Subject: Re: AGATA Crystal positions (Look-Up Table)
Posted by miree on Thu, 19 Mar 2015 14:05:08 GMT
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In the prespec package, the transformation looks like this (prespec/plugins/AGATA/process/AgataAdapter.cpp)

```
void AgataAdapter::Orientation::transform(int crystal_id, double x, double y, double z, double &x_lab, double &y_lab, double &z_lab)
{
  // perform the full transformation:
  // crystal coordinate sytem -> agata array coordinate system -> frs cooridinate system
  y_lab = -(crystal_ori[crystal_id][0][0] * x  + crystal_ori[crystal_id][1][0] * y + crystal_ori[crystal_id][2][0] * z + crystal_pos[crystal_id][0]);
  x_lab = -(crystal_ori[crystal_id][0][1] * x  + crystal_ori[crystal_id][1][1] * y + crystal_ori[crystal_id][2][1] * z + crystal_pos[crystal_id][1]);
  z_lab =   crystal_ori[crystal_id][0][2] * x  + crystal_ori[crystal_id][1][2] * y + crystal_ori[crystal_id][2][2] * z + crystal_pos[crystal_id][2] ;
}
```

You can see that swapping and minus signs are explicitly put here and are not part of the transformation matrices in CrystalPositionLookupTable.

As far as I know, the CrystalPositionLookupTable did change from Legnaro to GSI.