Subject: Re: AGATA Crystal positions (Look-Up Table)
Posted by thuyuk on Thu, 19 Mar 2015 13:46:20 GMT
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Dear all,

If we compare the coordinates of the first several crystals in both cases:

Lookup table inside the GW:

```
  0  0     48.08390   31.04885 -227.95092
     1      0.45352    0.86888   0.19842
     2      0.86889   -0.48060   0.11858
     3      0.19839    0.11862  -0.97292
  1  0     40.86042   88.71803 -213.76361
     1      0.64447   -0.74500   0.17214
     2     -0.73906   -0.54919   0.39011
     3     -0.19610   -0.37863  -0.90454
  2  0     96.65970   58.36943 -206.11951
     1     -0.90585   -0.01692   0.42326
     2      0.09899    0.96308   0.25036
     3     -0.41187    0.26869  -0.87073
  3  0    -14.67047   55.32513 -227.95092
     1     -0.68622    0.72558  -0.05146
     2      0.69982    0.67784   0.22535
     3      0.19839    0.11862  -0.97292
  4  0    -71.74929   66.27595 -213.76361
     1      0.90204    0.29209  -0.31782
     2      0.38454   -0.87825   0.28426
     3     -0.19610   -0.37863  -0.90454
  5  0    -25.64313  109.96598 -206.11951
     1     -0.37407   -0.92117  -0.10731
     2     -0.83092    0.28151   0.47991
     3     -0.41187    0.26869  -0.87073
  6  0    -57.15075    3.14396 -227.95092
     1     -0.87762   -0.42045  -0.23022
     2     -0.43637    0.89953   0.02069
     3      0.19839    0.11862  -0.97292
```

Lookup table insdie the prespec an. pack.:

```
  0  0     41.34692   39.57936  227.95091
     1      0.95033   -0.26615   0.16133
     2      0.23981    0.95660   0.16553
     3     -0.19839   -0.11862   0.97292
  1  0     95.77207   19.18782  213.76361
     1     -0.56958   -0.70689   0.41938
     2      0.79820   -0.59745   0.07704
     3      0.19610    0.37863   0.90454
  2  0     79.18105   80.50124  206.11951
     1     -0.11363    0.93294   0.34164
     2     -0.90413   -0.23965   0.35372
     3      0.41187   -0.26869   0.87073
  3  0    -24.86530   51.55395  227.95091
```

```
 1      0.06560  -0.99203  -0.10758
 2      0.97793   0.04248   0.20459
 3     -0.19839  -0.11862   0.97292
4 0    11.34650  97.01402 213.76361
 1     -0.93514   0.34976   0.05632
 2     -0.29505  -0.85692   0.42266
 3      0.19610   0.37863   0.90454
5 0   -52.09293 100.18191 206.11951
 1      0.82476   0.51622  -0.23084
 2     -0.38746   0.81322   0.43422
 3      0.41187  -0.26869   0.87073
6 0   -56.71452  -7.71727 227.95091
 1     -0.90979  -0.34695  -0.22782
 2      0.36458  -0.93035  -0.03909
 3     -0.19839  -0.11862   0.97292
```

First of all, it is not clear for me what would the "small" coordinates mean, in other words, the coordinates with the id "0" make sense, but the ids "1, 2 and 3" are not obvious for me.

Well, if we compare the coordinates with id 0, then we immediately see that the z coordinates are swapped from -z to +z, from the GW to the prespec code, respectively. But, the transformation on x and y seem totally confusing. Damian, did you find out by yourself the transformation, or you were told by somebody else?

Does anybody know if the crystal numbering was changed from Legnaro to GSI? This information is required to focus on comparing crystal by crystal without worrying if also the crystals were scrambled.

edit:
sorry for the bad view of the coordinates, the tabs are not shown properly in the html, I guess.
I uploaded two file, so you can compare them with your favorite viewer.
So, the one with suffix __gw is from the GW, and the __orig is the one inside the prespec code.

File Attachments

1) Adapter.CrystalPositionLookUpTable__gw, downloaded 482 times
2) Adapter.CrystalPositionLookUpTable__orig, downloaded 464 times