Tutorial of Vector Method Analysis Program(Cubic)

We execute "Crystal Orientation Distribution Analysis by Vector Method" program
by using a sample data of pole figure.

1. Program execution
    When we double click "..¥Vector¥exe¥Vector.exe",   it is wake-upped,
    and its main view is shown.（Fig.1）
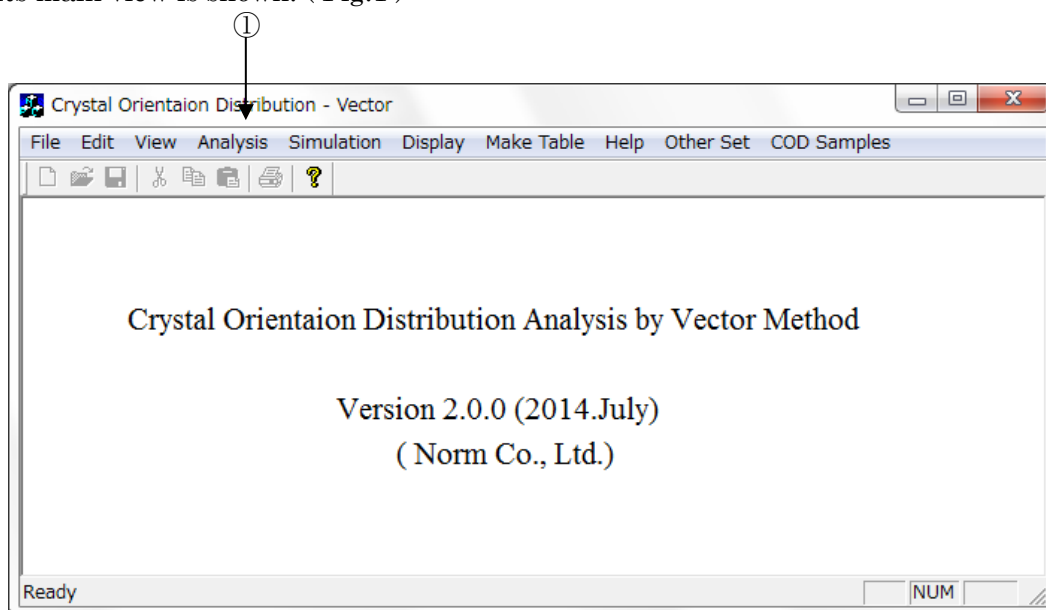

Fig. 1 Main View

① By click "Analysis" of Main Menu,   "Analysis Parameter" dialog（Fig. 2）is shown.
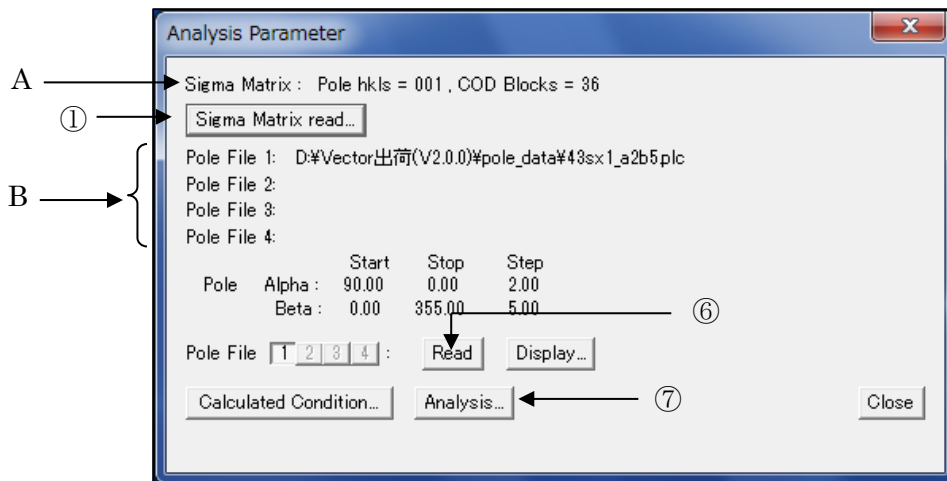
2. "Analysis Parameter" dialog

Fig. 2   Analysis Parameter Dialog

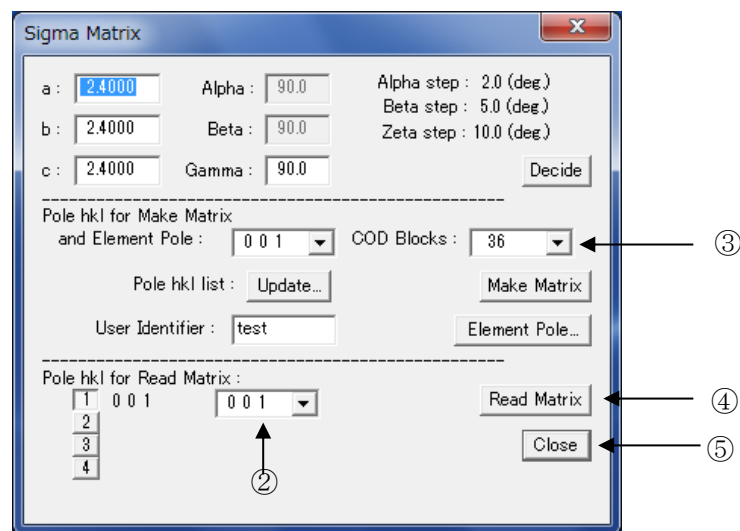① By "Sigma Matrix read…" button click, "Sigma Matrix" dialog (Fig.3) is shown.

Fig. 3   Sigma Matrix Dialog

② As sample data is 001 pole figure, select 001 from "Pole hkl for Read Matrix" .

③ Select 36 from "COD Blocks" . (COD: Crystal Orientation Distribution)

④ By "Read Matrix" button click, sigma matrix is read.
   The read sigma matrix information is shown at A of Fig. 2 .

⑤ By "Close" button click, this dialog is closed.

⑥ Return to Fig. 2, and confirm that Pole File is selected 1, and click "Pole file read" button.
   Select "43sx1_a2b5.plc" file of "..¥Vector¥pole_data" folder.
   The content of the pole figure is shown at B of Fig. 2.

⑦ When you click "Analysis…" button of Fig. 2, "Analysis" dialog (Fig. 4) is shown.
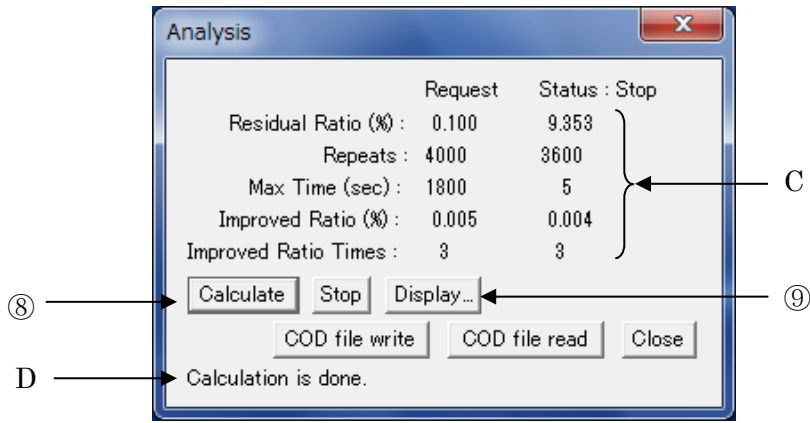
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Fig. 4　Analysis

⑧　When you click "Calculate" button,　Calculation of Vector Method Analysis is started.
Calculated process is displayed at C of Fig. 4.　Ordinarily, Calculation time is about
5 ~ 6 seconds.　After calculation, "Calculation is done" message is shown at D of Fig. 4.

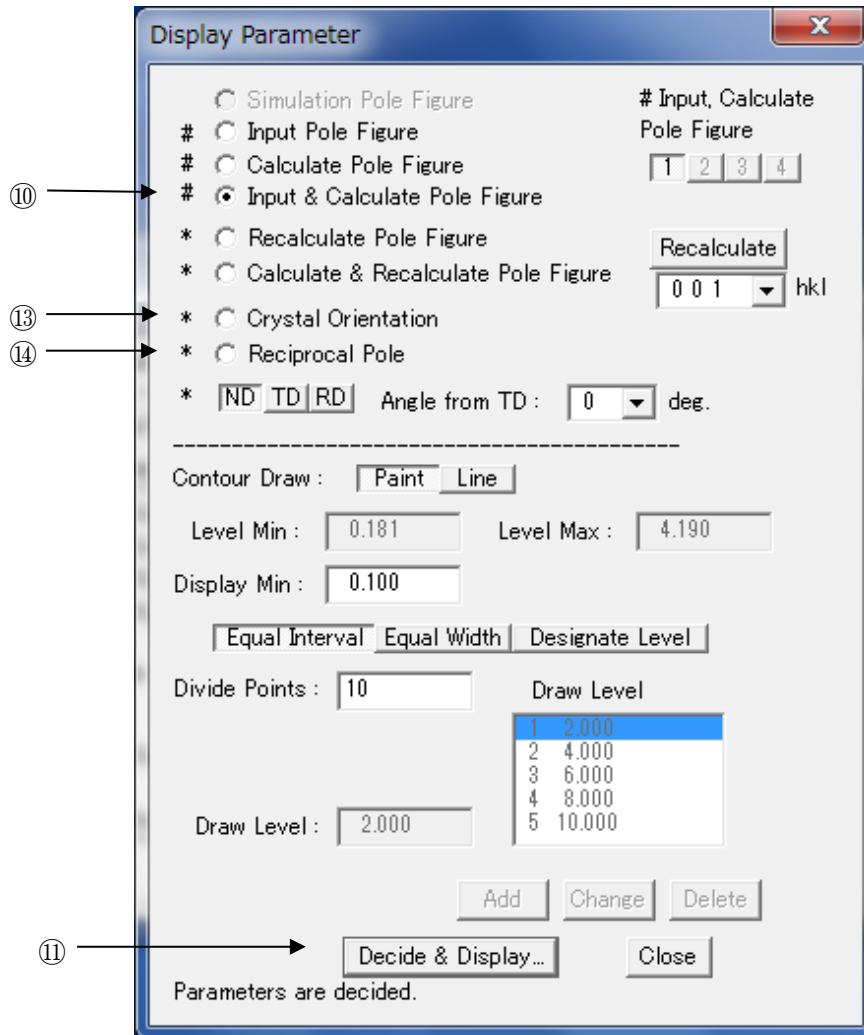⑨　When you click "Display…" button,　"Display Parameter" dialog (Fig. 5) is shown.

Fig. 5　Display Parameter

⑩　Select "Input & Calculate Pole Figure" radio button.

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⑪ When you click "Decide & Display…" button, dialogs ("Input Pole figure" and "Calculated Pole figure") (Fig. 6) are shown.
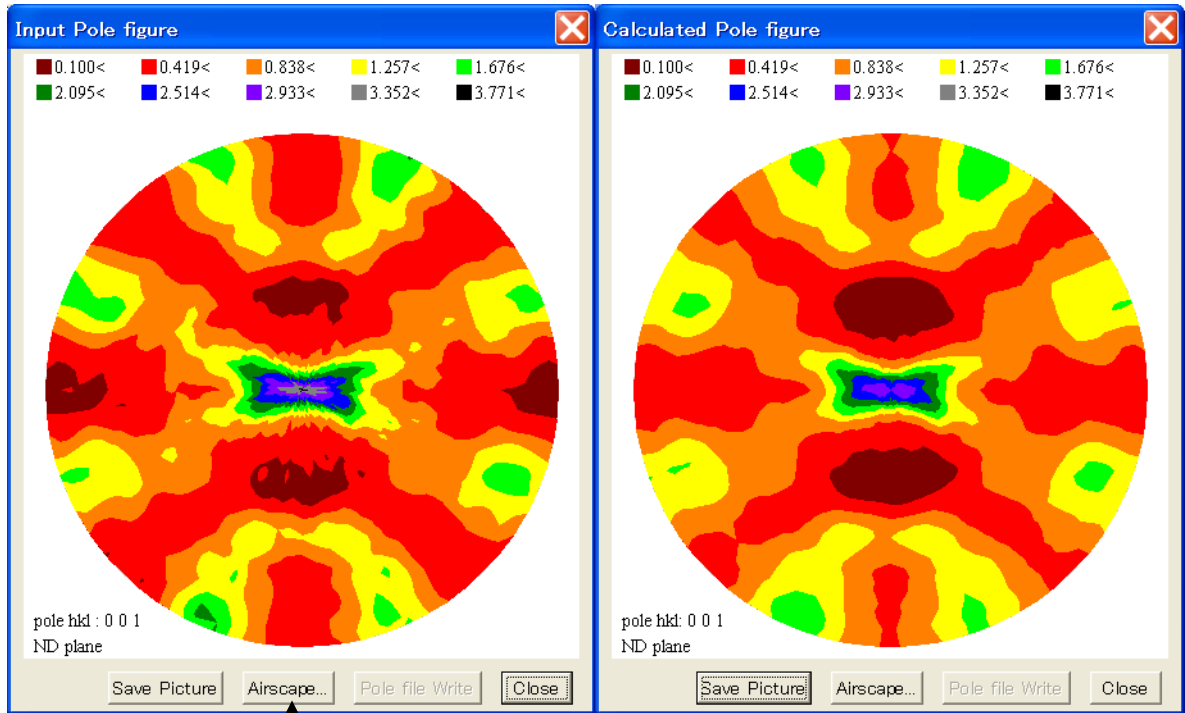

Fig. 6 Input Pole figure and Calculated Pole figure

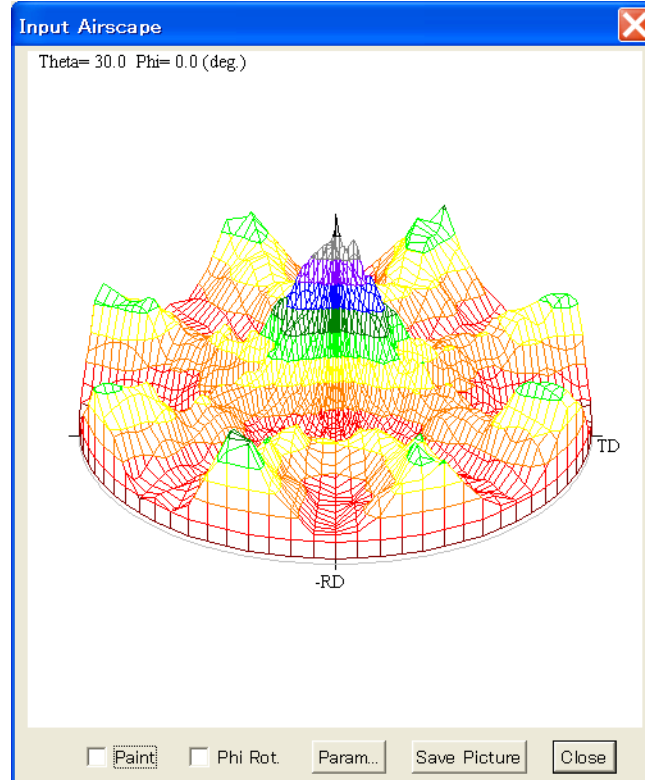⑫ When you click "Airscape…" button, the airscape of "Input Pole figure" is shown.

Fig. 7 Input Airscape

After the observation of displays, each dialog is closed by "Close" button click.

⑬ You select "Crystal Orientation" radio button at Fig. 5, and click "Decide & Display…" of ⑪, Crystal Orientation Display (Fig. 8) is shown.

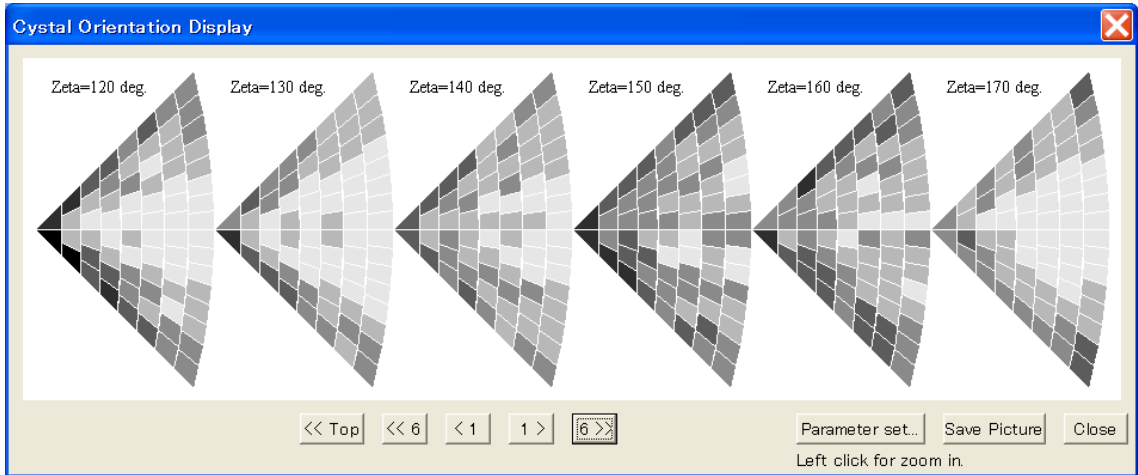　After the observation of display, this dialog is closed by "Close" button click.

Fig. 8　Crystal Orientation Display

⑭ You select "Reciprocal Pole" radio button at Fig. 5, and click "Decide & Display…" of ⑪, "Reciplocal Pole Display " dialog (Fig. 9) is shown.

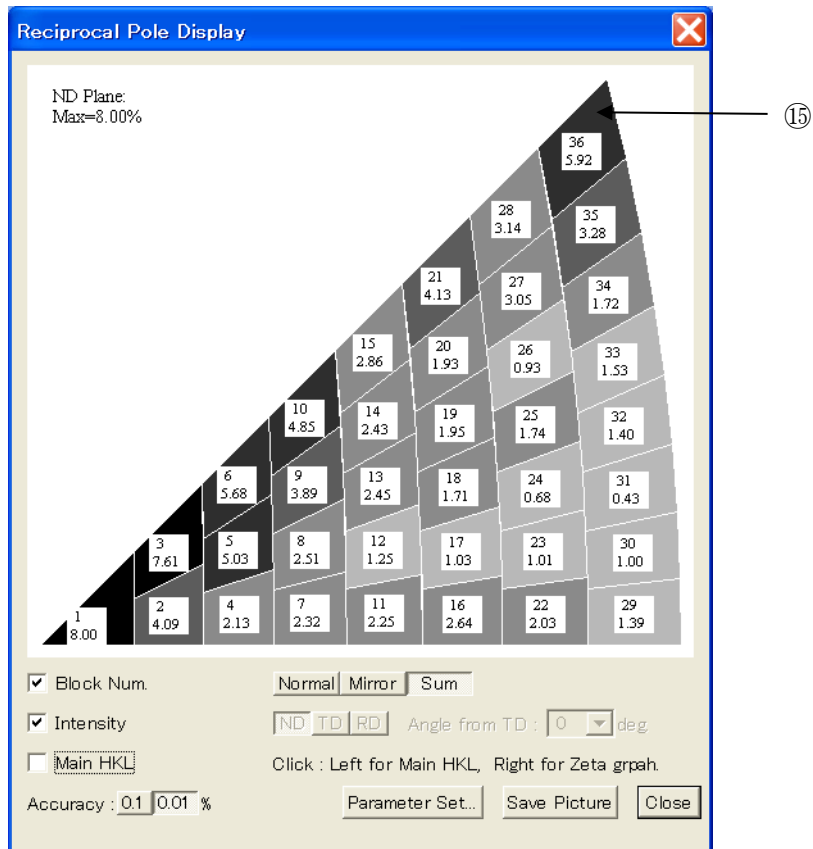

Fig. 9　Reciprocal Pole Display

⑮ When you click a block of Reciprocal Pole (Fig. 9) by right mouse button, "Zeta Graph" dialog (Fig. 10)is shown. Fig. 10 is ζ distribution of clicked block.
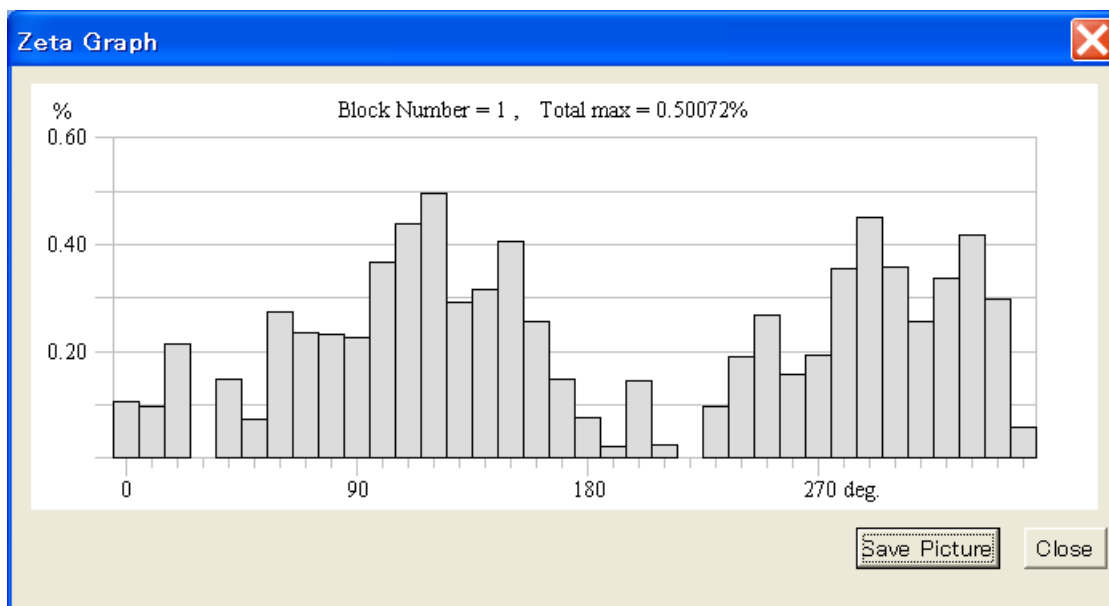
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Fig. 10   Zeta Graph

After the observation of displays,   each dialog is closed by "Close" button click.

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