

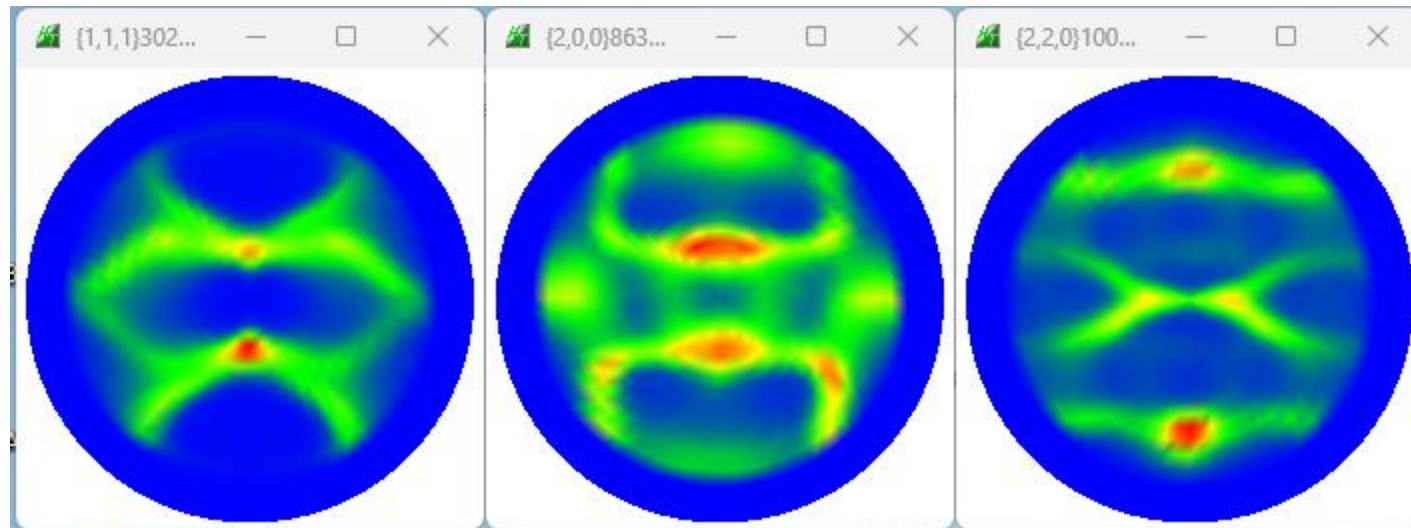
# アルミニウムA社H材の解析例

粉末random試料によるdefocus補正

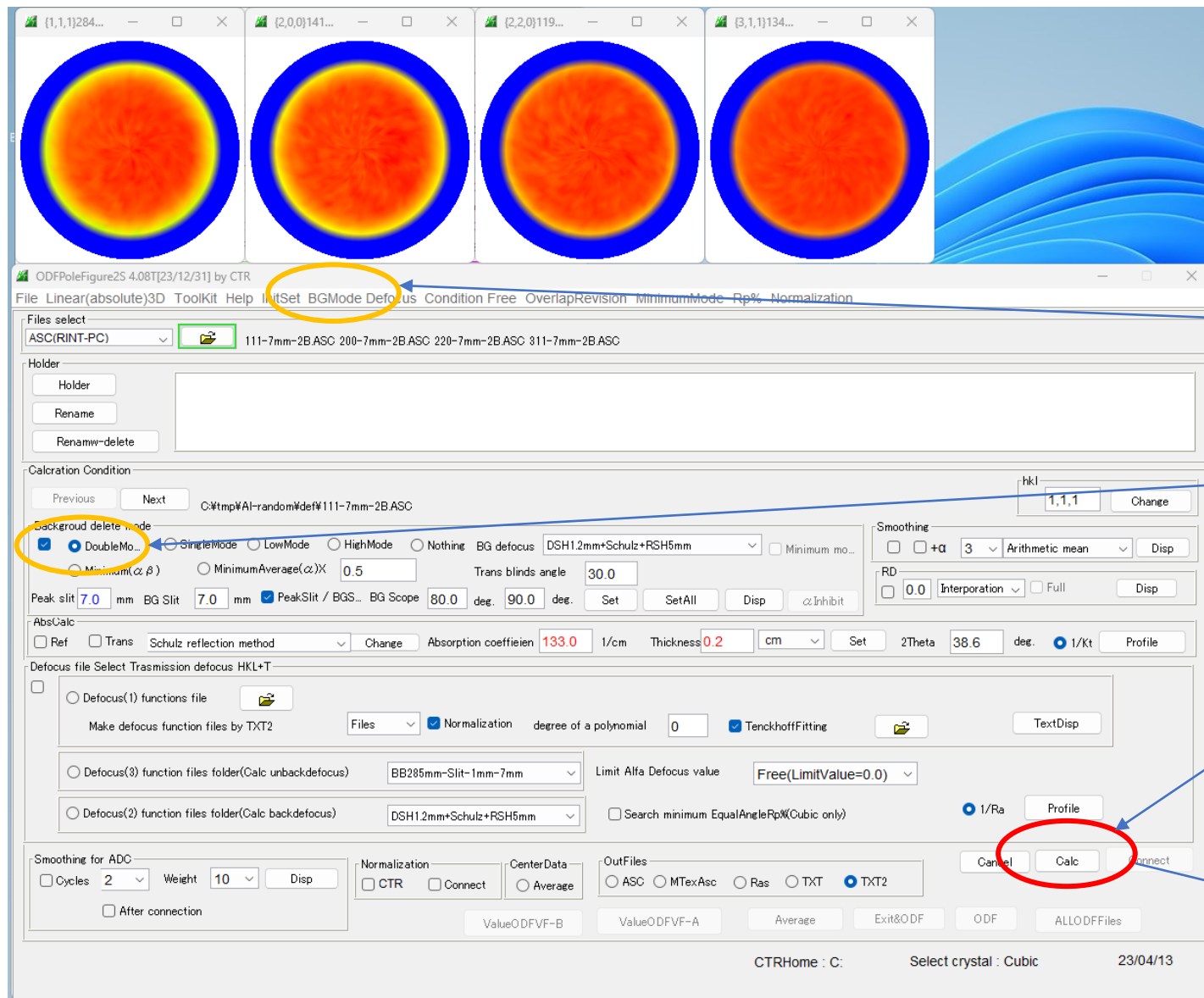
Rp%評価

Random(BG)%評価

VolumeFraction評価



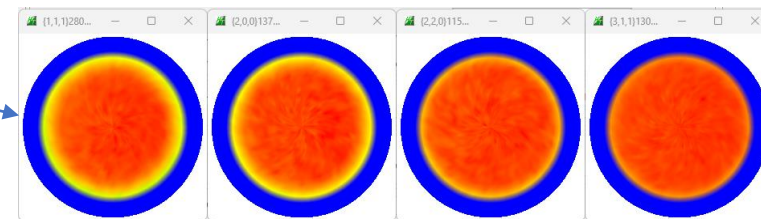
# 粉末試料によるdefocus補正データ作成



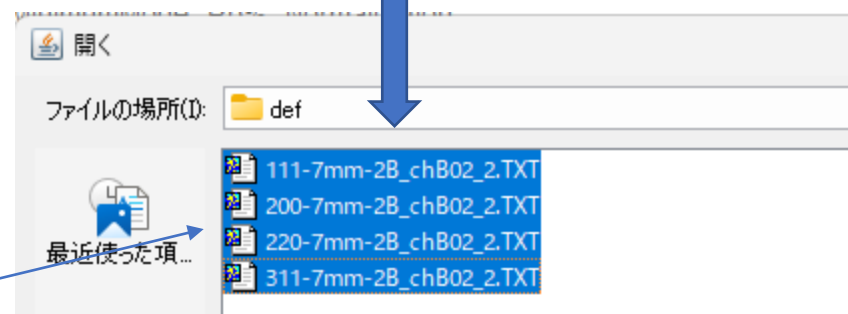
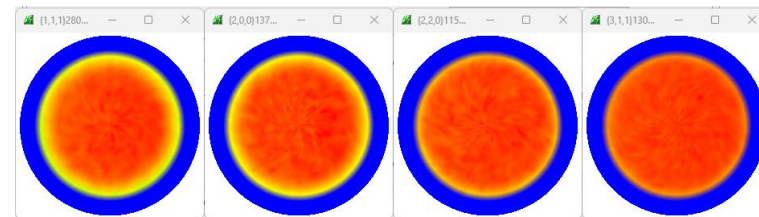
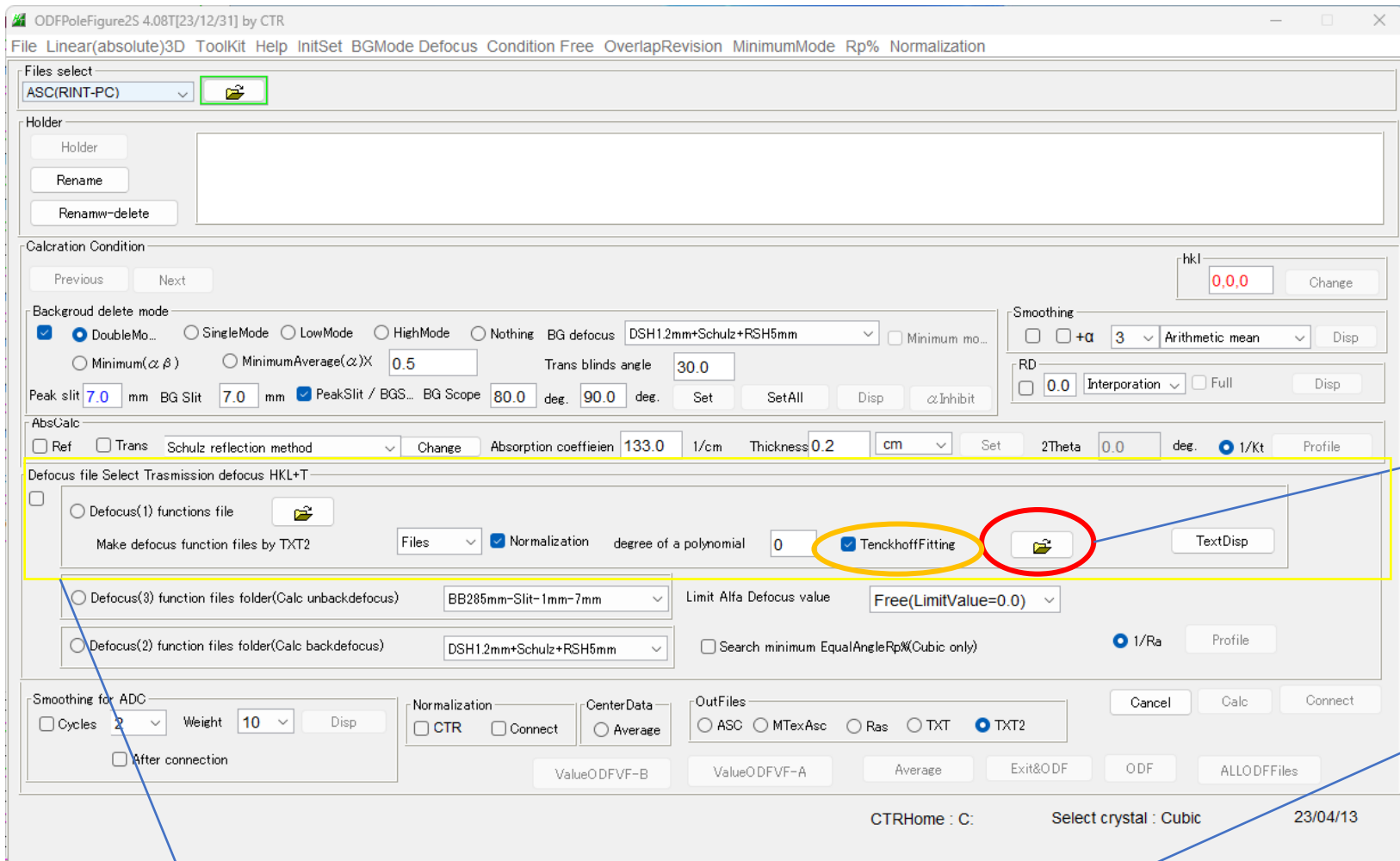
Background-defocusモード補正指定

Background削除指定

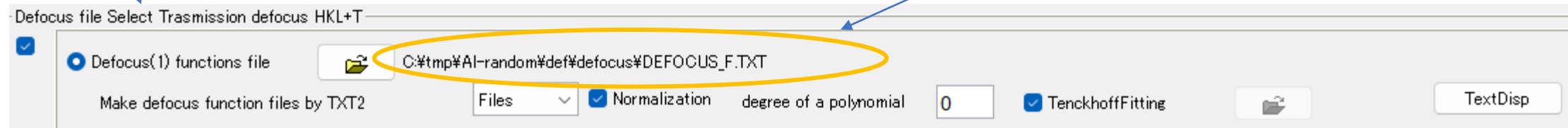
Background削除処理



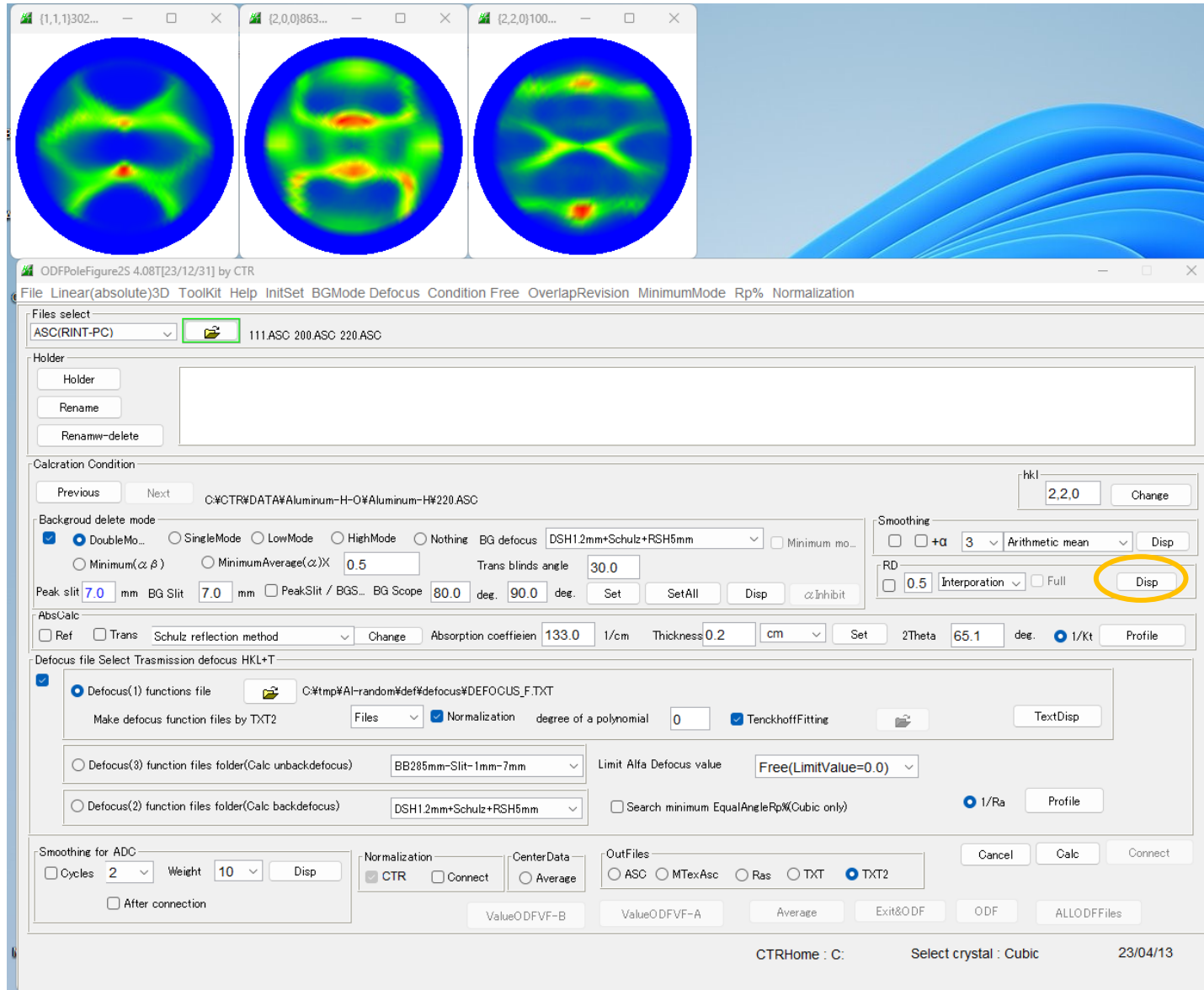
# Defocusファイル登録



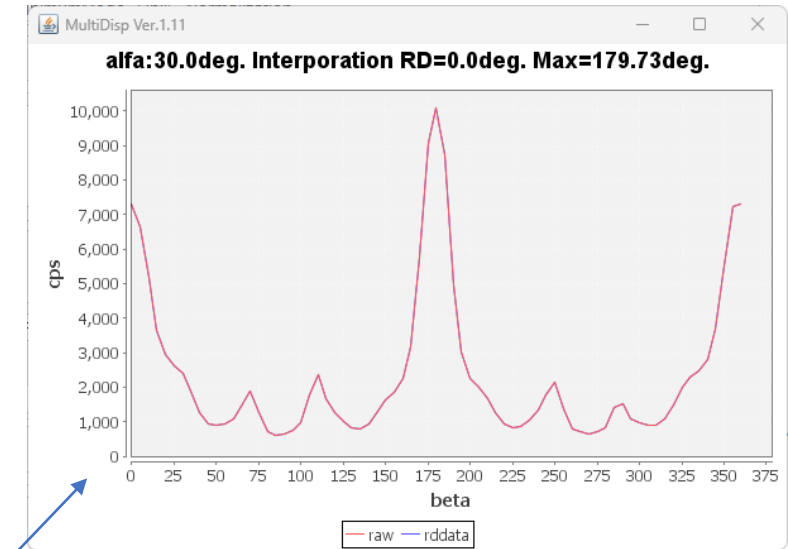
Backgroundを削除したファイルを  
TenckhoffFittingで登録



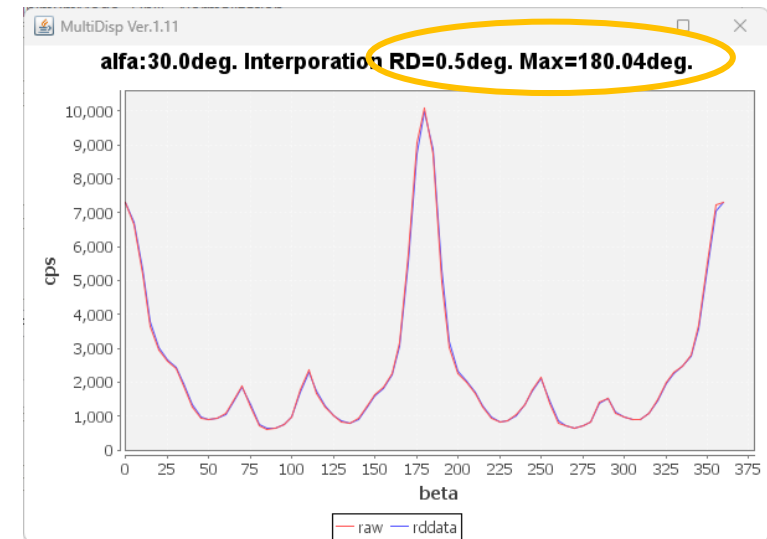
# A社H材の極点処理 1



## RD確認



## 補正角度決定



# A社H材の極点処理2

The screenshot displays the ODFPoleFigure2S software interface. At the top, three circular pole figures are shown, illustrating the progression of peak processing. Below them is a 3D surface plot. The main window contains several panels with settings:

- Files select:** ASC(RINT-PC), 111.ASC, 200.ASC, 220.ASC
- Holder:** Holder, Rename, Renamw-delete
- Calculation Condition:** Previous, Next, C:\CTR\DATA\Aluminum-H-O\Aluminum-HW220.ASC
- Background delete mode:**  DoubleMode,  SingleMode,  LowMode,  HighMode,  Nothing. BG defocus: DSH1.2mm+Schulz+RSH5mm
- Smoothing:**  +a, 3, Arithmetic mean, Disp
- RD:**  0.5, Interpolation, Full, Disp
- AbsCalc:**  Ref,  Trans, Schulz reflection method, Absorption coefficient: 133.0, Thickness: 0.2, 2Theta: 65.1, Profile
- Defocus file:**  Defocus(1) functions file, C:\tmp\AI-random\def\defocus\DEFOCUS\_F.TXT
- Defocus(3) function files folder:** BB285mm-Slit-1mm-7mm, Limit Alfa Defocus value: Free(Limit Value: 0.0)
- Defocus(2) function files folder:** DSH1.2mm+Schulz+RSH5mm,  Search minimum EqualAngleRp%(Cubic only), 1/Ra, Profile
- Smoothing for ADC:**  Cycles, 2, Weight: 10, Disp
- Normalization:**  CTR,  Connect,  Average
- OutFiles:**  ASC,  MTextAsc,  Ras,  TXT,  TXT2
- Buttons:** Cancel, Calc, Connect

BG-defocus mode

Background削除

RD補正

Defocus補正

最適化Rp%

処理

RD補正

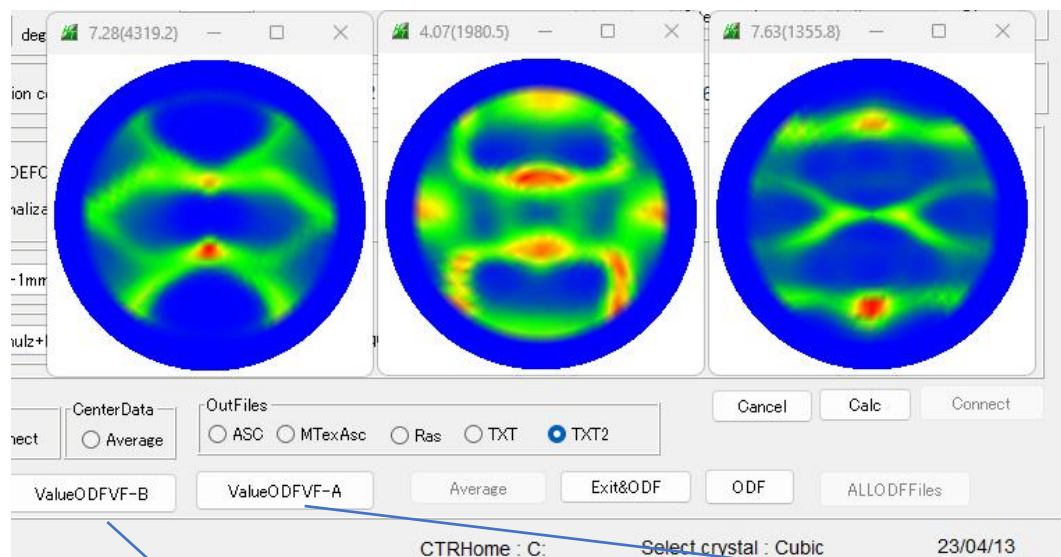
BG-defocusモードによる  
background削除

defocus補正

最適化Rp%

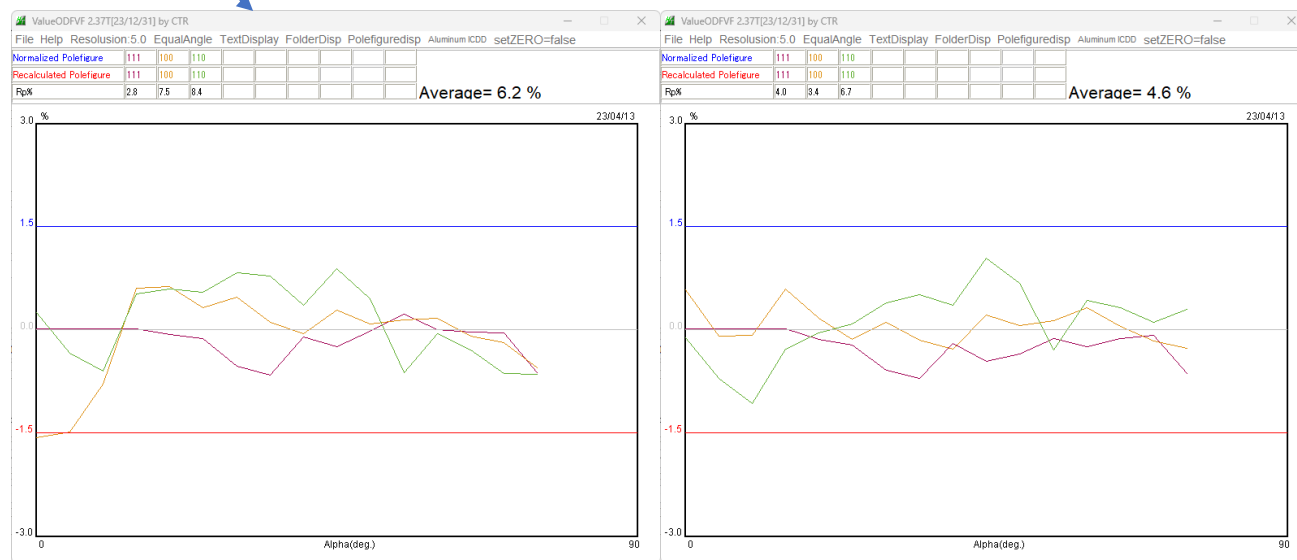
# A社H材の極点処理確認

$$RP_{\{hkl\}} = \frac{1}{N} \sum_{i=1}^N \left| \frac{\{PF_{exp.}\}_i - \{PF_{calc.}\}_i}{\{PF_{exp.}\}_i} \right| \cdot 100\%$$



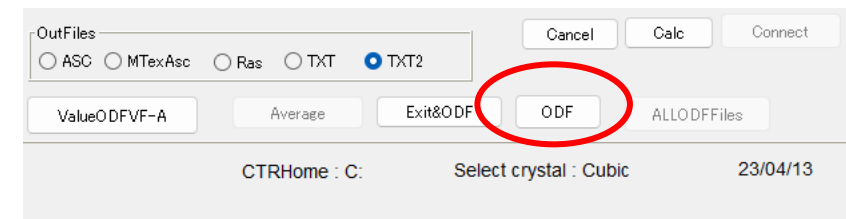
ODF解析前後による入力データ評価  
 ValueODFVF-B (最適化Rp%前)  
 ValueODFVF-A (最適化Rp%後)

結果  
 粉末random補正曲線が最適な為  
 最適化Rp%前後で同一データ

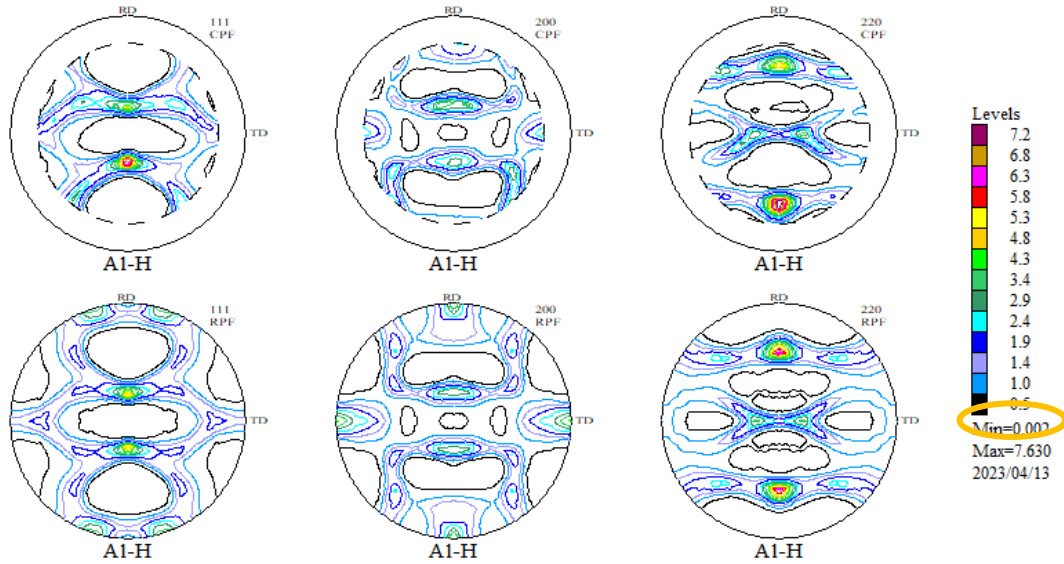


最適化Rp%で改善される

## ODF向けファイル作成



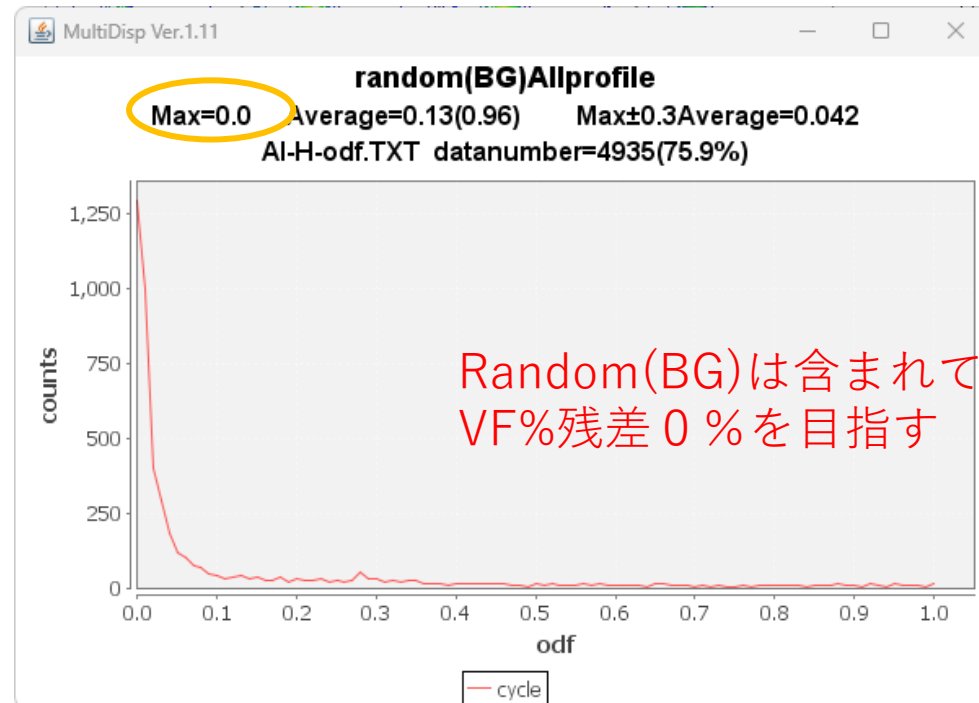
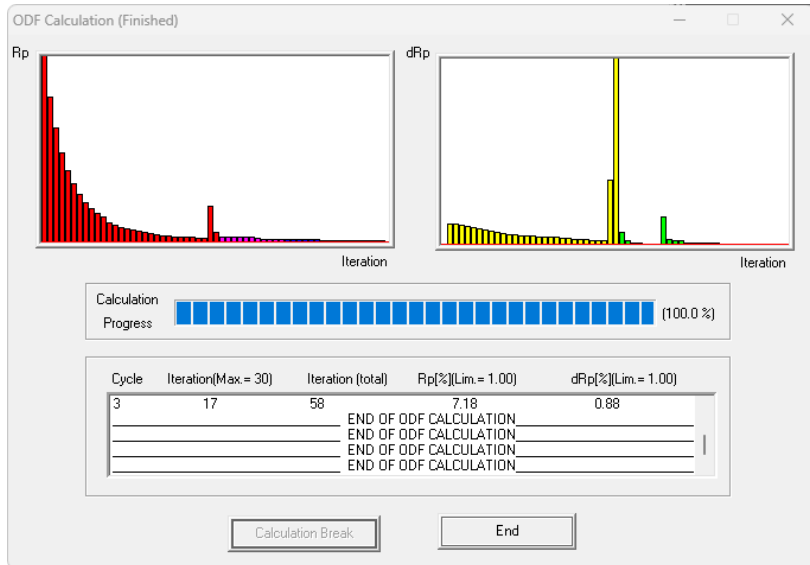
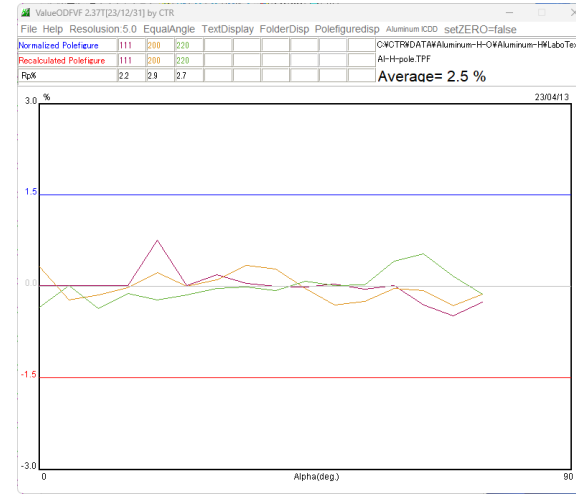
# LaboTexによるODF解析



Min=0.002->random(BG)が含まれている可能性小  
ODF図をExportし、Random(BG)定量を行う

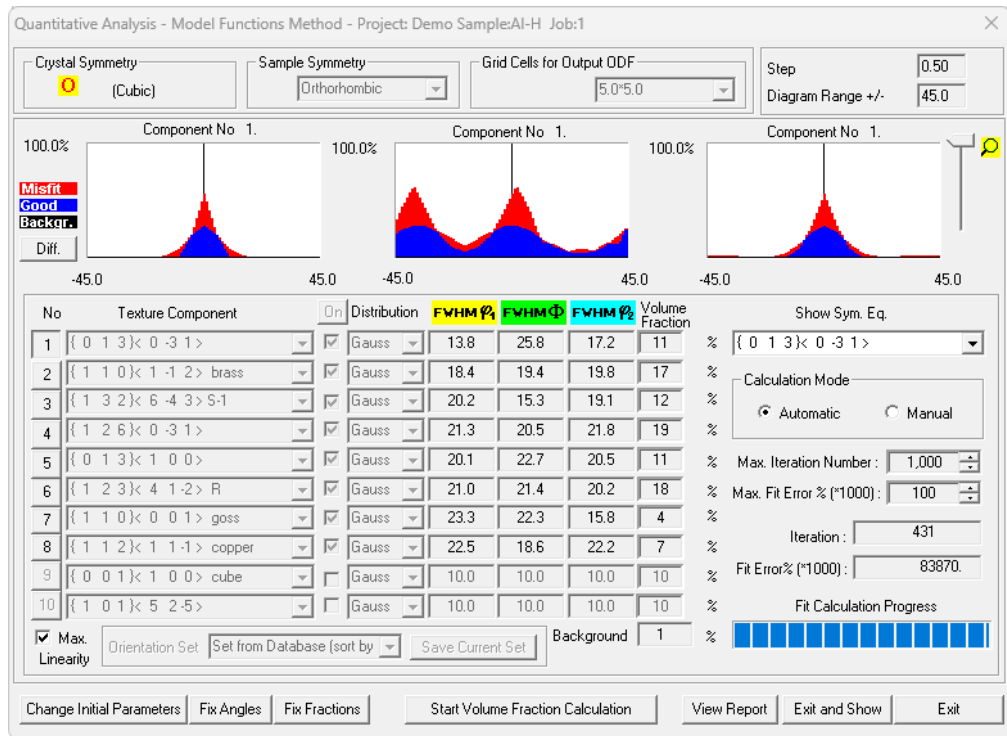
Rp%は測定時より下がる

Random(BG)が含まれると  
Rp%は低下する傾向あり



Random(BG)は含まれていない  
VF%残差0%を目指す

# VolumeFraction



No.	VF (%)	Phi1 (FWHM)	Phi (FWHM)	Phi2 (FWHM)	Orientation
1:	18.00	16.9	28.0	19.8	{ 0 1 3 } < 0 -3 1 >
2:	14.00	19.7	17.0	18.5	{ 1 1 0 } < 1 -1 2 > bras
3:	19.00	12.9	14.2	15.7	{ 1 3 2 } < 6 -4 3 > S-1
4:	11.00	16.2	21.6	20.1	{ 0 1 3 } < 1 0 0 >
5:	21.00	24.3	17.4	22.4	{ 1 2 3 } < 4 1 -2 > R
6:	5.00	28.0	25.7	15.0	{ 1 1 0 } < 0 0 1 > goss
7:	11.00	33.7	12.7	25.1	{ 1 1 2 } < 1 1 -1 > copp
8:	1.00	Background Volume Fraction			

Background=random(BG)+other=0+Other=1.0  
 VolumeFractionが決定されているが乱れがある。

