

Laue Analysis System(Ver.6.0.0)

Norm Engineering Co.,

1. Outline

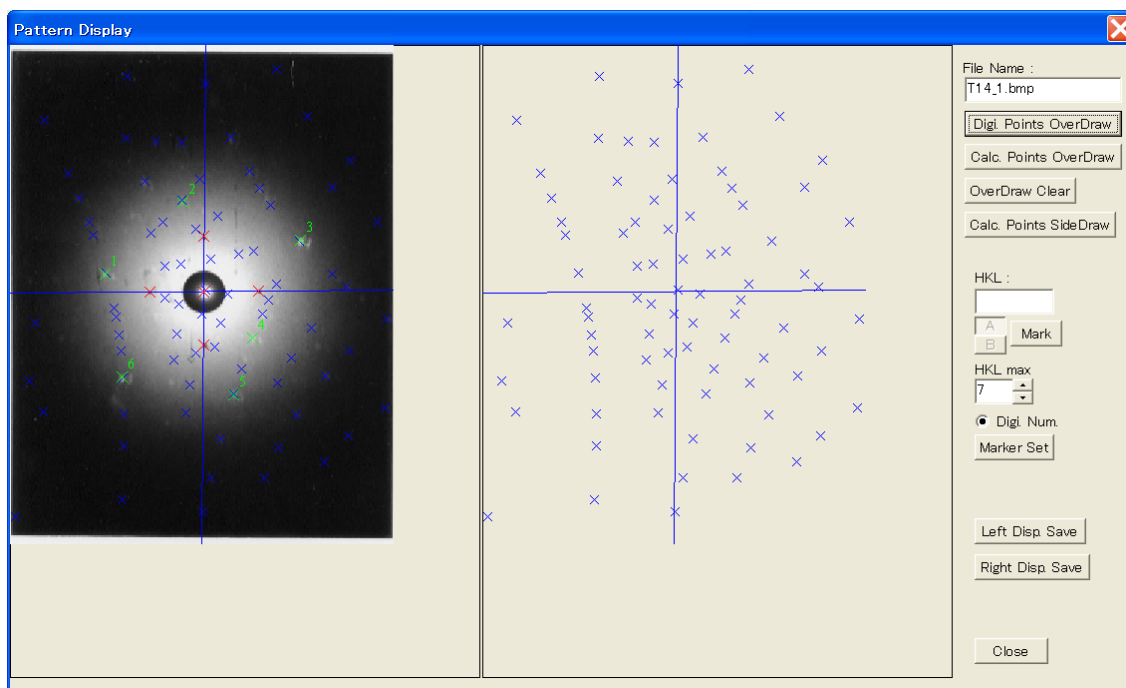
This Laue Analysis System has two programs.

One is “Laue Analysis Program”, which can get the direction indices (hkl) on Laue spots and the crystal rotation angle.

Another one is “Laue pattern and Stereographic projection draw Program”.

2. Character of “Laue Analysis Program”

- ① When you digitize the Laue spot on the Laue photograph that was read from BMP file (.bmp), you can get the spot positions(x,y).
- ② From the spot positions(x,y), you can do the Laue Analysis.
From the analysis, you can get **the direction indices (hkl) on Laue spots** and **the crystal rotation angle**.
The crystal rotation angle is expressed not only by **the crystal coordinate**, but also by **the mechanical coordinate**.
- ③ You can confirm the Laue Analysis result on the display, and print out the **full-scale picture**.
- ④ You can analyze **all crystal system** (cubic, tetragonal, orthorhombic, rhombohedral, hexagonal, monoclinic, triclinic).
- ⑤ You can analyze **Back Reflection Laue**, **Forward Reflection Laue** and **Free reflection Laue**.
- ⑥ There are two analysis modes. One is designated hkl of Normal Direction.
Another one is all direction search.
- ⑦ You can save Laue Analysis result in **clip board** and **bit map file**.
- ⑧ You can consider **the extinction rule** by reflection type and condition which was classified by space group.
- ⑨ You can analyze not only flat Laue photo, but also **Cylindrical Laue photo**.
- ⑩ When you analyze Back Reflection Laue, you can get **Greninger values (γ, δ)** about digitize points.
And when you analyze Forward Reflection Laue, you can get **Leonhardt values(ϕ, δ)** about digitize points.



3. Character of “Laue pattern and Stereographic projection draw Program”

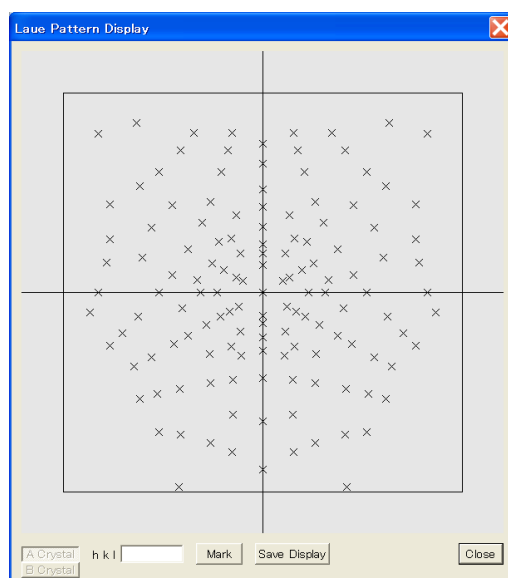
① Laue pattern drawing

When you input the lattice constant, ND(Normal Direction) and RD(Rolling Direction) index, crystal rotating angle (ψ , θ , ϕ), photo size and sample camera distance, then you can simulate the Laue pattern of all crystal system.

And you can save this simulation picture in clip board and bit map file.

The crystal rotation angle is expressed not only by the crystal coordinate, but also by the mechanical coordinate.

And when you input the atoms position in the crystal unit cell, then you can calculate the structure factor and reflect the diffraction intensity on Laue spots.

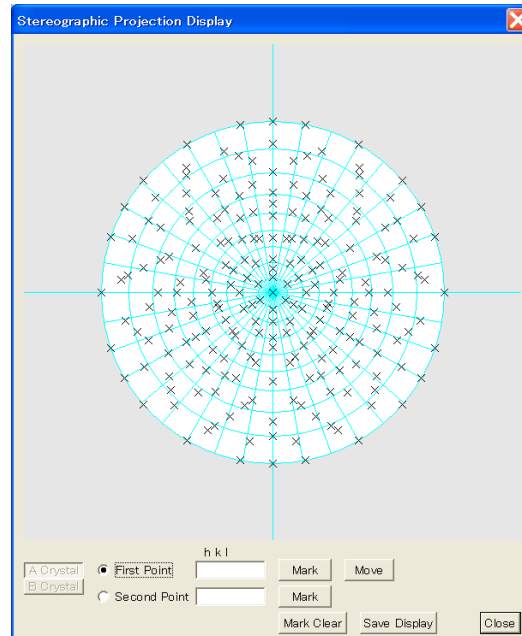


② Stereographic projection drawing

When you input the lattice constant, ND(Normal Direction) and RD(Rolling Direction) index, and crystal rotating angle, then you can simulate the Stereographic projection.

When you designate maximum angle, you can zoom up the center area.

And you can save this simulation picture in clip board and bit map file.



Empty Page