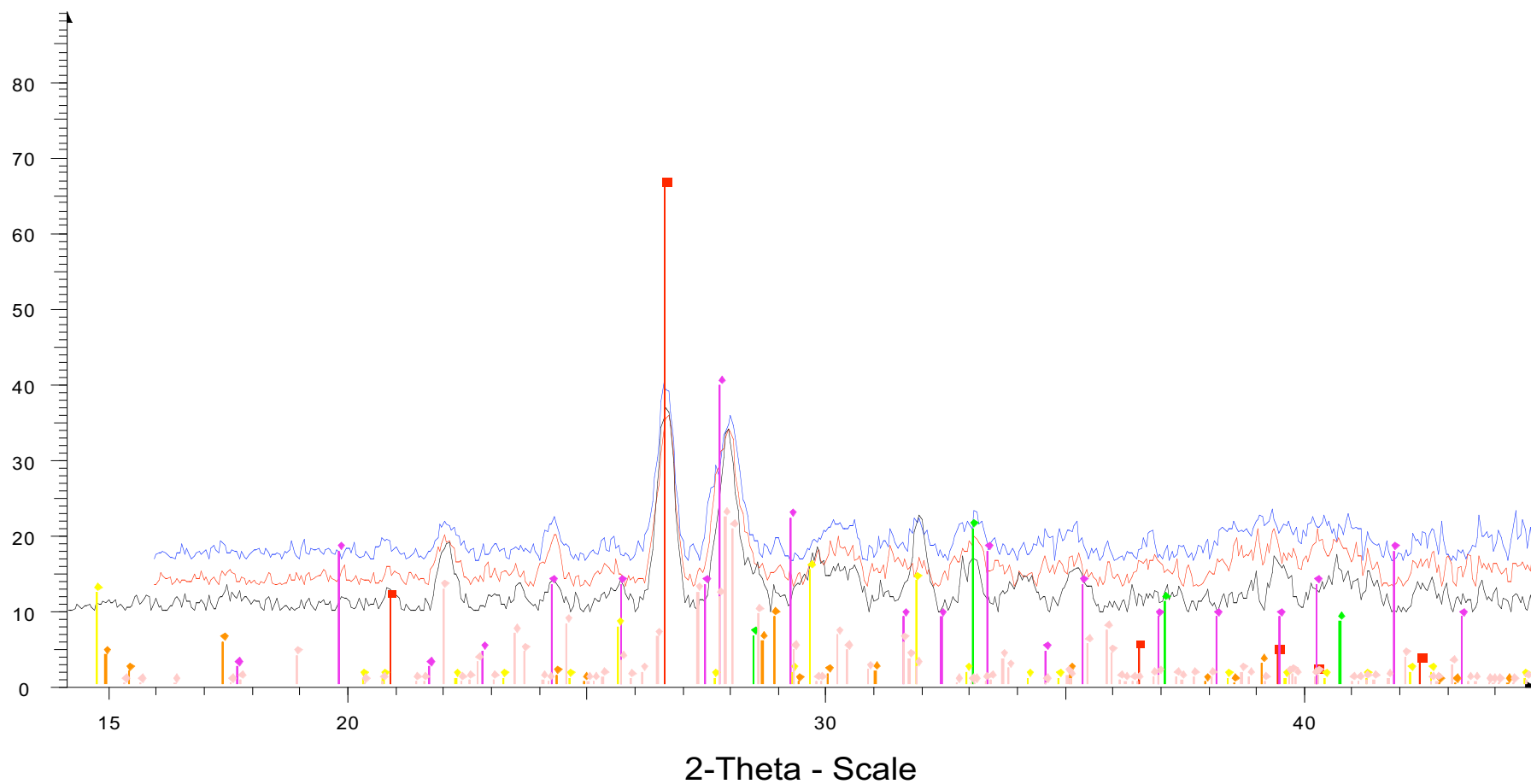
File: KristinTM2 2 20 16.raw  
Y + 2.0 mm - File: KristinTM2 2 20 20.raw  
Y + 4.0 mm - File: KristinTM2 2 20 21.raw



## 2-Theta - Scale

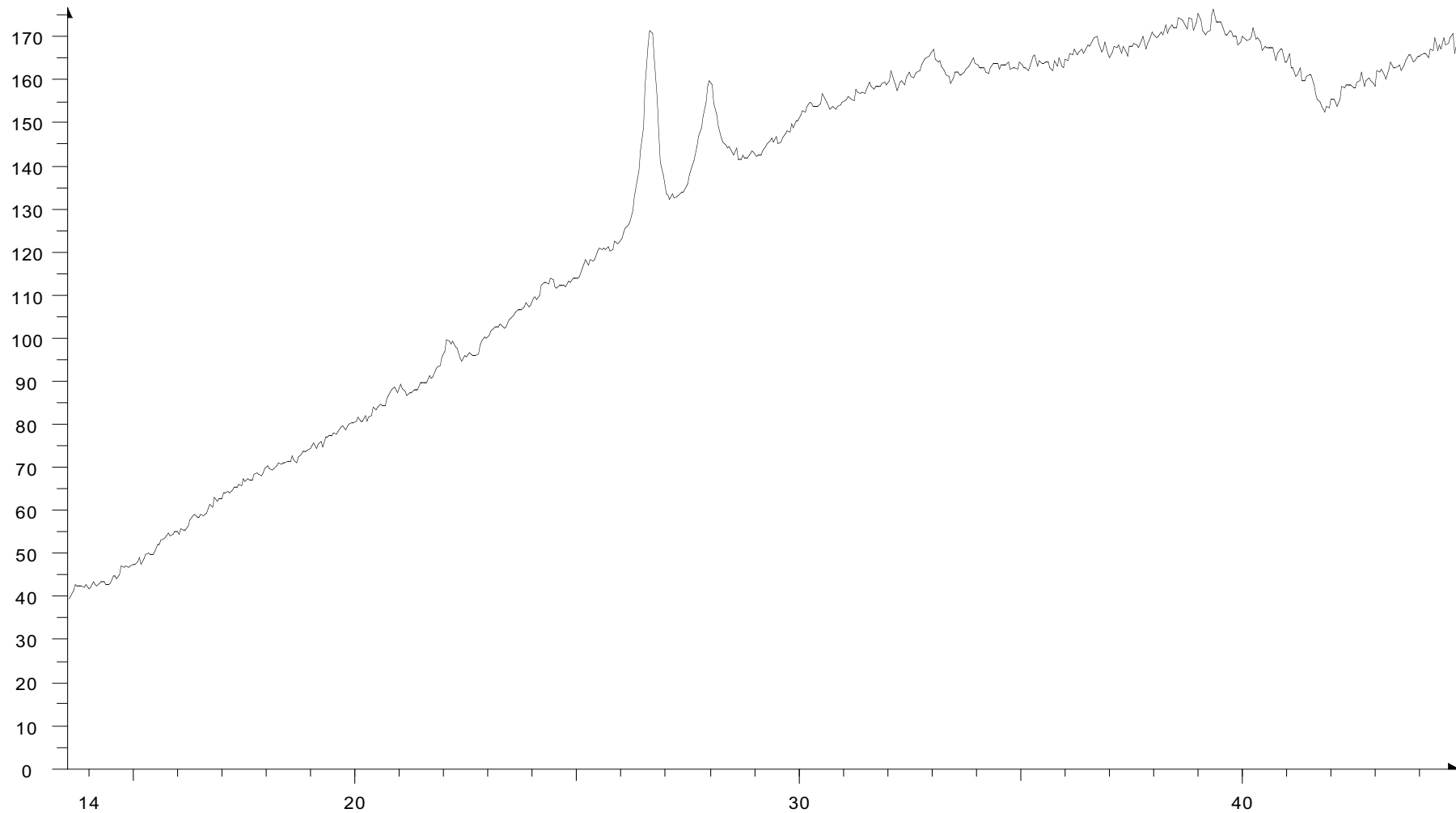
- Y + 6.0 mm - File: KristinTM2 2 20 16.raw
- Y + 8.0 mm - File: KristinTM2 2 20 20.raw
- Y + 10.0 mm - File: KristinTM2 2 20 21.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pprite - FeS<sub>2</sub>
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 76-0629 (C) - Jarosite - K(Fe<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>)
- 41-0224 (I) - Bassanite. svn - CaSO<sub>4</sub>·0.5H<sub>2</sub>O

- 86-1705 (C) - Anorthite - Ca(Al<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>)

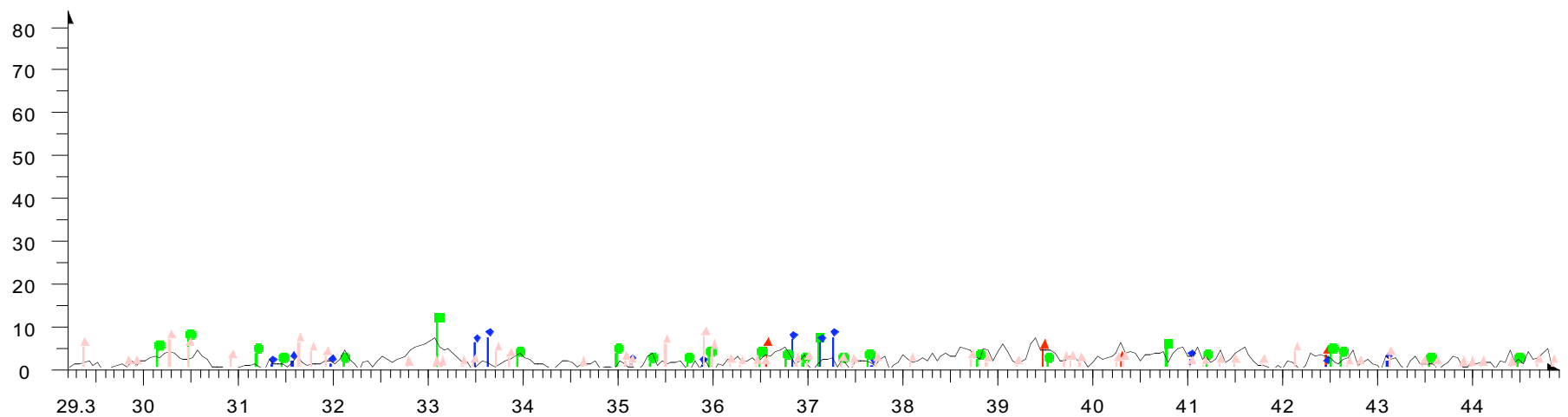
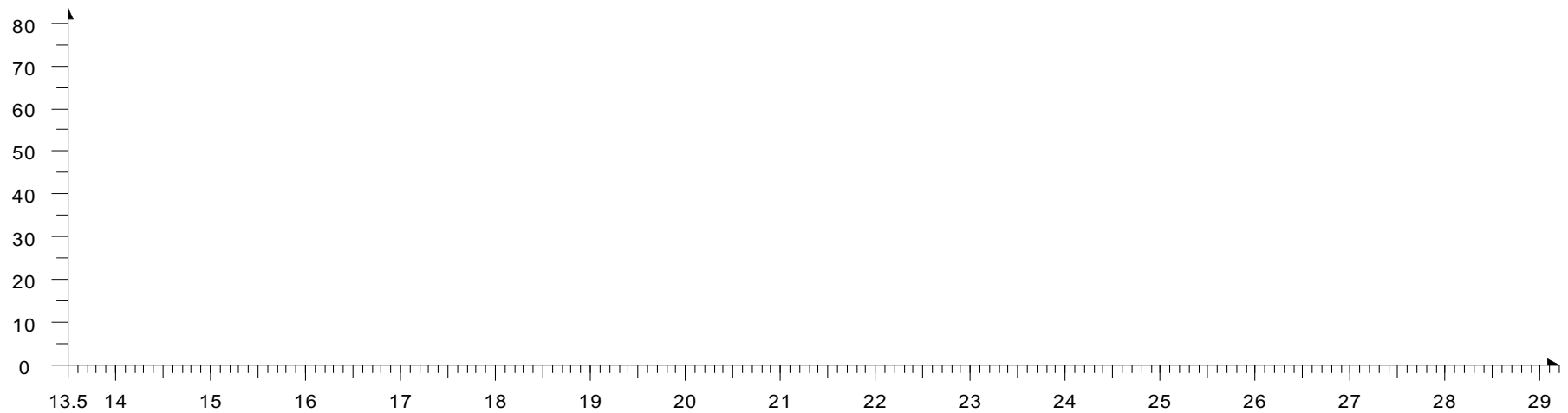


- Y + 12.0 mm - File: KristinTM2 2 20 16.raw
- Y + 16.0 mm - File: KristinTM2 2 20 20.raw
- Y + 20.0 mm - File: KristinTM2 2 20 21.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pvrite - FeS<sub>2</sub>
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 76-0629 (C) - Jarosite - K(Fe<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>)
- 41-0224 (I) - Bassanite. svn - CaSO<sub>4</sub>·0.5H<sub>2</sub>O

86-1705 (C) - Anorthite - Ca(Al<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>)



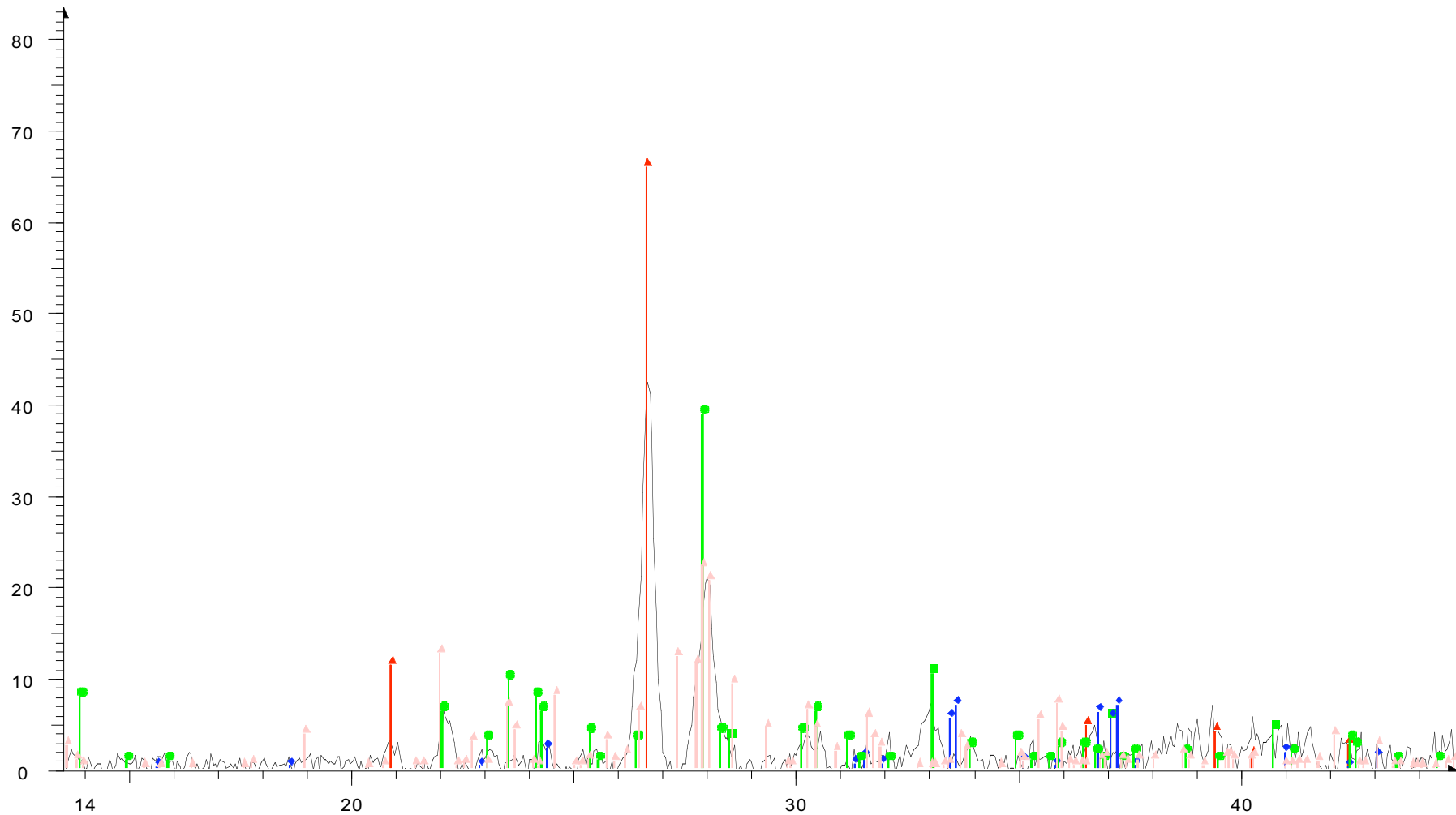
File: KristinTM2 2 20 25.raw



2-Theta - Scale

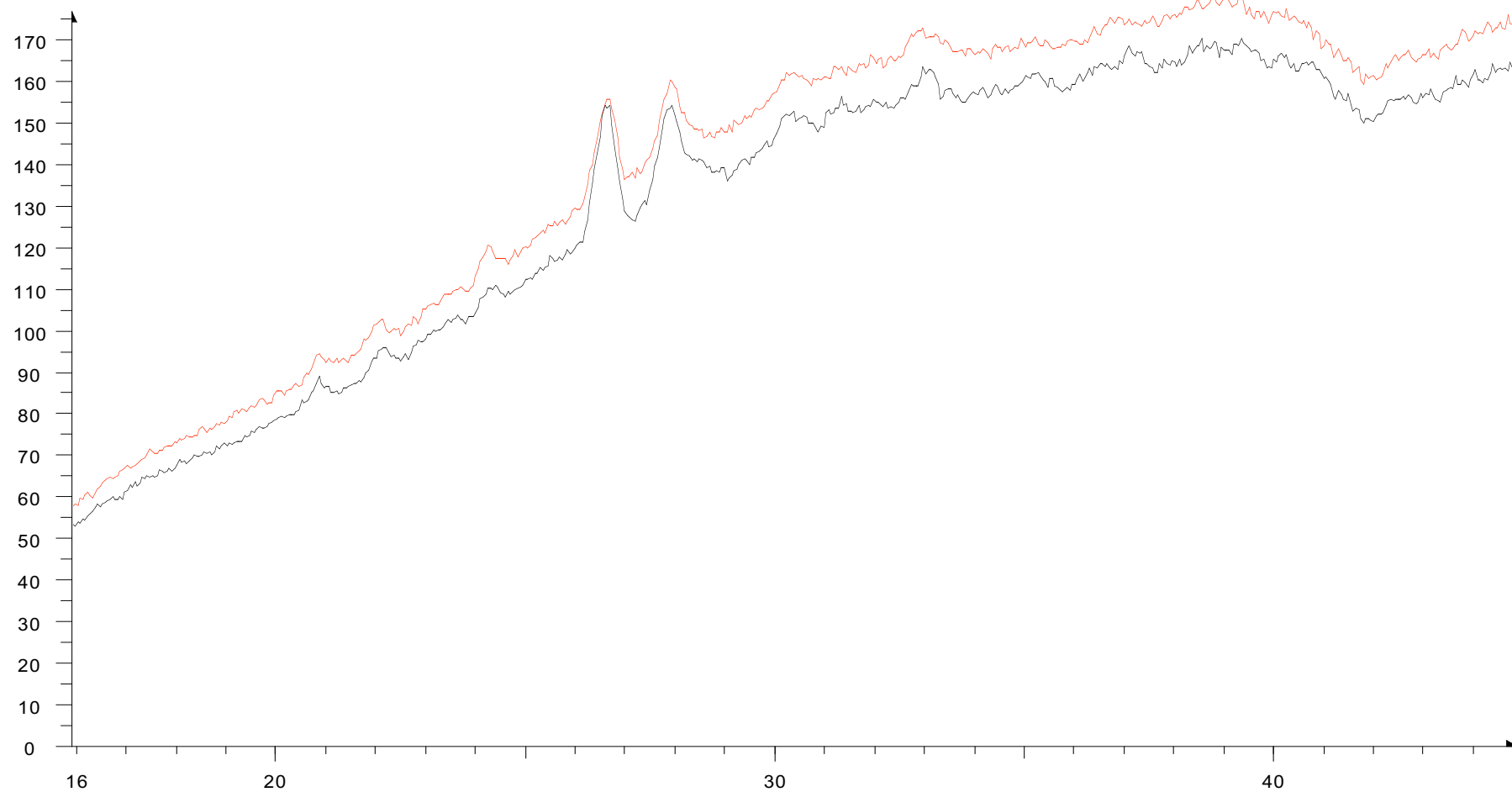
- File: KristinTM2 2 20 25.raw
- 85-0796 (C) - Quartz -  $\text{SiO}_2$
- 42-1340 (\*) - Pwrite -  $\text{FeS}_2$
- 42-1320 (I) - Arsenopvrite -  $\text{FeAsS}$
- 09-0466 (\*) - Albite, ordered -  $\text{NaAlSi}_3\text{O}_8$
- 86-1705 (C) - Anorthite -  $\text{Ca}(\text{Al}_2\text{Si}_2\text{O}_8)$



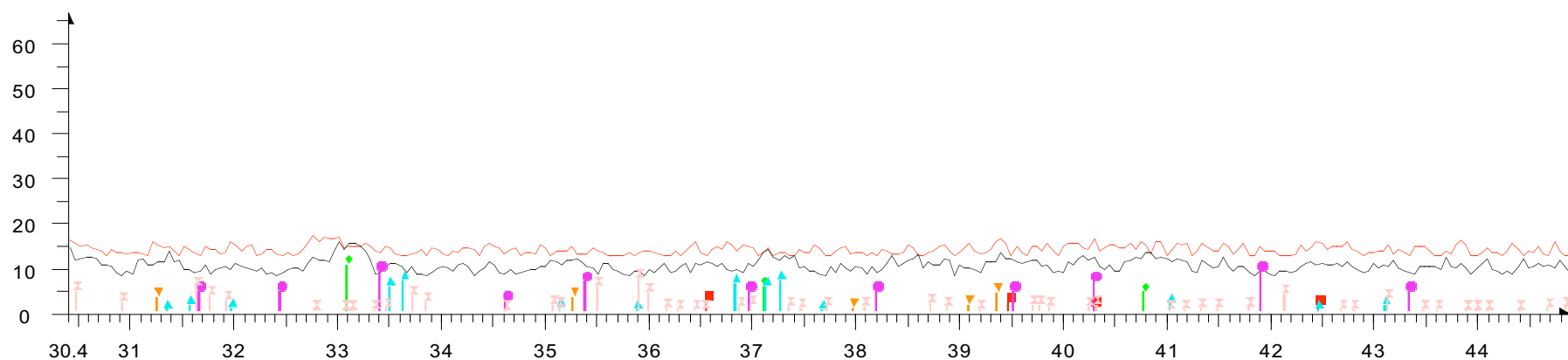
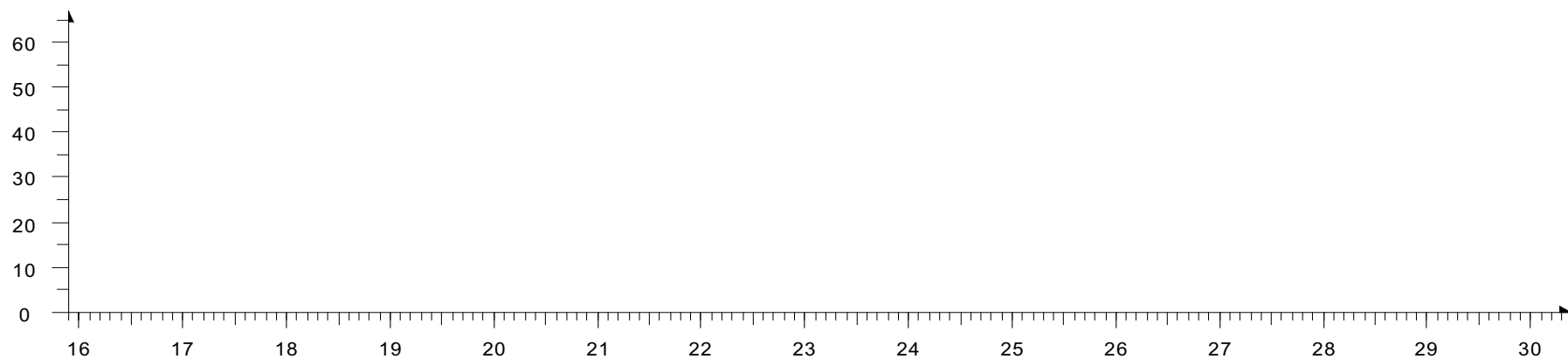


2-Theta - Scale

- File: KristinTM2 2 20 25.raw
- 85-0796 (C) - Quartz - SiO2
- 42-1340 (\*) - Prite - FeS2
- 42-1320 (I) - Arsenopyrite - FeAsS
- 09-0466 (\*) - Albite, ordered - NaAlSi3O8
- 86-1705 (C) - Anorthite - Ca(Al2Si2O8)

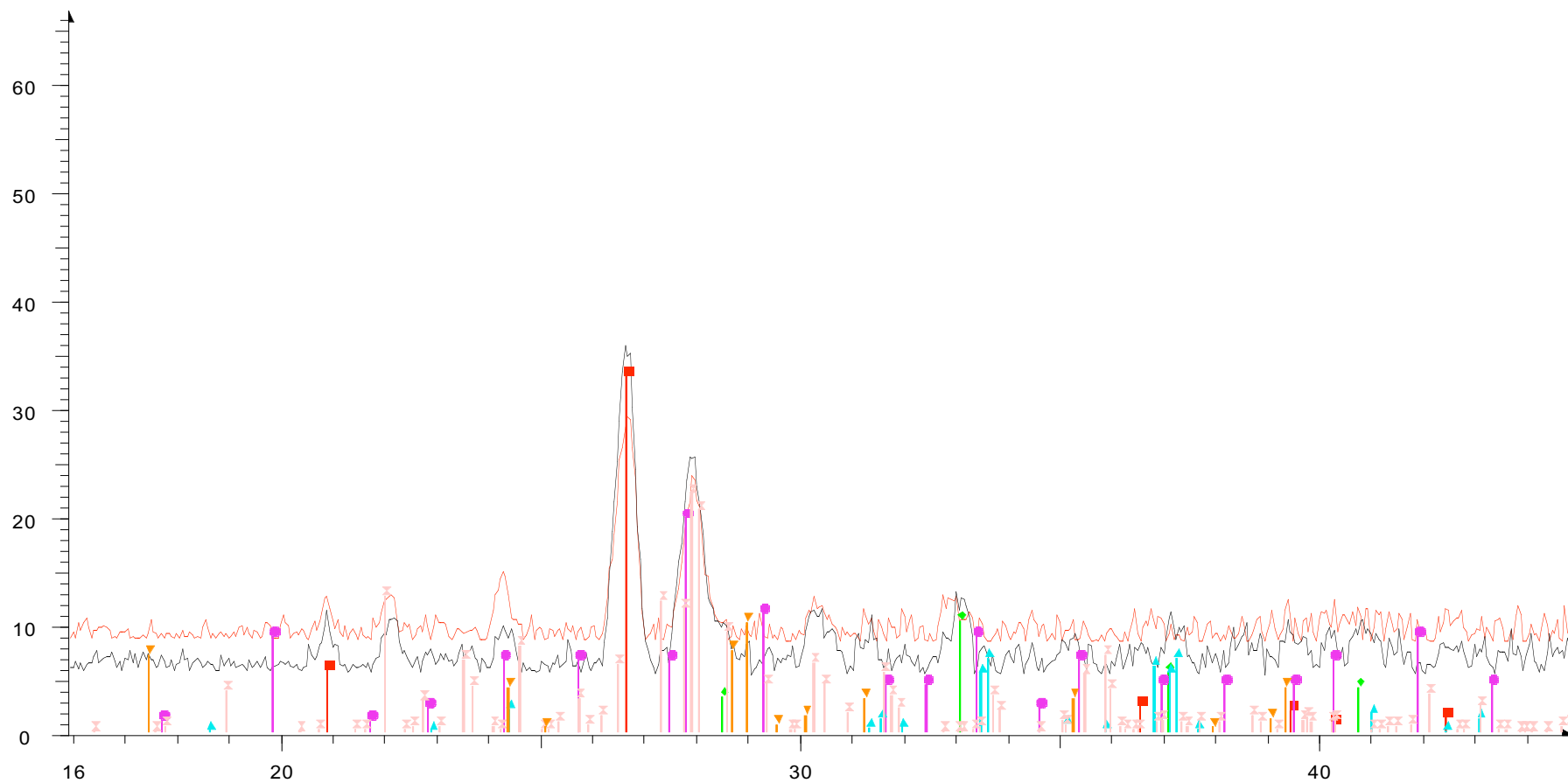


File: KristinTM2 2 20 22.raw  
Y + 3.0 mm - File: KristinTM2 2 20 23.raw



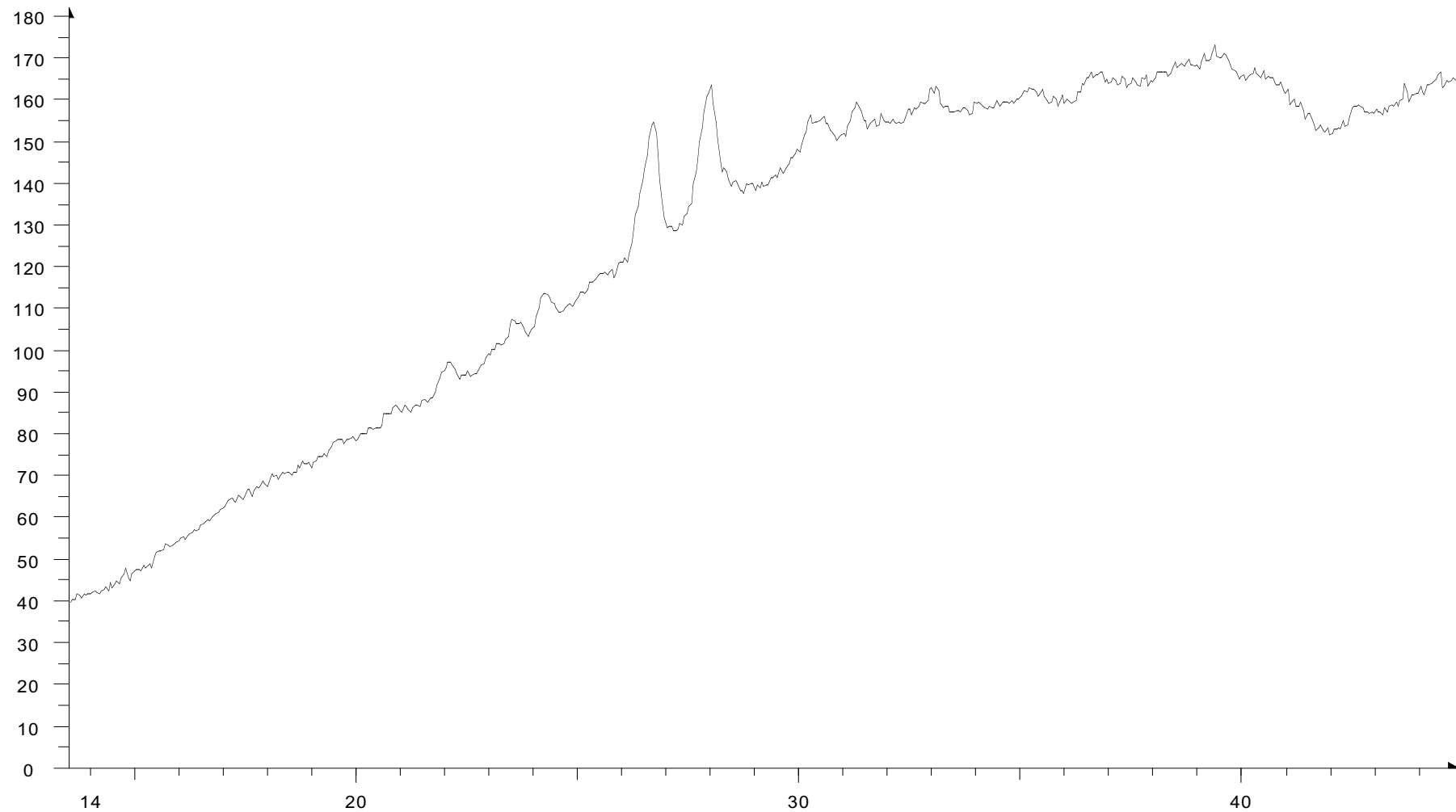
2-Theta - Scale

- Y + 6.0 mm - File: KristinTM2 2 20 22.raw
- Y + 9.0 mm - File: KristinTM2 2 20 23.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pyrite - FeS<sub>2</sub>
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 42-1320 (I) - Arsenopvrite - FeAsS
- 22-0827 (I) - Jarosite. svn - KFe<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>
- 86-1705 (C) - Anorthite - Ca(Al<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>)

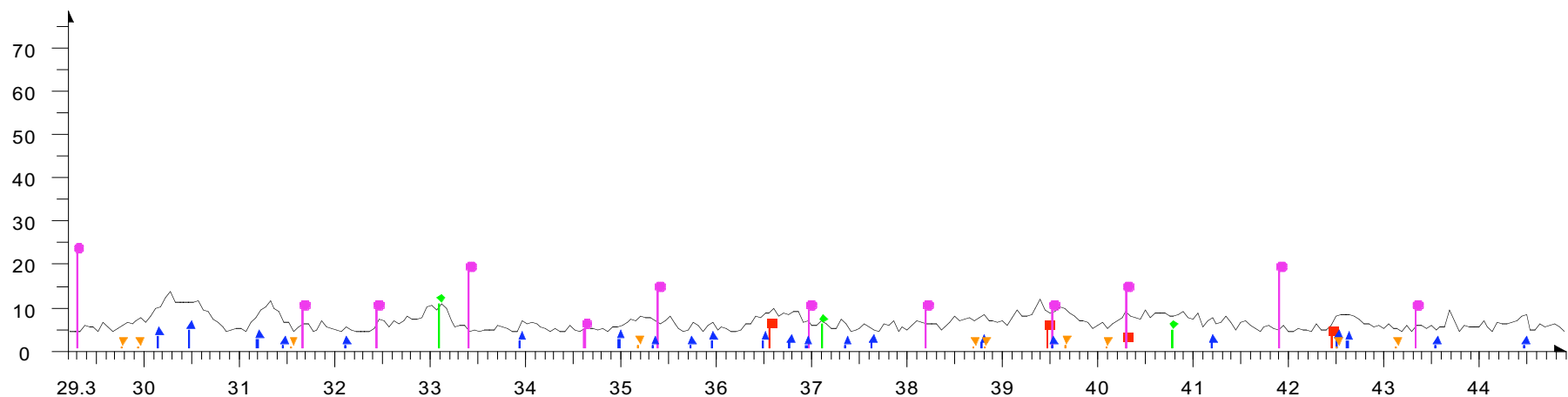
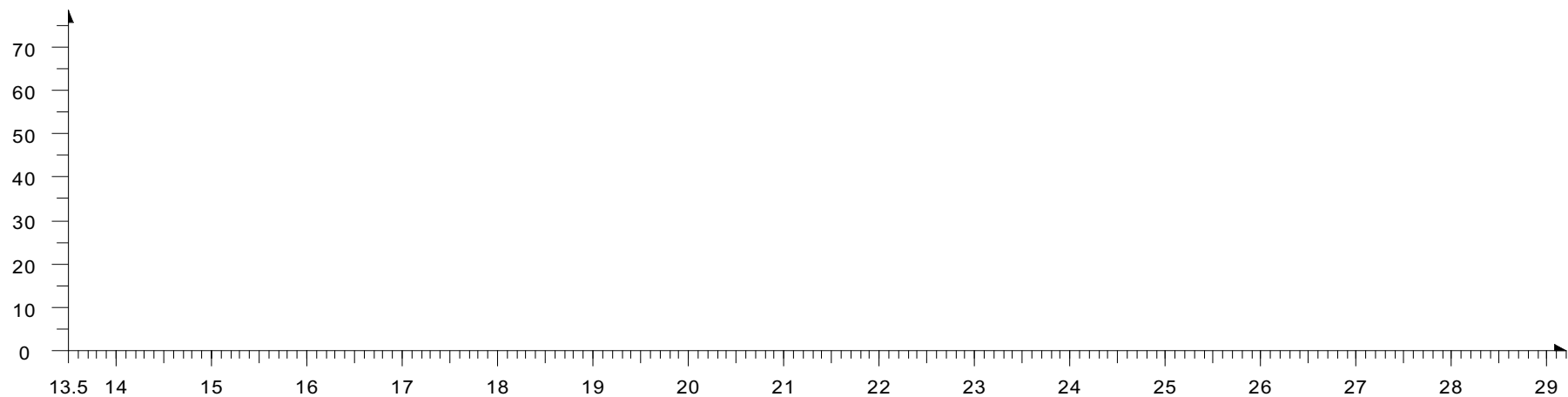


2-Theta - Scale







- Y + 10.0 mm - File: KristinTM2 2 20 22.raw
- Y + 15.0 mm - File: KristinTM2 2 20 23.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pyrite - FeS<sub>2</sub>
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 42-1320 (I) - Arsenopyrite - FeAsS
- 22-0827 (I) - Jarosite, svn - KFe<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>
- 86-1705 (C) - Anorthite - Ca(Al<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>)

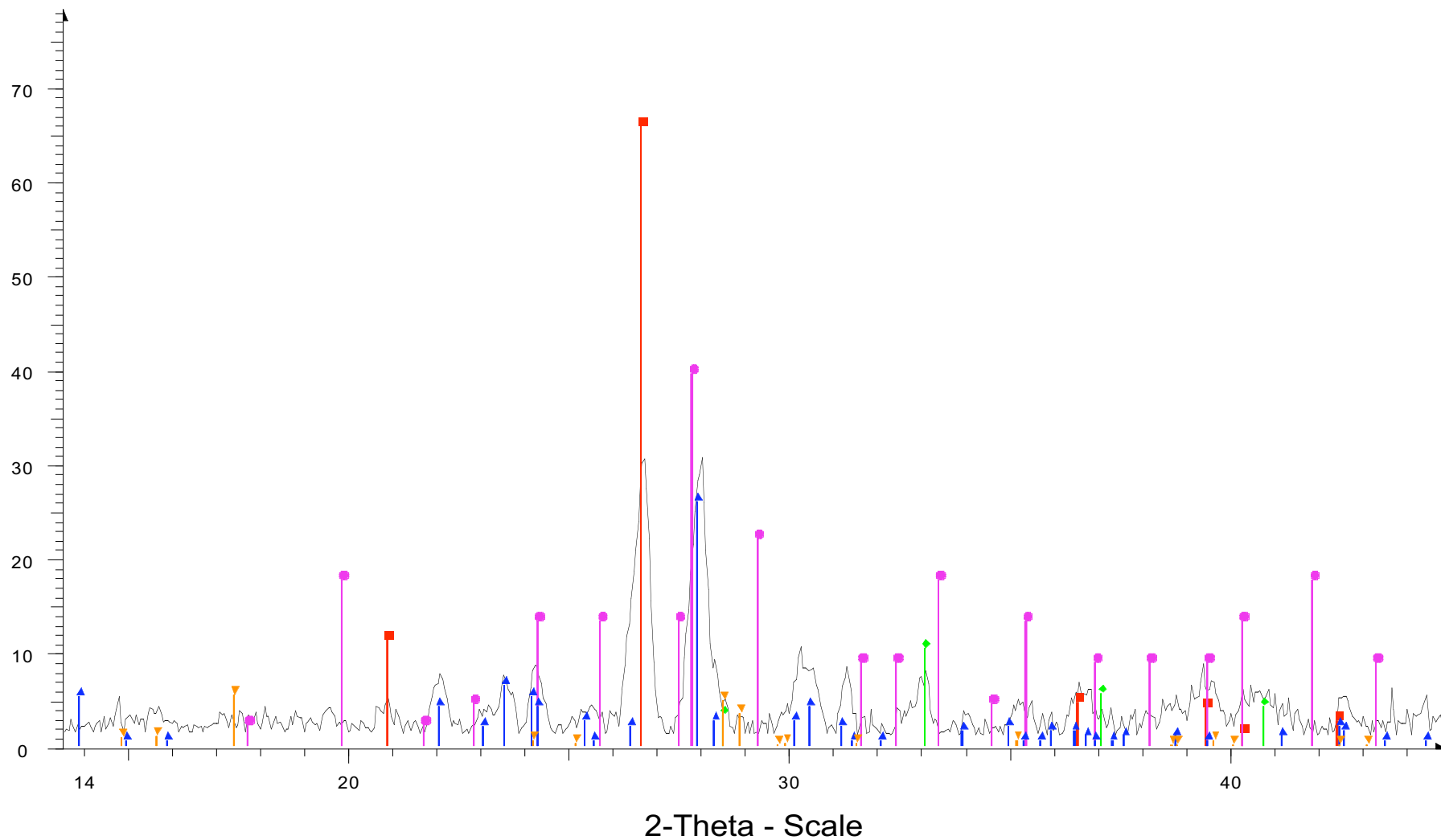


File: KristinTM2 2 20 24.raw



2-Theta - Scale

-  Y + 3.0 mm - File: KristinTM2 2 20 24.raw
-  85-0796 (C) - Quartz - SiO<sub>2</sub>
-  42-1340 (\*) - Pwrite - FeS<sub>2</sub>
-  44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
-  09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>
-  31-0650 (I) - Hvdroniumiarosite, svn - (H<sub>3</sub>O)Fe<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>



- Y + 3.0 mm - File: KristinTM2 2 20 24.raw
- 85-0796 (C) - Quartz - SiO<sub>2</sub>
- 42-1340 (\*) - Pprite - FeS<sub>2</sub>
- 44-1468 (N) - Tooeleite - Fe<sub>8</sub>(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>6</sub>·5H<sub>2</sub>O
- 09-0466 (\*) - Albite, ordered - NaAlSi<sub>3</sub>O<sub>8</sub>
- 31-0650 (I) - Hvdroniumiarosite, svn - (H<sub>3</sub>O)Fe<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>