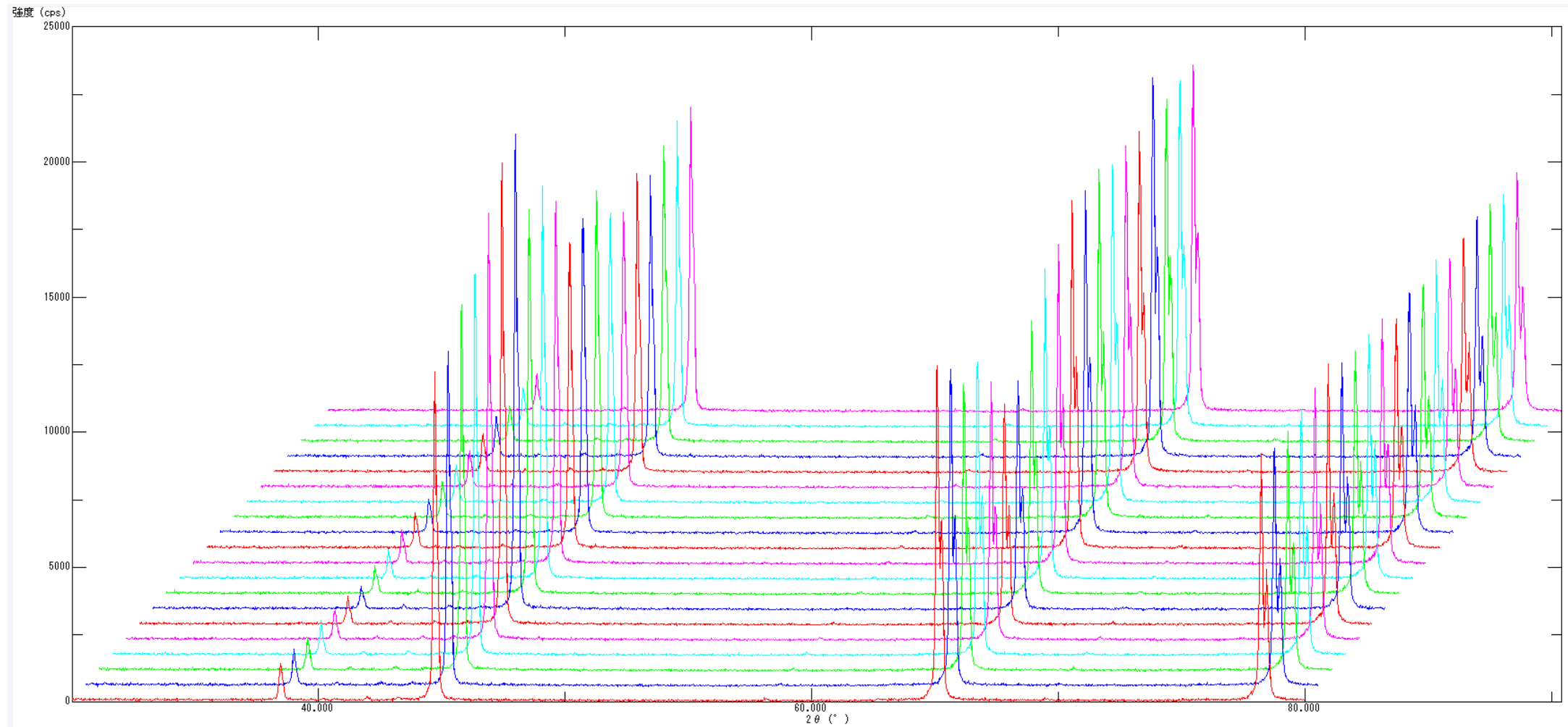


# アルミニウム圧延板から切り出した20sampleの極点図平均化



20 サンプルの  $\theta/\theta$  プロファイル

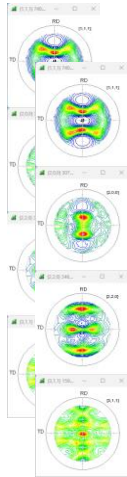
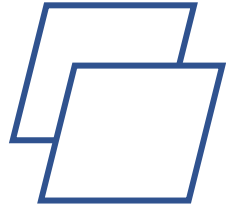
# データフロー

20試料

4面極点図

極点データ処理(バックグラウンド, defocus, 最適化Rp%)

ODF向けファイル作成

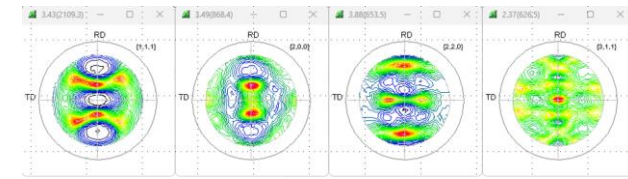


測定

ASCファイル(80)

平均化(80->4)

TXT2ファイル(4)



各種ODF向けファイル

## データ配置とファイル名

- 試料をまとめるホルダ (AL1100P)、複数サンプルホルダ(NO001-NO020)
- サンプルホルダに指数を先頭とする極点図ファイル(ASC)を配置する。
- 複数のホルダ間で同一ファイル名の極点図 (ASC)を配置
- ファイル名が異なる場合、renameで同一ファイル名に変更

ファイル名が異なったり、

ASCファイルに登録されている指数が異なる場合連続処理は終了する

## 極点図処理

- バックグラウンド処理
- 吸収補正
- D e f o c u s 補正
- 最適化 R p %
- T X T 2 ファイル作成

ODFPoleFigure2S

- 平均化を行う (AddingPole)
- 各種ODF向けファイル作成 (PFtoODF3)

# DATA (807ファイル)

C:\tmp\A1100P\NO001 ¥111-7mm.ASC  
C:\tmp\A1100P\NO001 ¥200-7mm.ASC  
C:\tmp\A1100P\NO001 ¥220-7mm.ASC  
C:\tmp\A1100P\NO001 ¥311-7mm.ASC  
C:\tmp\A1100P\NO002 ¥111-7mm.ASC  
C:\tmp\A1100P\NO002 ¥200-7mm.ASC  
C:\tmp\A1100P\NO002 ¥220-7mm.ASC  
C:\tmp\A1100P\NO002 ¥311-7mm.ASC  
C:\tmp\A1100P\NO003 ¥111-7mm.ASC  
C:\tmp\A1100P\NO003 ¥200-7mm.ASC  
C:\tmp\A1100P\NO003 ¥220-7mm.ASC  
C:\tmp\A1100P\NO003 ¥311-7mm.ASC  
C:\tmp\A1100P\NO004 ¥111-7mm.ASC  
C:\tmp\A1100P\NO004 ¥200-7mm.ASC  
C:\tmp\A1100P\NO004 ¥220-7mm.ASC  
C:\tmp\A1100P\NO004 ¥311-7mm.ASC  
C:\tmp\A1100P\NO005 ¥111-7mm.ASC  
C:\tmp\A1100P\NO005 ¥200-7mm.ASC  
C:\tmp\A1100P\NO005 ¥220-7mm.ASC  
C:\tmp\A1100P\NO005 ¥311-7mm.ASC  
C:\tmp\A1100P\NO006 ¥111-300.ASC  
C:\tmp\A1100P\NO006 ¥200-300.ASC  
C:\tmp\A1100P\NO006 ¥220-300.ASC  
C:\tmp\A1100P\NO006 ¥311-300.ASC  
C:\tmp\A1100P\NO007 ¥111-7mm.ASC  
C:\tmp\A1100P\NO007 ¥200-7mm.ASC  
C:\tmp\A1100P\NO007 ¥220-7mm.ASC  
C:\tmp\A1100P\NO007 ¥311-7mm.ASC  
C:\tmp\A1100P\NO008 ¥111-7mm.ASC  
C:\tmp\A1100P\NO008 ¥200-7mm.ASC  
C:\tmp\A1100P\NO008 ¥220-7mm.ASC  
C:\tmp\A1100P\NO008 ¥311-7mm.ASC  
C:\tmp\A1100P\NO009 ¥111-7mm.ASC  
C:\tmp\A1100P\NO009 ¥200-7mm.ASC  
C:\tmp\A1100P\NO009 ¥220-7mm.ASC  
C:\tmp\A1100P\NO009 ¥311-7mm.ASC  
C:\tmp\A1100P\NO010 ¥111-7mm.ASC  
C:\tmp\A1100P\NO010 ¥200-7mm.ASC  
C:\tmp\A1100P\NO010 ¥220-7mm.ASC  
C:\tmp\A1100P\NO010 ¥311-7mm.ASC

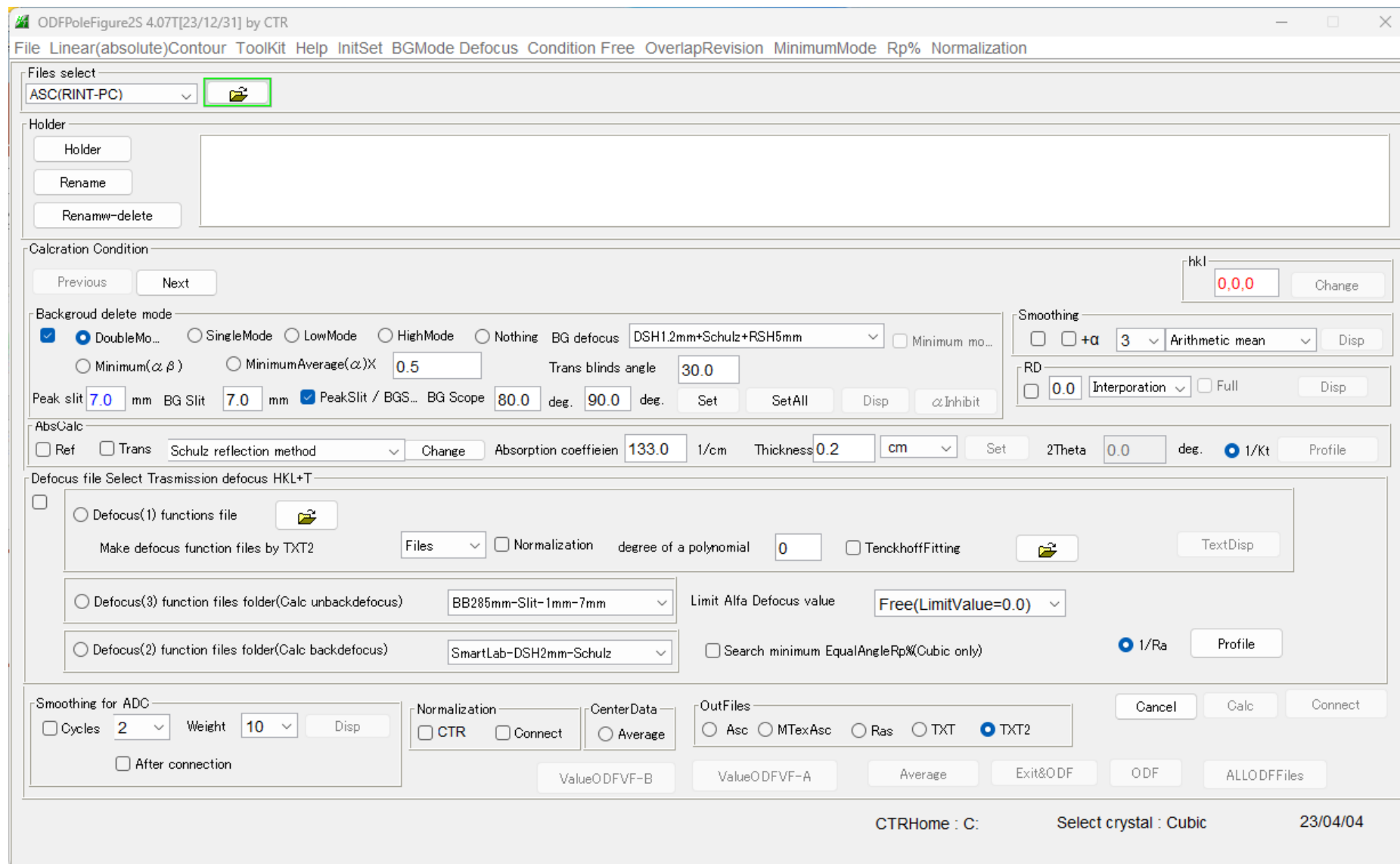
C:\tmp\A1100P\NO011 ¥111-7mm.ASC  
C:\tmp\A1100P\NO011 ¥200-7mm.ASC  
C:\tmp\A1100P\NO011 ¥220-7mm.ASC  
C:\tmp\A1100P\NO011 ¥311-7mm.ASC  
C:\tmp\A1100P\NO012 ¥111-7mm.ASC  
C:\tmp\A1100P\NO012 ¥200-7mm.ASC  
C:\tmp\A1100P\NO012 ¥220-7mm.ASC  
C:\tmp\A1100P\NO012 ¥311-7mm.ASC  
C:\tmp\A1100P\NO013 ¥111-7mm.ASC  
C:\tmp\A1100P\NO013 ¥200-7mm.ASC  
C:\tmp\A1100P\NO013 ¥220-7mm.ASC  
C:\tmp\A1100P\NO013 ¥311-7mm.ASC  
C:\tmp\A1100P\NO014 ¥111-NO014.ASC  
C:\tmp\A1100P\NO014 ¥200-NO014.ASC  
C:\tmp\A1100P\NO014 ¥220-NO014.ASC  
C:\tmp\A1100P\NO014 ¥311-NO014.ASC  
C:\tmp\A1100P\NO015 ¥111-NO015.ASC  
C:\tmp\A1100P\NO015 ¥200-NO015.ASC  
C:\tmp\A1100P\NO015 ¥220-NO015.ASC  
C:\tmp\A1100P\NO015 ¥311-NO015.ASC  
C:\tmp\A1100P\NO016 ¥111-NO016.ASC  
C:\tmp\A1100P\NO016 ¥200-NO016.ASC  
C:\tmp\A1100P\NO016 ¥220-NO016.ASC  
C:\tmp\A1100P\NO016 ¥311-NO016.ASC  
C:\tmp\A1100P\NO017 ¥111-NO017.ASC  
C:\tmp\A1100P\NO017 ¥200-NO017.ASC  
C:\tmp\A1100P\NO017 ¥220-NO017.ASC  
C:\tmp\A1100P\NO017 ¥311-NO017.ASC  
C:\tmp\A1100P\NO018 ¥111-NO018.ASC  
C:\tmp\A1100P\NO018 ¥200-NO018.ASC  
C:\tmp\A1100P\NO018 ¥220-NO018.ASC  
C:\tmp\A1100P\NO018 ¥311-NO018.ASC  
C:\tmp\A1100P\NO019 ¥111-NO019.ASC  
C:\tmp\A1100P\NO019 ¥200-NO019.ASC  
C:\tmp\A1100P\NO019 ¥220-NO019.ASC  
C:\tmp\A1100P\NO019 ¥311-NO019.ASC  
C:\tmp\A1100P\NO020 ¥111-NO020.ASC  
C:\tmp\A1100P\NO020 ¥200-NO020.ASC  
C:\tmp\A1100P\NO020 ¥220-NO020.ASC  
C:\tmp\A1100P\NO020 ¥311-NO020.ASC

C:\tmp\¥1100P以下に  
NO001からNO200の200個のホルダ  
{111},{200},{220},{311}の極点図  
ファイル名の先頭に指数  
しかし、指数以降に7mm,300,Noなど  
異なったファイル名のASCファイルが存在する

一括処理するには同一ファイル名にする  
(ODFPoleFigure2Sのrename)

# 一括処理を行うソフトウェア

## ODFPoleFigure2S、ODFPoleFigure1.5



# ファイル名を統一する

## NO001の極点図を選択

The screenshot displays the ODFPoleFigure2S 4.07T[23/12/31] by CTR software interface. A file selection dialog box is open, showing the contents of the 'NO001' folder. The files listed are:

- 111-7mm.ASC
- 200-7mm.ASC
- 220-7mm.ASC
- 311-7mm.ASC

The file selection dialog box has the following fields:

- ファイル名(N): nm.ASC " 200-7mm.ASC " 220-7mm.ASC " 311-7mm.ASC
- ファイルのタイプ(T): \*.asc;\*.ASC;\*.Asc

The main software interface includes the following sections:

- Files select:** ASC(RINT-PC) (highlighted with a yellow circle)
- Holder:** Holder, Rename, Renamw-delete
- Calculation Condition:** Previous, Next, Background delete mode (DoubleMo... selected), Peak slit 7.0 mm, BG Slit 7.0 m
- AbsCalc:** Ref, Trans, Schulz reflection
- Defocus file Select:** Defocus(1) functions file, Defocus(3) function files folder, Defocus(2) function files folder(Calc backdefocus) (SmartLab-DSH2mm-Schulz)
- Smoothing for ADC:** Cycles 2, Weight 10
- Normalization:** CTR, Connect, CenterData (Average)
- OutFiles:** Asc, MTexAsc, Ras, TXT, TXT2 (selected)

Buttons at the bottom include: ValueODFVF-B, ValueODFVF-A, Average, Exit&ODF, ODF, ALLODFFiles, Cancel, Calc, Connect.

Footer information: CTRHome : C: Select crystal : Cubic 23/04/04

# ファイル名を統一するホルダを選択

NO001の親ホルダを選択 A1100P

The screenshot displays the ODF software interface. At the top, four contour plots are shown, each representing a different orientation:  $\{1,1,1\}$ ,  $\{2,0,0\}$ ,  $\{2,2,0\}$ , and  $\{3,3,1\}$ . The plots show intensity distributions in the RD (Roll Direction) and TD (Transverse Direction) planes. Below the plots is the main software window titled "ODFPoleFigure2S 4.07T[23/12/31] by CTR". The "Files select" section shows a list of files: "111-7mm.ASC", "200-7mm.ASC", "220-7mm.ASC", and "311-7mm.ASC". The "Holder" section has a "Rename" button highlighted with a yellow circle. A file explorer window is open, showing the "tmp" directory. The folder "A1100P" is selected, and its name is entered in the "フォルダ名(N):" field as "C:\tmp\A1100P". The file explorer also shows other folders like "50%-profile", "0329", "0329-2", "1101-12", "2022-07-27-Fiber-NDRDTD", "20220705-EBSD", "20220712-copper", "A1100P - コピー", "A5052P", "Al2O3", "all", "BCC", "COD", and "CTRODF". The software interface also includes various settings like "Smoothing" (Arithmetic mean, Disp), "RD" (Interpolation, Full, Disp), and "2Theta" (38.46 deg, 1/Kt, Profile).



# 指数\_rename\_2.ASCファイルに統一される

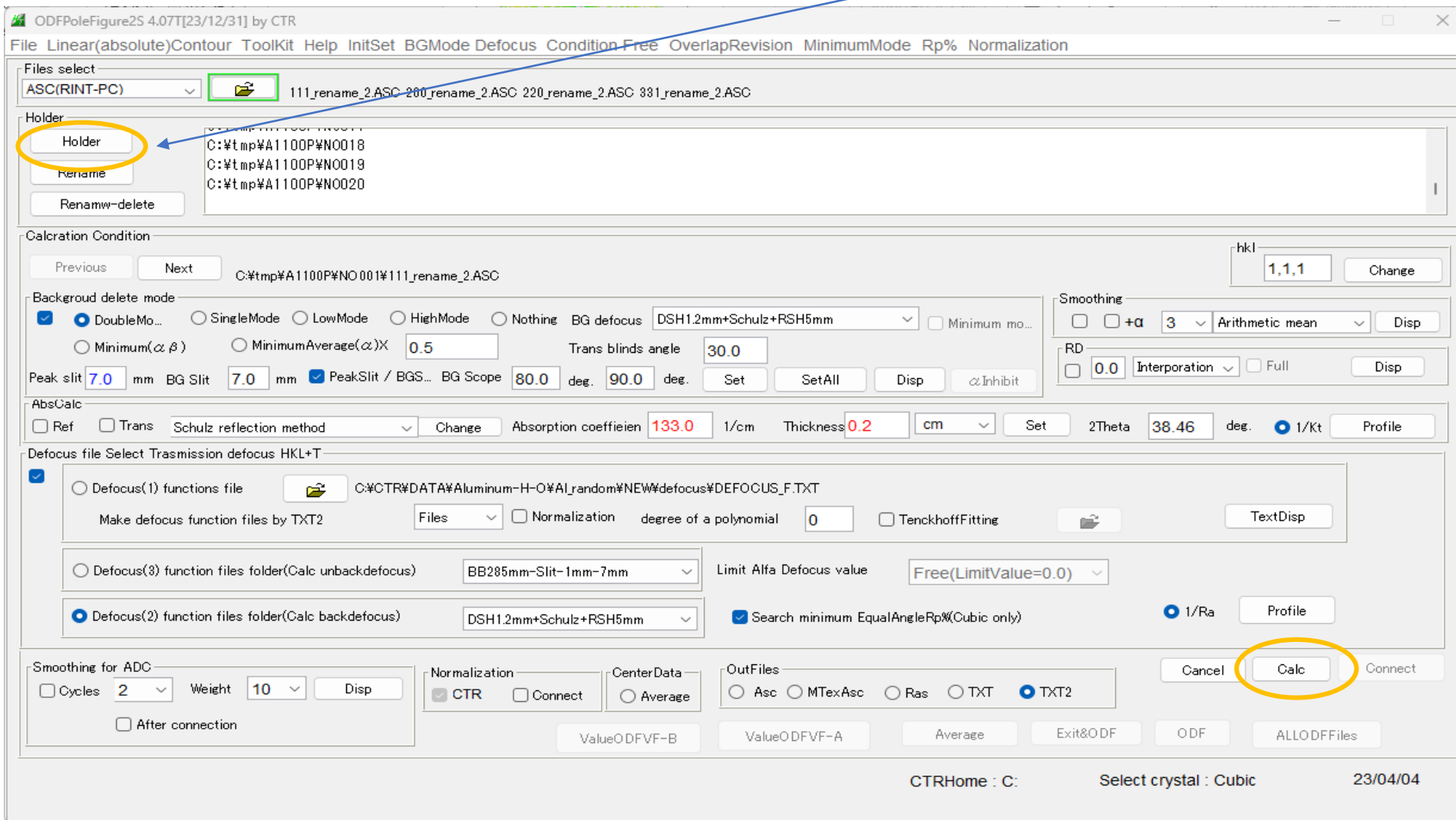
C:\tmp\A1100P\NO001\111\_rename\_2.ASC  
C:\tmp\A1100P\NO001\200\_rename\_2.ASC  
C:\tmp\A1100P\NO001\220\_rename\_2.ASC  
C:\tmp\A1100P\NO001\331\_rename\_2.ASC  
C:\tmp\A1100P\NO002\111\_rename\_2.ASC  
C:\tmp\A1100P\NO002\200\_rename\_2.ASC  
C:\tmp\A1100P\NO002\220\_rename\_2.ASC  
C:\tmp\A1100P\NO002\311\_rename\_2.ASC  
C:\tmp\A1100P\NO003\111\_rename\_2.ASC  
C:\tmp\A1100P\NO003\200\_rename\_2.ASC  
C:\tmp\A1100P\NO003\220\_rename\_2.ASC  
C:\tmp\A1100P\NO003\311\_rename\_2.ASC  
C:\tmp\A1100P\NO004\111\_rename\_2.ASC  
C:\tmp\A1100P\NO004\200\_rename\_2.ASC  
C:\tmp\A1100P\NO004\220\_rename\_2.ASC  
C:\tmp\A1100P\NO004\311\_rename\_2.ASC  
C:\tmp\A1100P\NO005\111\_rename\_2.ASC  
C:\tmp\A1100P\NO005\200\_rename\_2.ASC  
C:\tmp\A1100P\NO005\220\_rename\_2.ASC  
C:\tmp\A1100P\NO005\311\_rename\_2.ASC  
C:\tmp\A1100P\NO006\111\_rename\_2.ASC  
C:\tmp\A1100P\NO006\220\_rename\_2.ASC  
C:\tmp\A1100P\NO006\311\_rename\_2.ASC  
C:\tmp\A1100P\NO007\111\_rename\_2.ASC  
C:\tmp\A1100P\NO007\200\_rename\_2.ASC  
C:\tmp\A1100P\NO007\311\_rename\_2.ASC  
C:\tmp\A1100P\NO008\111\_rename\_2.ASC  
C:\tmp\A1100P\NO008\200\_rename\_2.ASC  
C:\tmp\A1100P\NO008\220\_rename\_2.ASC  
C:\tmp\A1100P\NO008\311\_rename\_2.ASC  
C:\tmp\A1100P\NO009\111\_rename\_2.ASC  
C:\tmp\A1100P\NO009\200\_rename\_2.ASC  
C:\tmp\A1100P\NO009\220\_rename\_2.ASC  
C:\tmp\A1100P\NO009\311\_rename\_2.ASC  
C:\tmp\A1100P\NO010\111\_rename\_2.ASC  
C:\tmp\A1100P\NO010\200\_rename\_2.ASC  
C:\tmp\A1100P\NO010\220\_rename\_2.ASC  
C:\tmp\A1100P\NO010\331\_rename\_2.ASC

C:\tmp\A1100P\NO011\111\_rename\_2.ASC  
C:\tmp\A1100P\NO011\200\_rename\_2.ASC  
C:\tmp\A1100P\NO011\220\_rename\_2.ASC  
C:\tmp\A1100P\NO011\311\_rename\_2.ASC  
C:\tmp\A1100P\NO012\111\_rename\_2.ASC  
C:\tmp\A1100P\NO012\200\_rename\_2.ASC  
C:\tmp\A1100P\NO012\220\_rename\_2.ASC  
C:\tmp\A1100P\NO012\311\_rename\_2.ASC  
C:\tmp\A1100P\NO013\111\_rename\_2.ASC  
C:\tmp\A1100P\NO013\200\_rename\_2.ASC  
C:\tmp\A1100P\NO013\220\_rename\_2.ASC  
C:\tmp\A1100P\NO013\311\_rename\_2.ASC  
C:\tmp\A1100P\NO014\111\_rename\_2.ASC  
C:\tmp\A1100P\NO014\200\_rename\_2.ASC  
C:\tmp\A1100P\NO014\220\_rename\_2.ASC  
C:\tmp\A1100P\NO014\311\_rename\_2.ASC  
C:\tmp\A1100P\NO015\111\_rename\_2.ASC  
C:\tmp\A1100P\NO015\200\_rename\_2.ASC  
C:\tmp\A1100P\NO015\220\_rename\_2.ASC  
C:\tmp\A1100P\NO015\311\_rename\_2.ASC  
C:\tmp\A1100P\NO016\111\_rename\_2.ASC  
C:\tmp\A1100P\NO016\200\_rename\_2.ASC  
C:\tmp\A1100P\NO016\220\_rename\_2.ASC  
C:\tmp\A1100P\NO016\311\_rename\_2.ASC  
C:\tmp\A1100P\NO017\111\_rename\_2.ASC  
C:\tmp\A1100P\NO017\200\_rename\_2.ASC  
C:\tmp\A1100P\NO017\220\_rename\_2.ASC  
C:\tmp\A1100P\NO017\311\_rename\_2.ASC  
C:\tmp\A1100P\NO018\111\_rename\_2.ASC  
C:\tmp\A1100P\NO018\200\_rename\_2.ASC  
C:\tmp\A1100P\NO018\220\_rename\_2.ASC  
C:\tmp\A1100P\NO018\311\_rename\_2.ASC  
C:\tmp\A1100P\NO019\111\_rename\_2.ASC  
C:\tmp\A1100P\NO019\200\_rename\_2.ASC  
C:\tmp\A1100P\NO019\220\_rename\_2.ASC  
C:\tmp\A1100P\NO019\311\_rename\_2.ASC  
C:\tmp\A1100P\NO020\111\_rename\_2.ASC  
C:\tmp\A1100P\NO020\200\_rename\_2.ASC  
C:\tmp\A1100P\NO020\220\_rename\_2.ASC  
C:\tmp\A1100P\NO020\311\_rename\_2.ASC

各ホルダの極点図が同一ファイル名であれば  
この作業は不要

# 一括データ処理

RenameしたNO001のASCファイルを選択、holderAI1100Pを選択



RP%の最適化指定ではスピードが遅くなる (ファイルに登録されている指数が異なると中止される)

# 20個の極点図の平均化

The screenshot displays the ODFPoleFigure2S software interface. At the top, the title bar reads "ODFPoleFigure2S 4.07T[23/12/31] by CTR". The menu bar includes "File", "Linear(absolute)Contour", "ToolKit", "Help", "InitSet", "BGMode", "Defocus", "Condition", "Free", "OverlapRevision", "MinimumMode", "Rp%", and "Normalization".

The "Files select" section shows a dropdown menu set to "ASC(RINT-PC)" and a list of files: "111\_rename\_2.ASC", "200\_rename\_2.ASC", "220\_rename\_2.ASC", and "311\_rename\_2.ASC". The "Holder" section contains buttons for "Holder", "Rename", and "Renamw-delete", with a text area listing file paths: "C:\tmp\A1100P\NO018", "C:\tmp\A1100P\NO019", and "C:\tmp\A1100P\NO020".

The "Calcration Condition" section includes "Previous" and "Next" buttons, a text field with "C:\tmp\A1100P\NO001\111\_rename\_2.ASC", and an "hkl" field set to "1,1,1". The "Background delete mode" section has radio buttons for "DoubleMo...", "SingleMode", "LowMode", "HighMode", "Nothing", "Minimum( $\alpha$   $\beta$ )", and "MinimumAverage( $\alpha$ )X", with a value of "0.5". Other settings include "BG defocus" (DSH1.2mm+Schulz+RSH5mm), "Trans blinds angle" (30.0), "Peak slit" (7.0 mm), "BG Slit" (7.0 mm), "PeakSlit / BGS..." (checked), "BG Scope" (80.0 deg), and "90.0 deg".

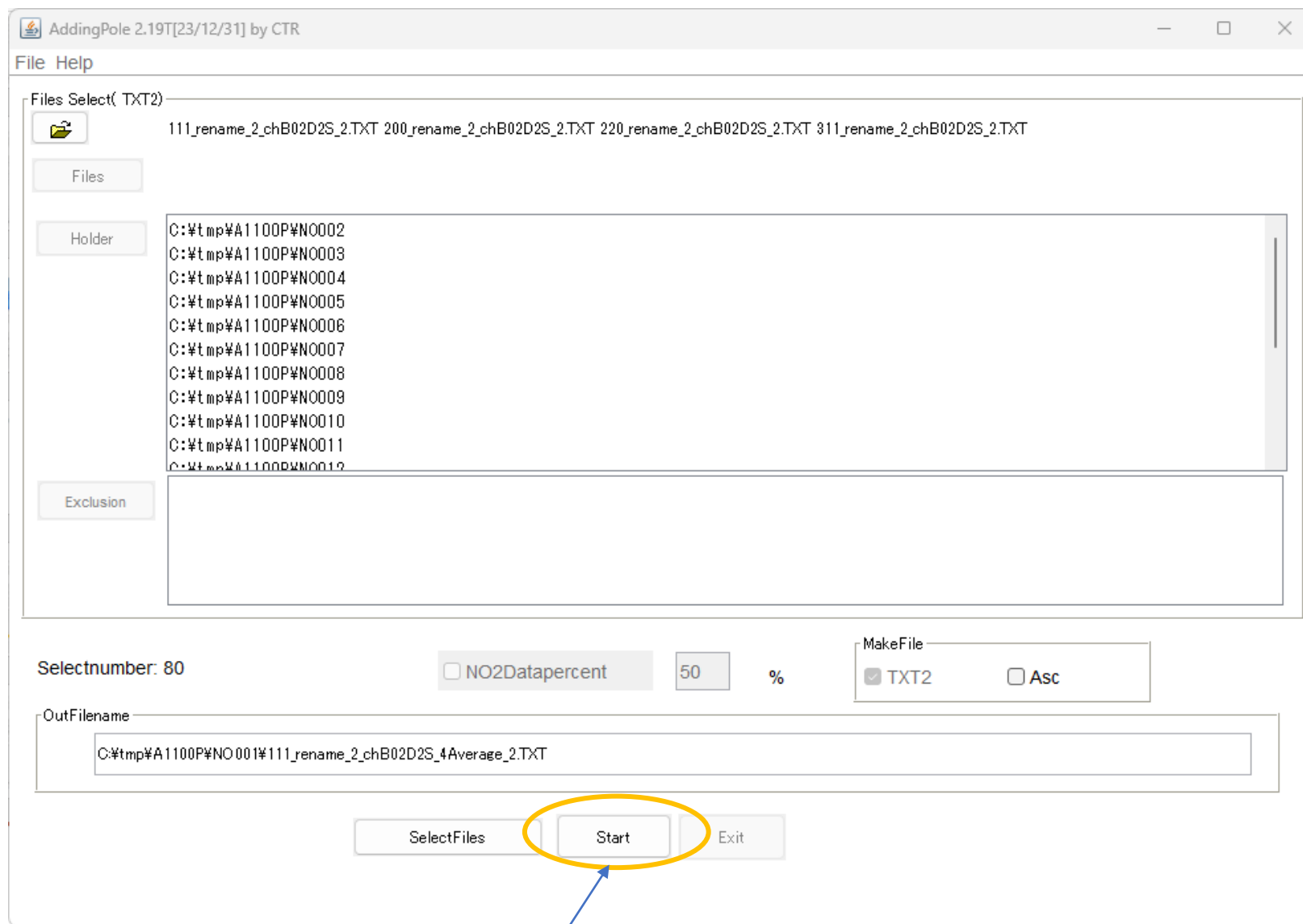
The "Smoothing" section has a dropdown set to "3" and "Arithmetic mean". The "RD" section has a dropdown set to "0.0" and "Interporation". The "Profile" section has a dropdown set to "38.46 deg" and "1/Kt".

The main display area shows four circular pole figures labeled "RD" and "TD" for hkl values {1,1,1}, {2,0,0}, {2,2,0}, and {3,1,1}. The bottom control panel includes "Cycles" (2), "Weight" (10), "Disp", "CTR" (checked), "Connect", "Average" (highlighted with a yellow circle), "Asc", "MTeXAsc", "Ras", "TXT", "TXT2", "ValueODFVF-B", "ValueODFVF-A", "Exit&ODF", "ODF", and "ALLODFFiles". A status bar at the bottom shows "Filemake success !!", "CTRHome : C:", "Select crystal : Cubic", and "23/04/04".

NO001から始まり最後のNO020の終了画面

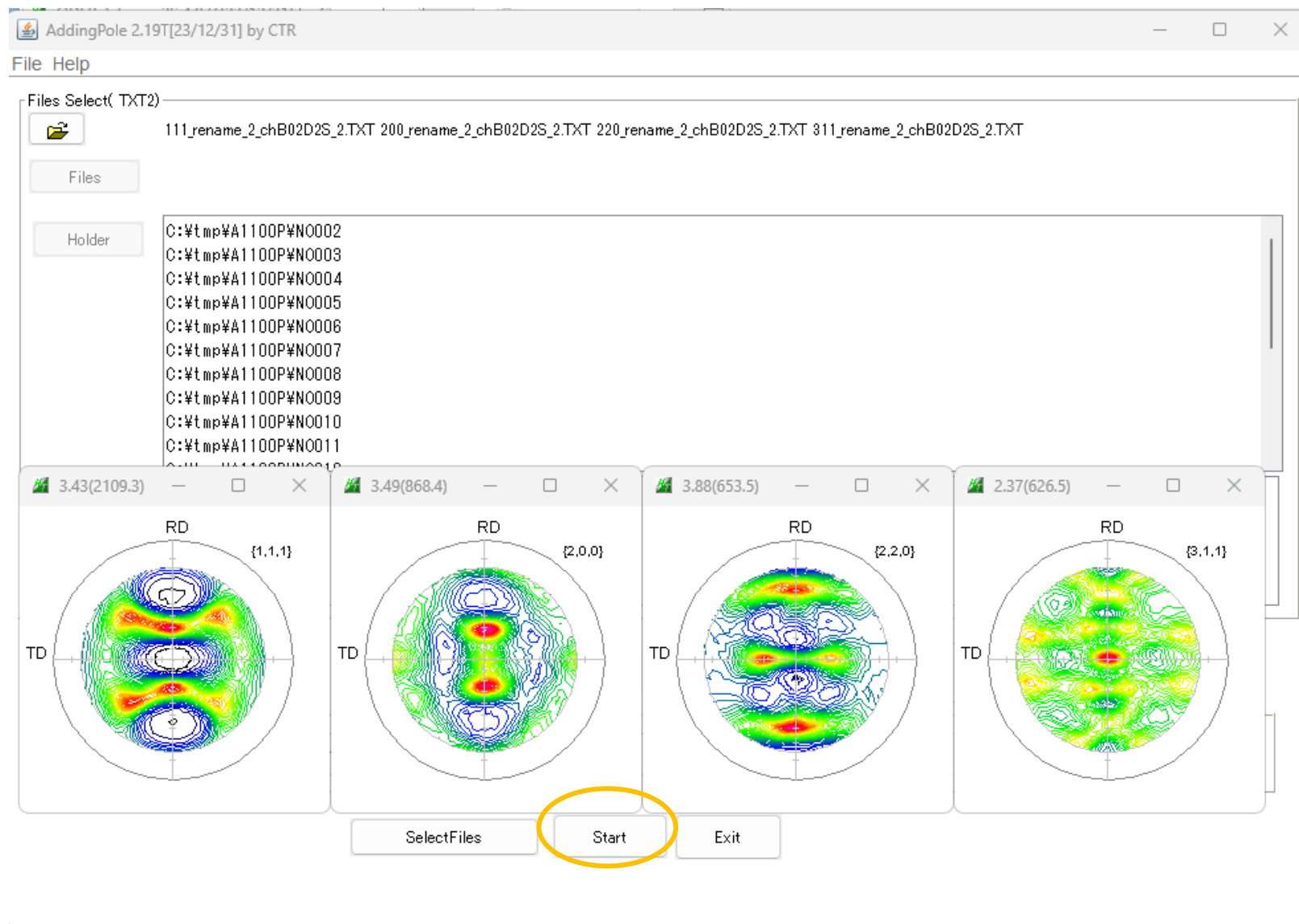
平均化を行う

# 平均化画面(TXT2の平均化)



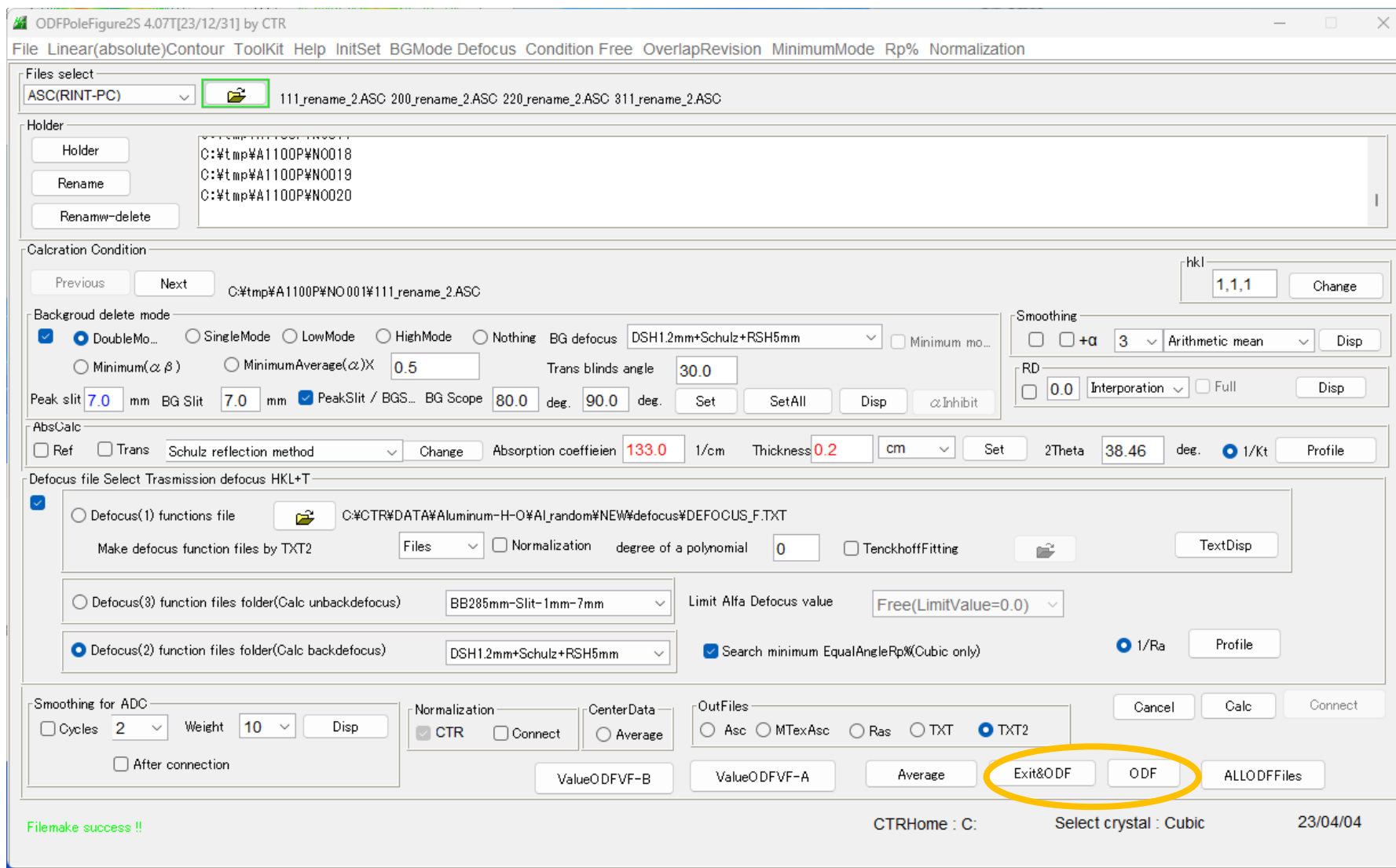
平均化

# 平均化終了



Exitで平均化したファイルをODFPoleFigure2Sに渡す

# ODFファイル作成



EXit&ODF、ODFで PftoODF3にデータを渡す

# ODF向けファイル

PFtoODF3 8.55T[23/12/31] by CTR

File Option Symmetric Software Data Help

Lattice constant

Material Chalcopyrite.txt

Structure Code(Symmetries after Schoenfiles) cif 5 - D4 (teragonal)

a 1.0 <=b 1.0 <=c 1.9656 alpha 90.0 beta 90.0 gamm 90.0

Initialize Start

getHKL-Filename

AllFileSelect

PF Holder C:\tmp\A1100P\NO001

PF Data

SelectFile(TXT(b,intens),TXT2(a,b,intens))	h,k,l	2Theta	Alpha scope	AlphaS	AlphaE	Select
111_rename_2_chB02D2S_20Average_2.TXT	1,1,1	38.46	0.0->75.0	0.0	75.0	<input checked="" type="checkbox"/>
200_rename_2_chB02D2S_20Average_2.TXT	2,0,0	44.7	0.0->75.0	0.0	75.0	<input checked="" type="checkbox"/>
220_rename_2_chB02D2S_20Average_2.TXT	2,2,0	65.08	0.0->75.0	0.0	75.0	<input checked="" type="checkbox"/>
311_rename_2_chB02D2S_20Average_2.TXT	3,1,1	78.22	0.0->75.0	0.0	75.0	<input checked="" type="checkbox"/>
	2,1,1	0.0		0.0	0.0	<input type="checkbox"/>
	3,1,1	0.0		0.0	0.0	<input type="checkbox"/>
	4,0,0	0.0		0.0	0.0	<input type="checkbox"/>
	3,3,1	0.0		0.0	0.0	<input type="checkbox"/>
	4,2,2	0.0		0.0	0.0	<input type="checkbox"/>
	5,1,1	0.0		0.0	0.0	<input type="checkbox"/>
	5,2,1	0.0		0.0	0.0	<input type="checkbox"/>
	5,3,1	0.0		0.0	0.0	<input type="checkbox"/>

Comment

Symmetric type Full

CenterData Average

Epf file save

Labotex(EPF).popLA(RAW) filename labotex

\_20Average\_2.TXTは  
20個の極点図の平均を表しています。  
ファイルはNO001に作成されています。

# ファイルに登録されている指数の変更

The screenshot shows the ODFPoleFigure2S software interface. The 'Files select' section shows 'ASC(RINT-PC)' and '311-7mm.ASC'. The 'Calculation Condition' section includes 'Background delete mode' (DoubleMo... selected), 'Smoothing' (3, Arithmetic mean), 'RD' (0.0, Interpolation), 'AbsCalc' (Schulz reflection method, 133.0 1/cm, 0.2 cm, 78.22 deg, 1/Kt), and 'Defocus file Select' (Defocus(2) function files folder selected). The 'OutFiles' section has 'Asc' selected. The 'Calc' button is circled in yellow. A blue arrow points from the 'Change' button in the 'hkl' field to a callout box.

hkl  
3,1,1  
Change

指数を変更し  
Ascを選択、Calcで  
修正ASCファイルが作成