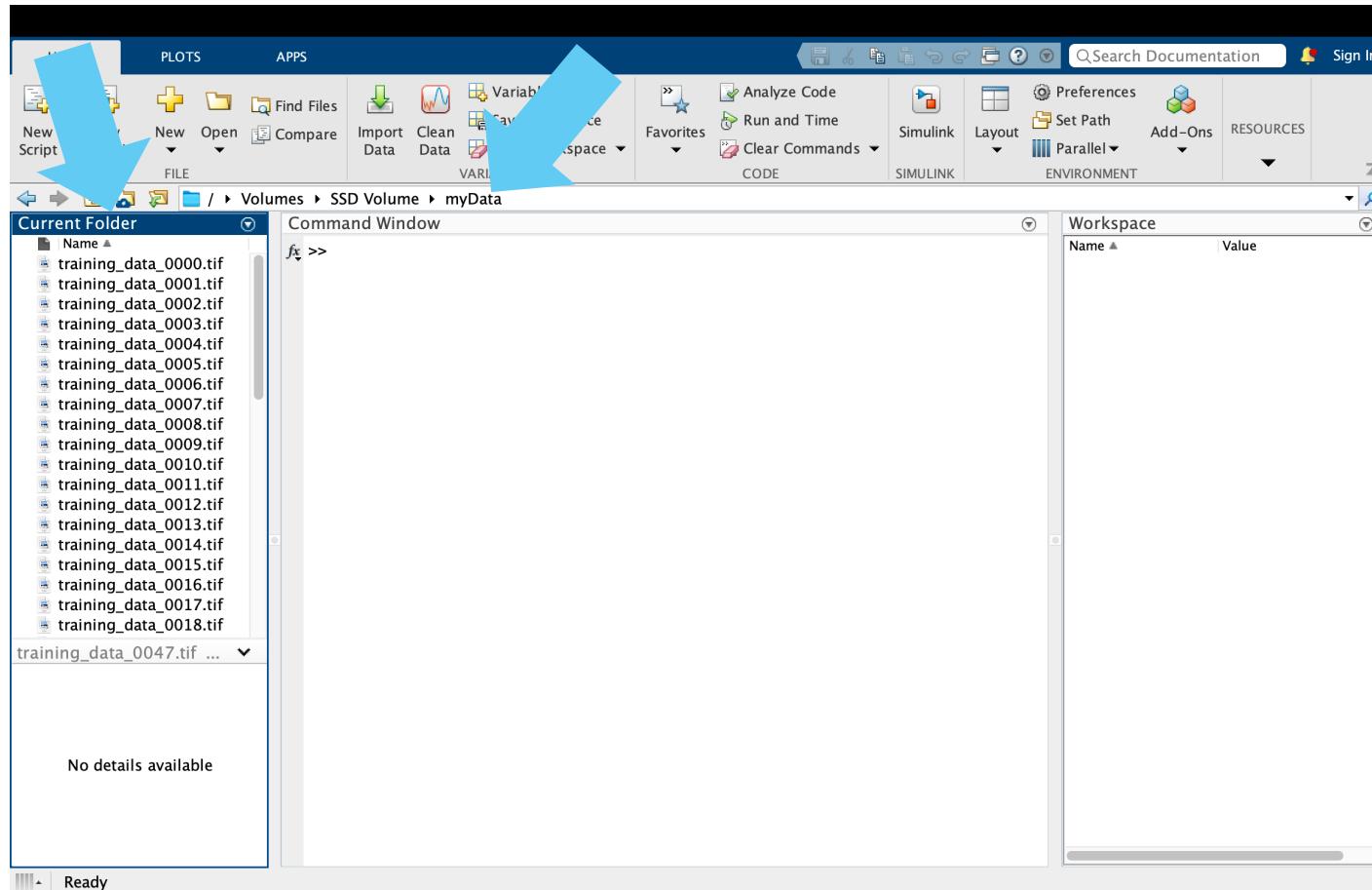


exCaking

A guide for accurate elastic strain analysis
using polycrystal diffraction data

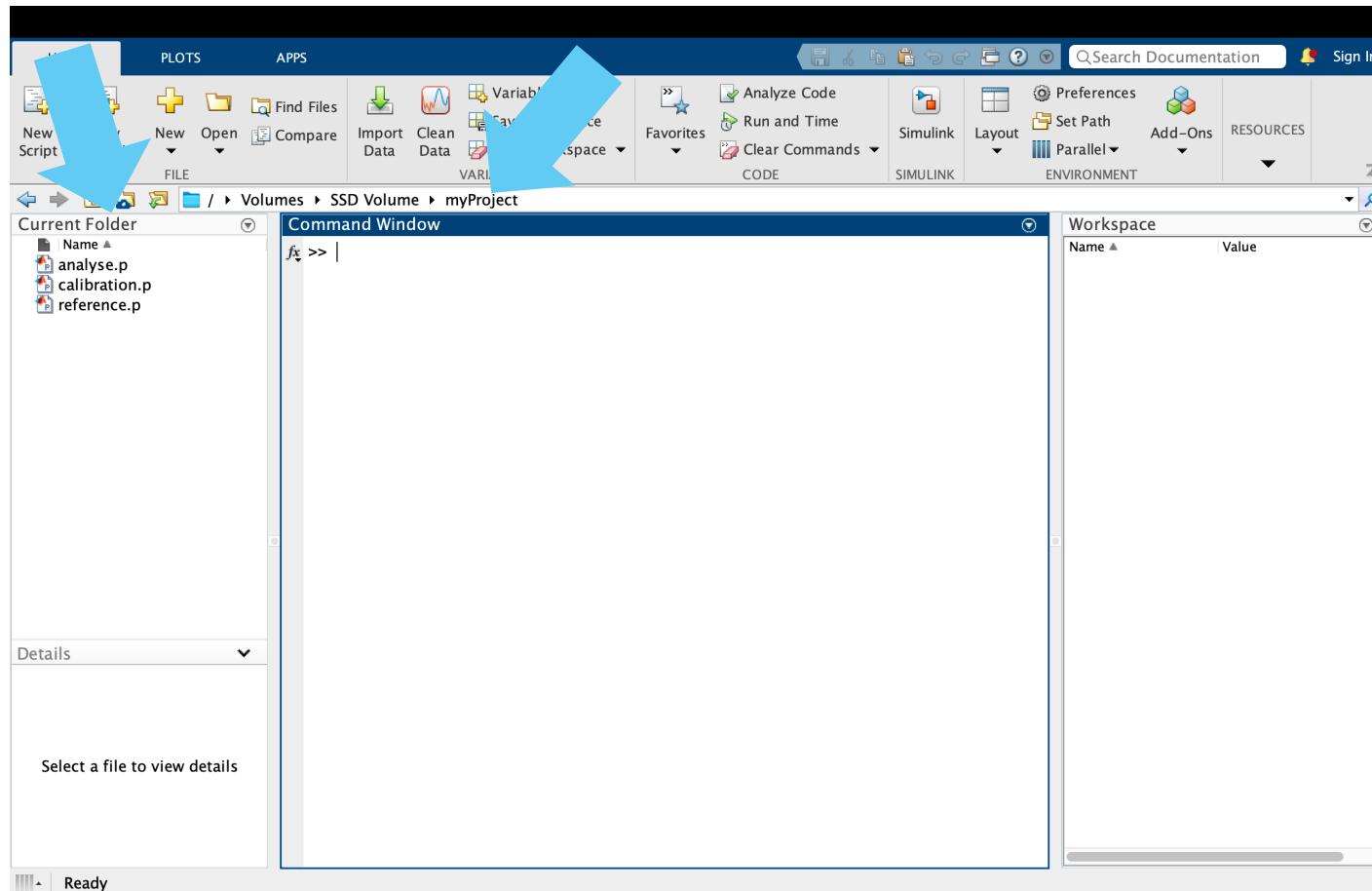
Place polycrystal diffraction data in a folder



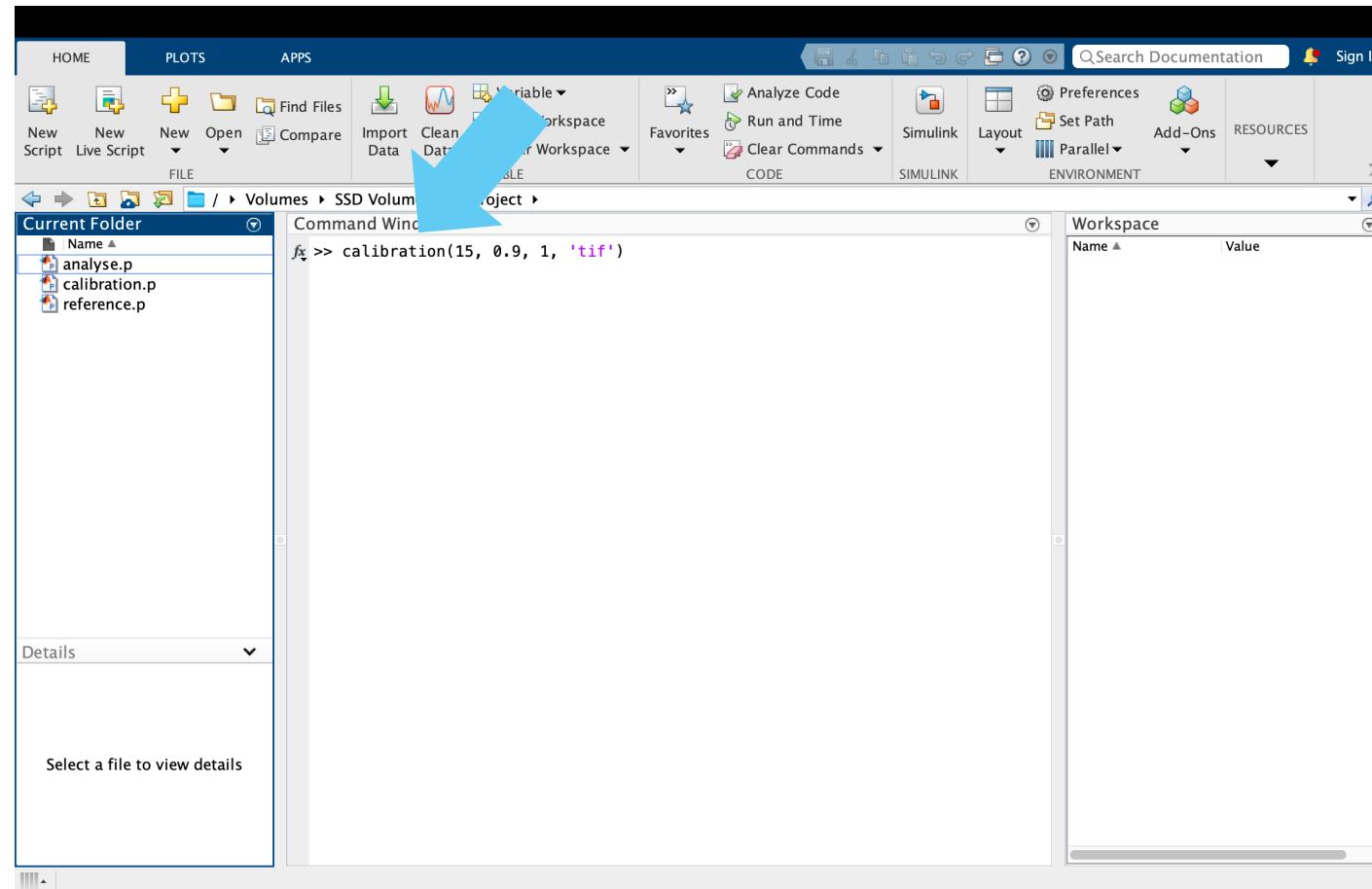
New Script

Ready

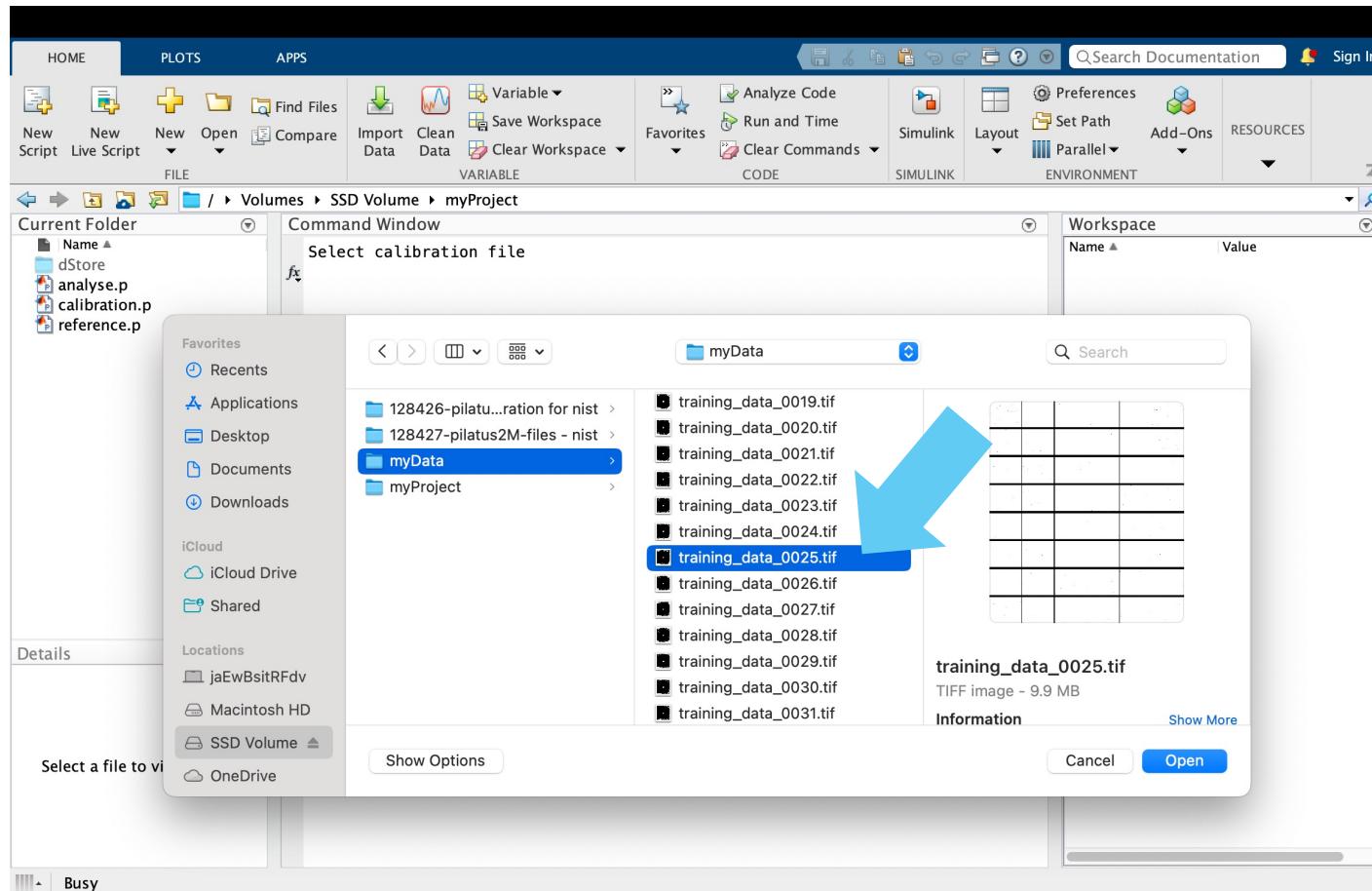
Copy exCaking functions to project folder



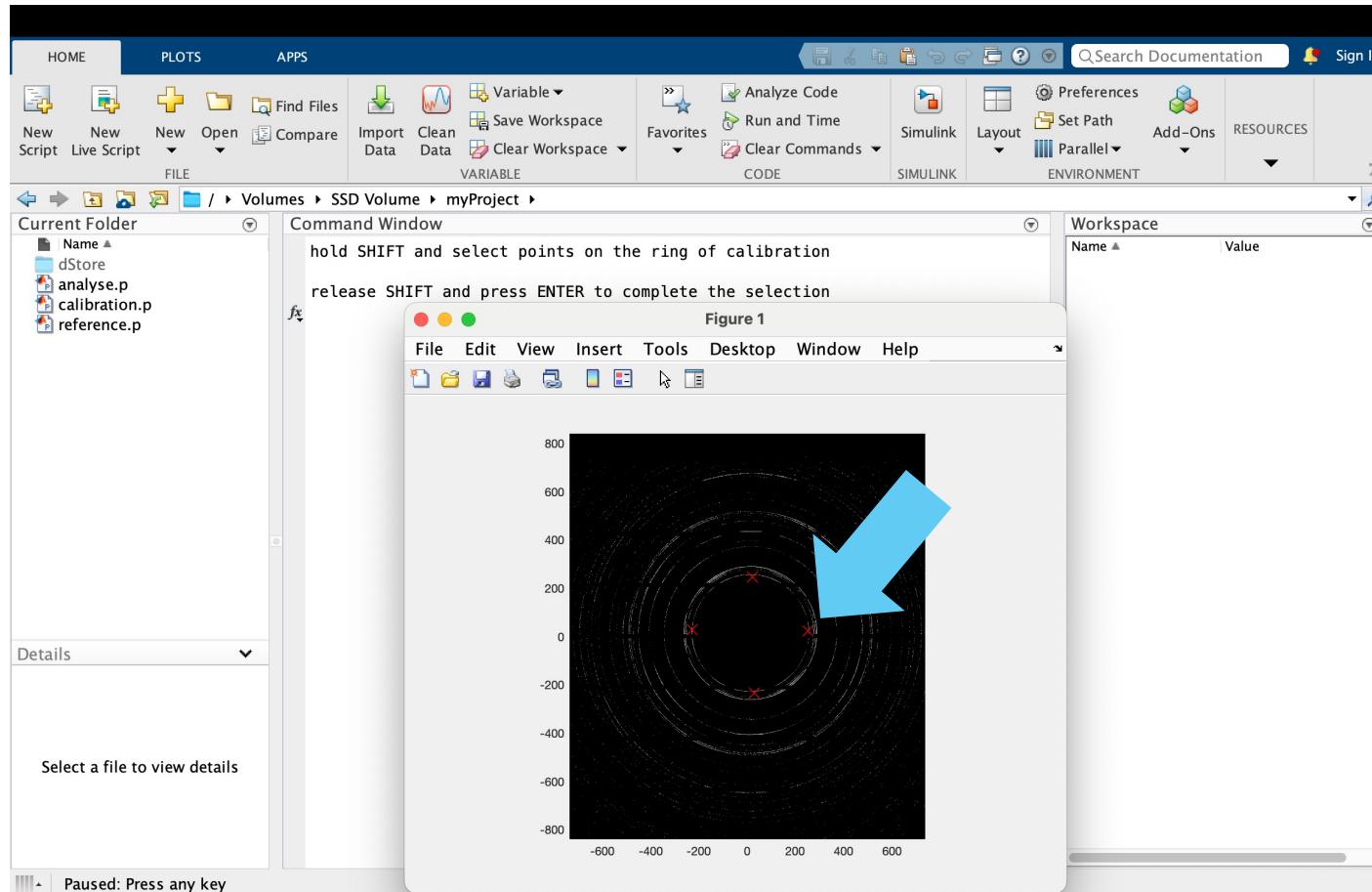
Initiate calibration command



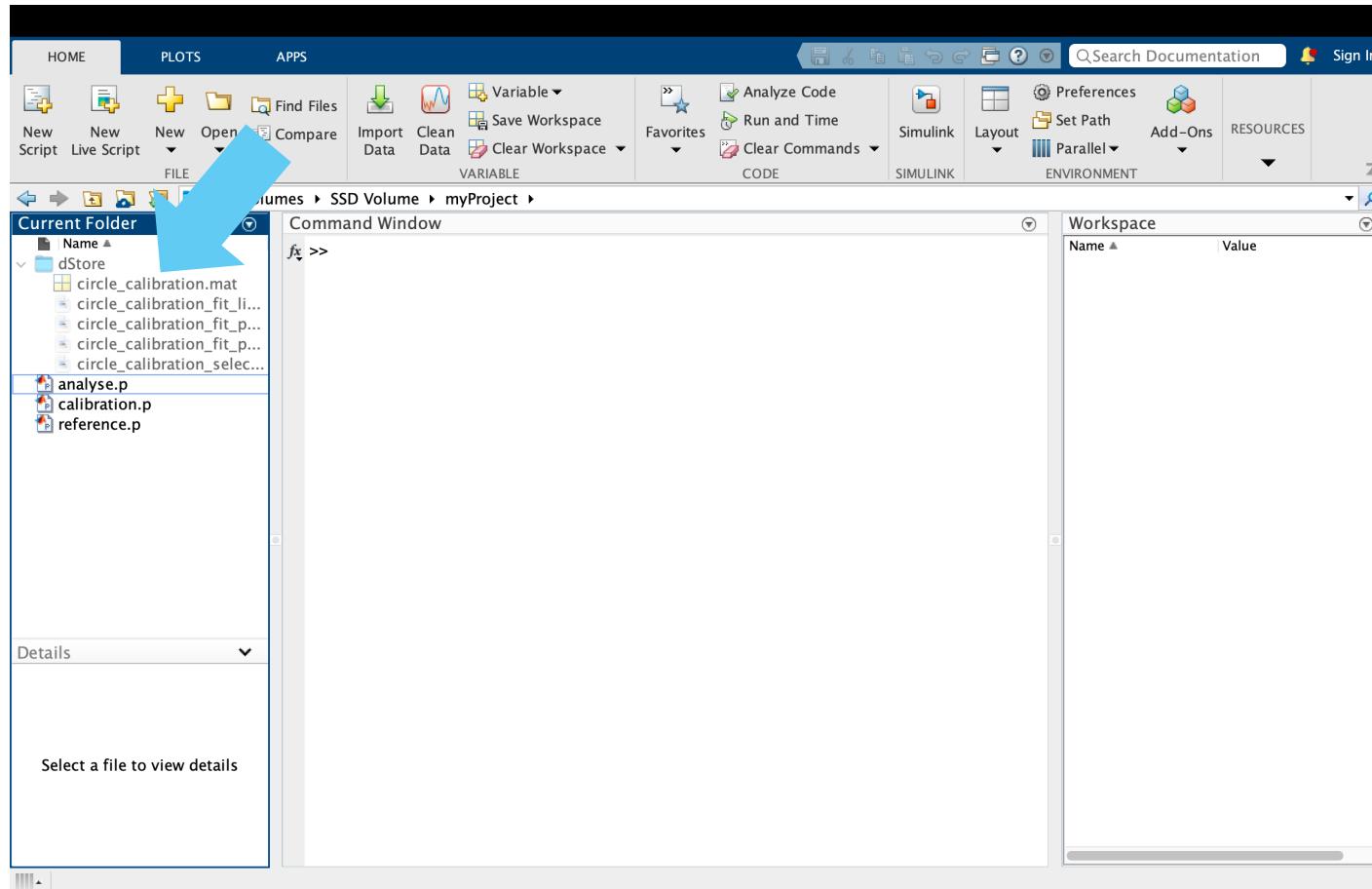
Select calibration file



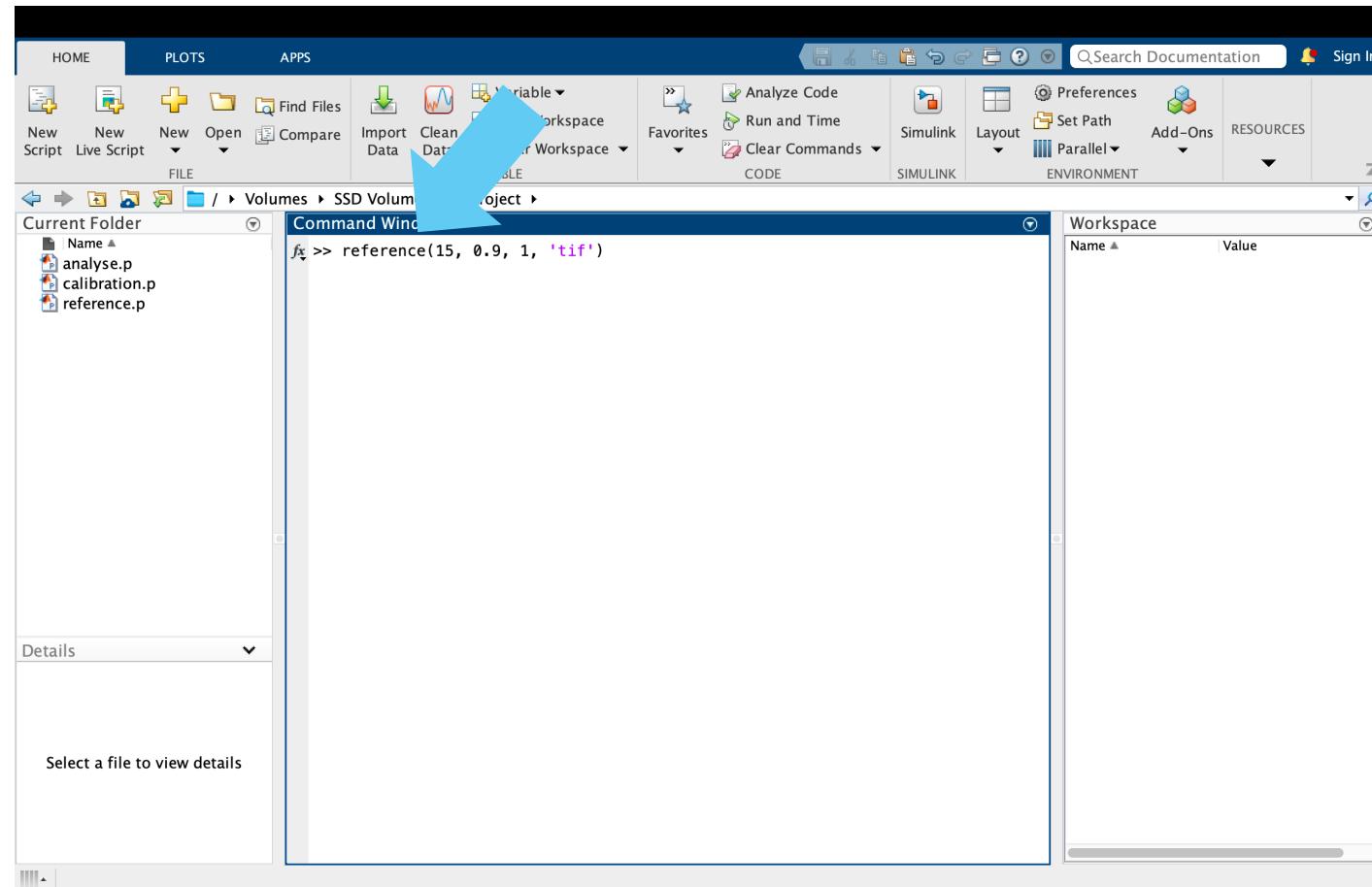
Select fitting points on one of the rings



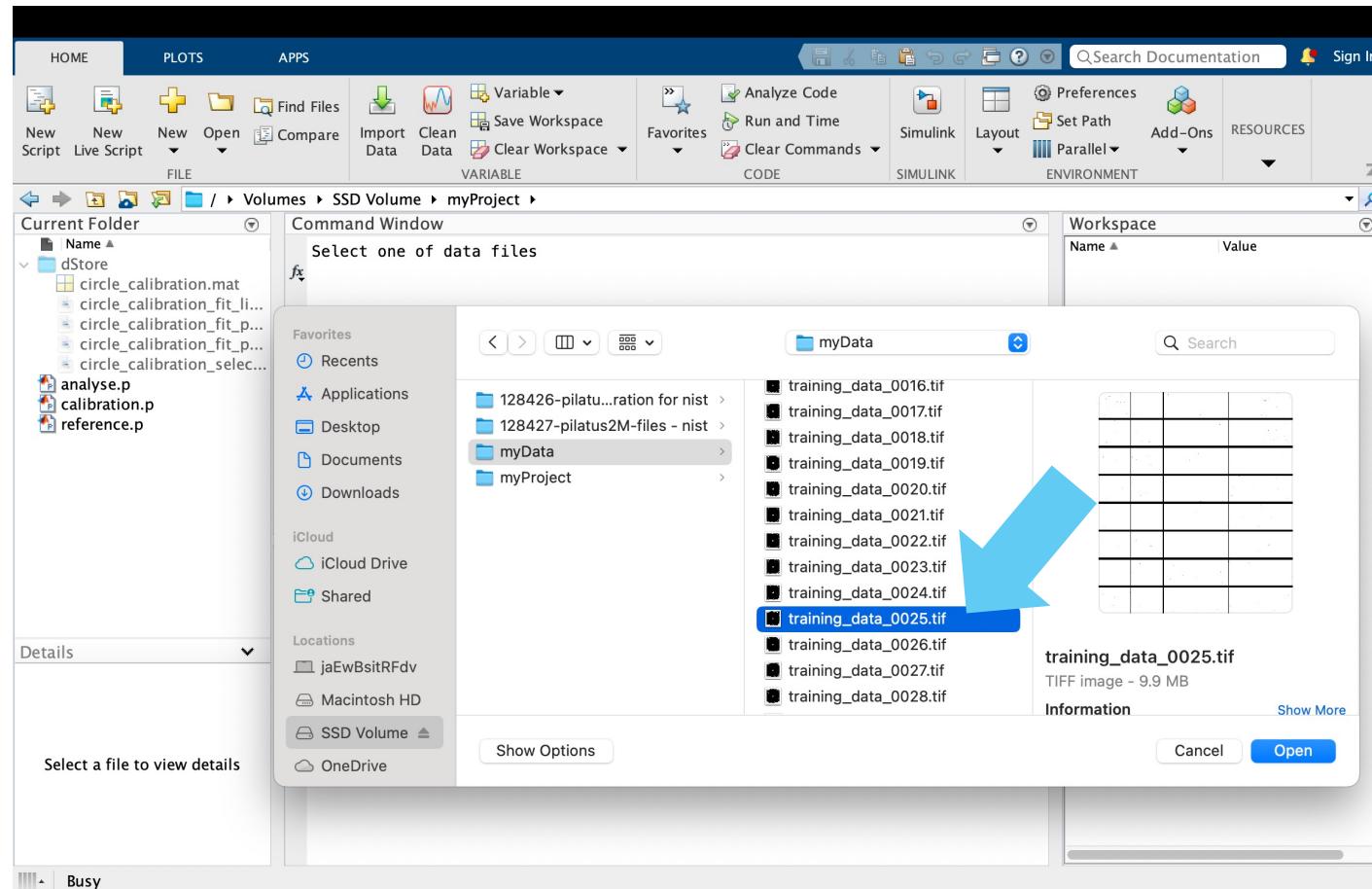
Calibration files are stored in **dStore** folder



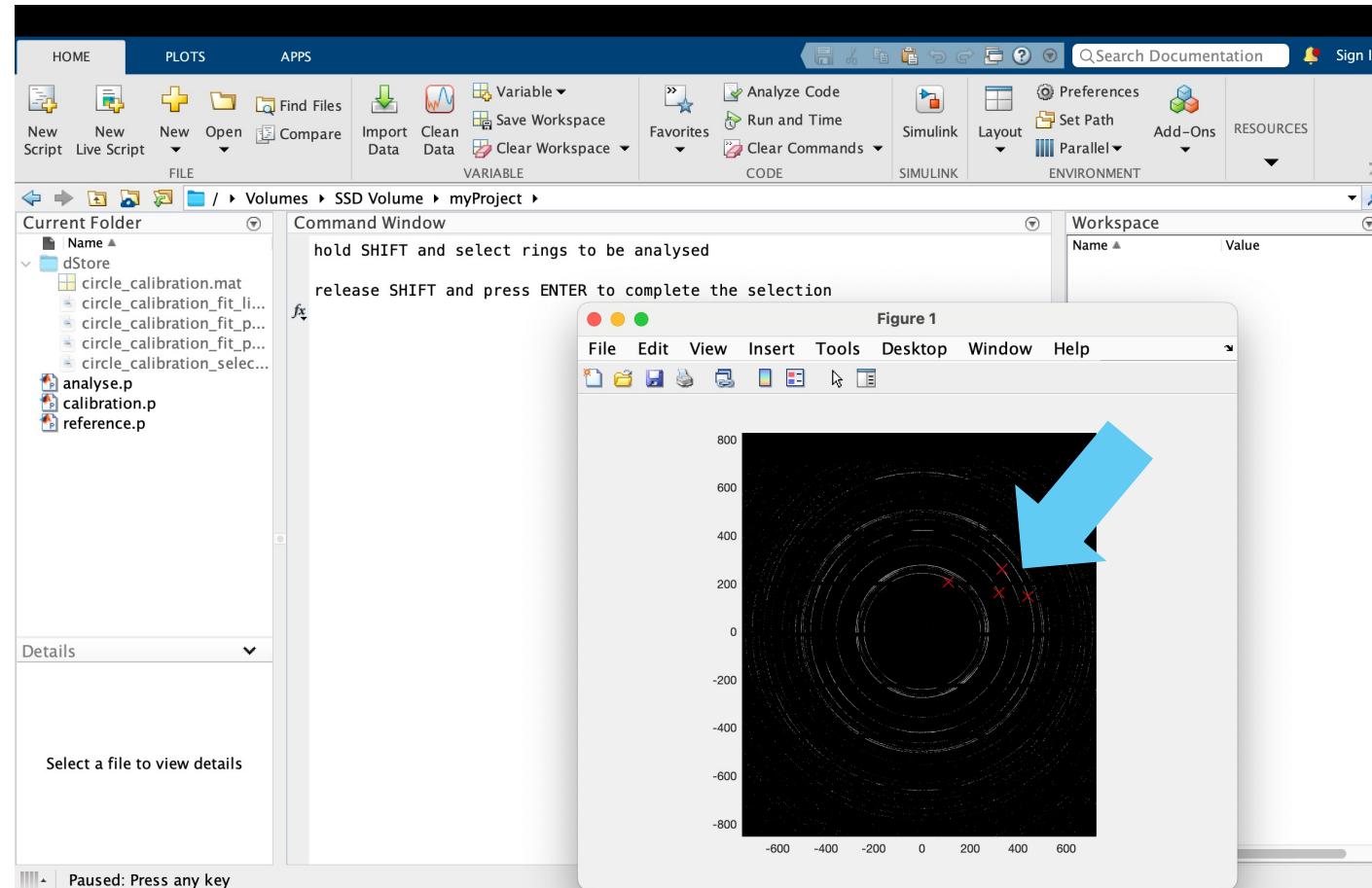
Initiate reference command



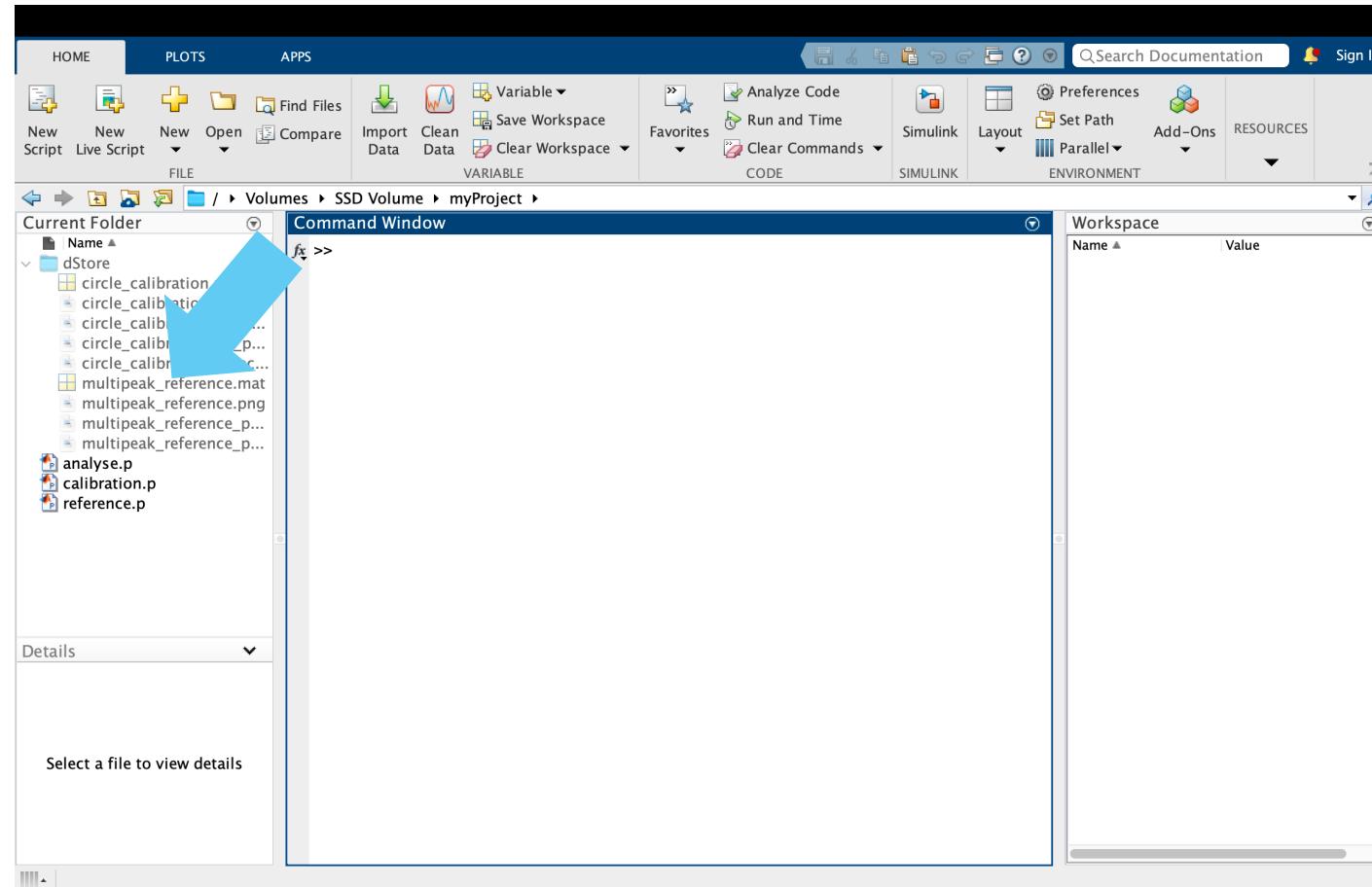
Select reference file



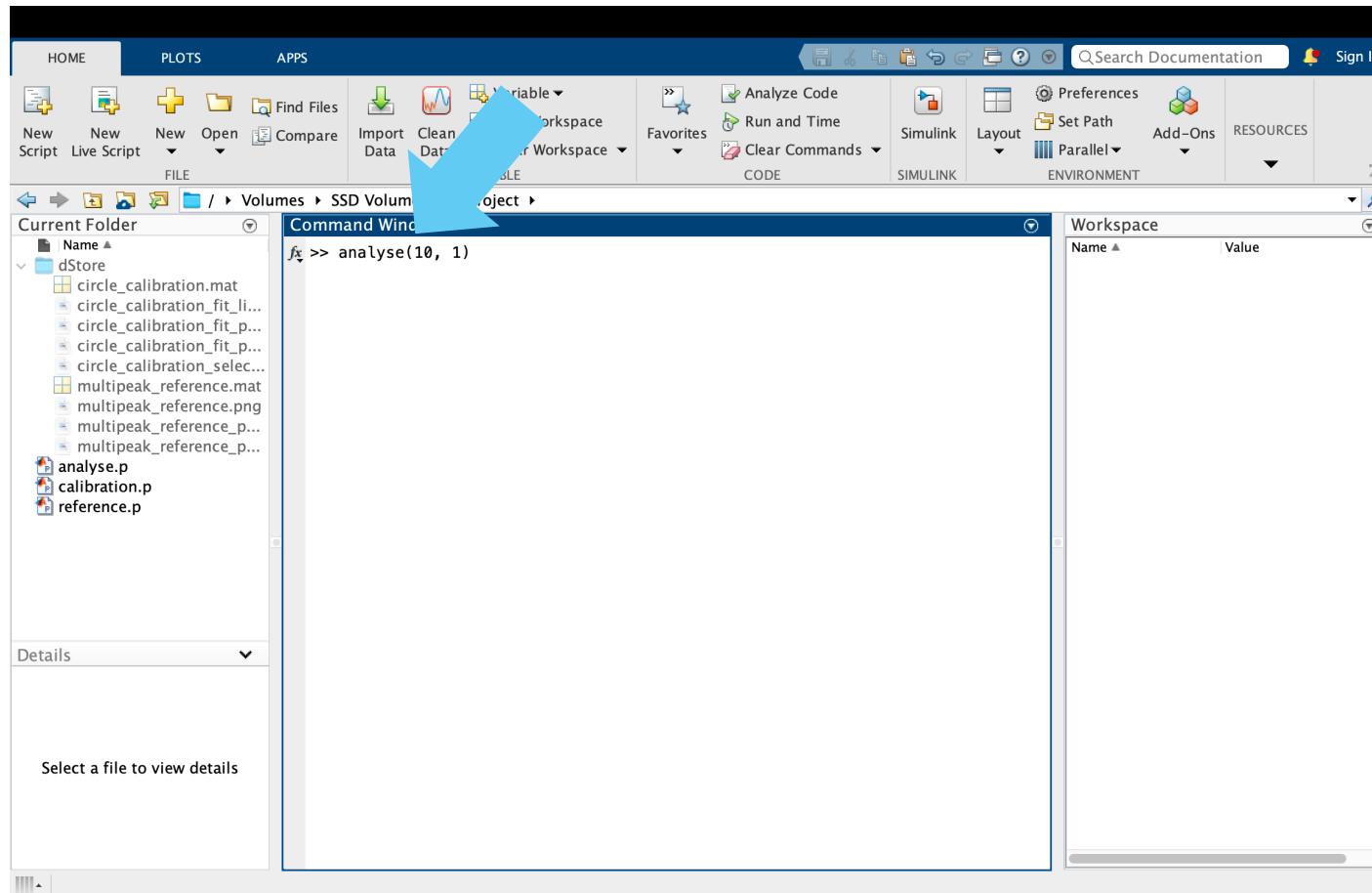
Select rings to be analysed



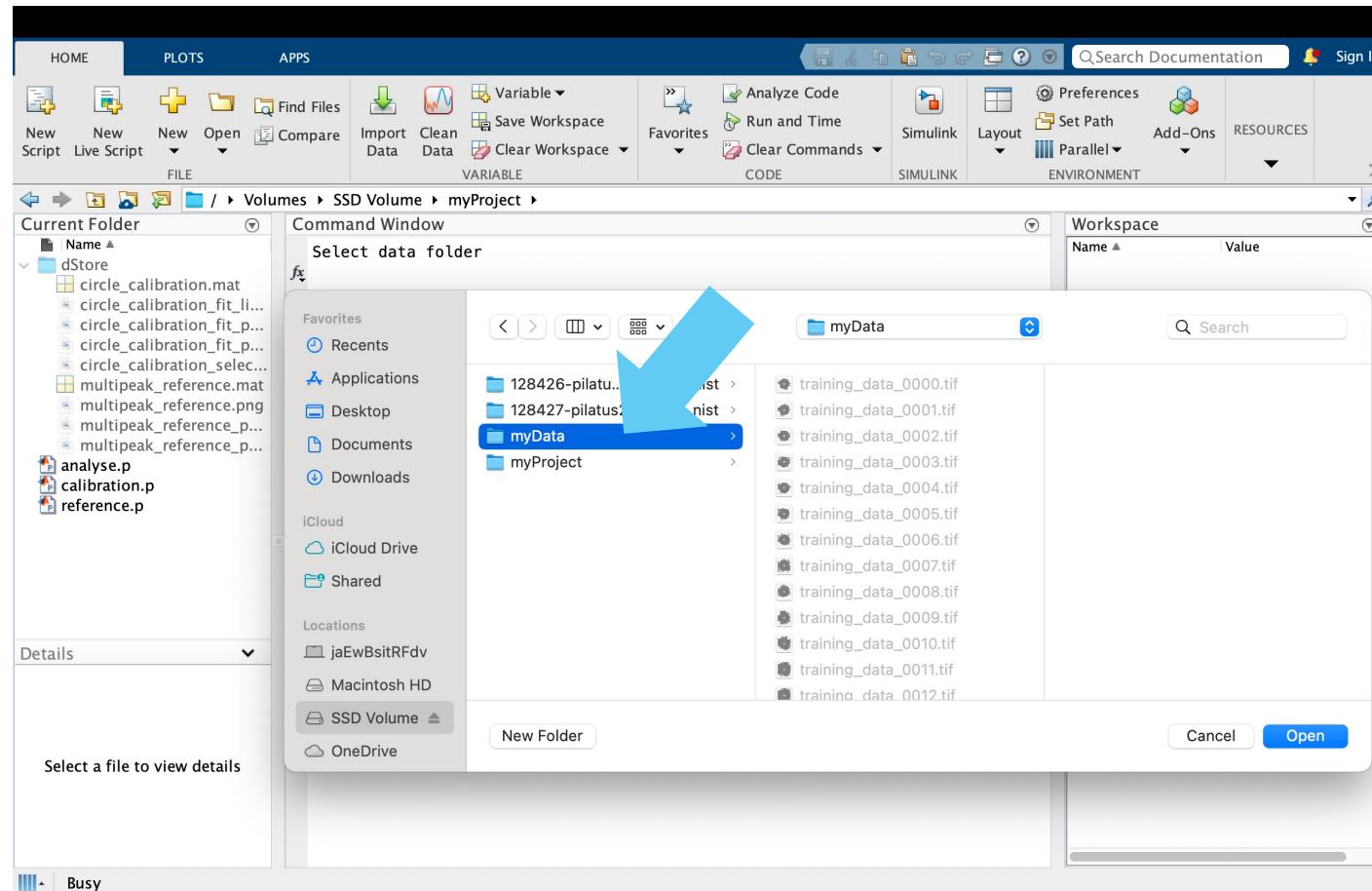
Reference files are stored in dStore folder



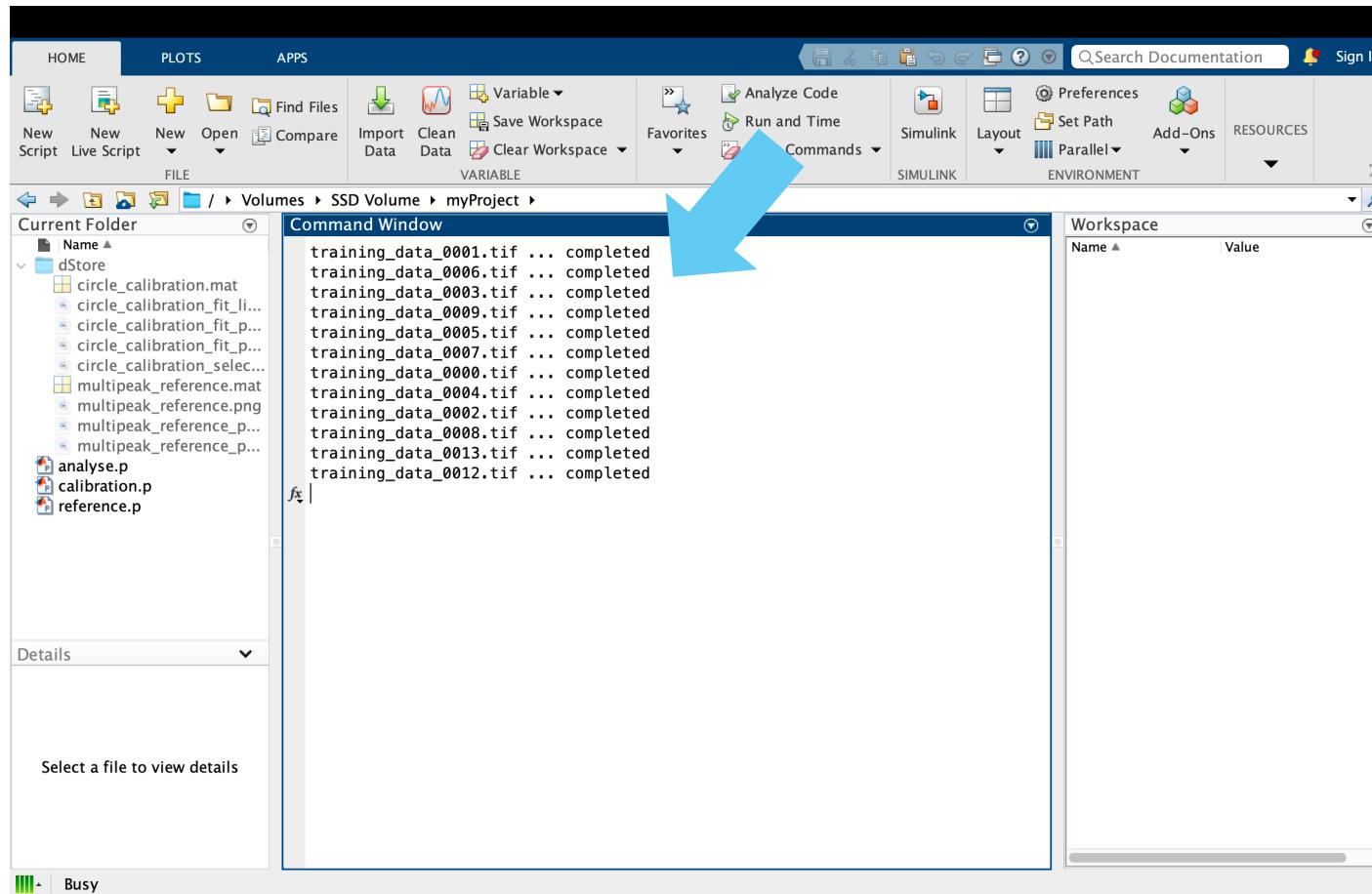
Initiate the analysis



Select data folder



Follow the progress from Command Window



Results are stored in CSV format

Import - /Volumes/SSD Volume/myProject/dStore/myData_exCaking.csv

IMPORT VIEW

Column delimiters: Comma

Range: A1:I50 Output Type: Table

Variable Names Row: 1

UNIMPORTABLE CELLS Import Selection

Delimited Fixed Width Delimiter Options

myDataexCaking

Number VarName1 VarName2 VarName3 VarName4 VarName5 VarName6 VarName7 VarName8 VarName9

1 training_data_0000.tif 241.939... 357.596... 419.658... 463.901... 243.559... 357.850... 421.363... 464.683...

2 training_data_0001.tif 241.858... 357.899... 419.758... 464.078... 243.459... 357.943... 421.259... 464.494...

3 training_data_0002.tif 241.958... 357.747... 419.974... 463.862... 243.629... 358.004... 421.378... 464.975...

4 training_data_0003.tif 242.094... 358.021... 420.329... 463.971... 243.487... 357.935... 421.348... 464.896...

5 training_data_0004.tif 242.085... 357.890... 420.083... 464.439... 243.341... 357.795... 420.793... 464.675...

6 training_data_0005.tif 242.350... 358.076... 420.386... 464.425... 243.399... 357.704... 420.964... 464.777...

7 training_data_0006.tif 242.190... 358.212... 420.517... 464.552... 243.410... 357.729... 421.193... 464.688...

8 training_data_0007.tif 242.289... 358.510... 420.648... 464.782... 243.299... 357.823... 420.599... 464.769...

9 training_data_0008.tif 242.484... 358.518... 420.724... 464.886... 243.362... 357.750... 421.332... 464.943...

10 training_data_0009.tif 242.451... 358.697... 420.995... 464.970... 243.225... 357.782... 420.682... 465.002...

11 training_data_0010.tif 242.740... 358.843... 421.301... 465.217... 243.221... 357.694... 420.643... 465.023...

12 training_data_0011.tif 242.749... 359.023... 421.476... 465.368... 243.349... 357.594... 420.967... 464.447...

13 training_data_0012.tif 243.057... 358.899... 421.720... 465.280... 243.215... 357.340... 420.291... 464.822...

14 training_data_0013.tif 243.256... 359.079... 421.810... 465.602... 243.289... 357.501... 420.791... 464.733...

15 training_data_0014.tif 243.290... 359.318... 421.860... 465.379... 243.327... 357.693... 421.169... 464.949...

16 training_data_0015.tif 243.305... 359.430... 422.102... 465.465... 243.425... 357.158... 420.431... 464.843...

17 training_data_0016.tif 243.330... 359.149... 421.955... 465.365... 243.144... 357.419... 420.730... 464.896...

18 training_data_0017.tif 242.976... 358.971... 421.969... 465.111... 243.201... 357.533... 420.947... 465.265...

19 training_data_0018.tif 242.831... 358.989... 421.369... 465.061... 243.596... 357.509... 421.161... 464.913...

20 training_data_0019.tif 242.912... 358.631... 421.026... 464.959... 243.185... 357.506... 421.400... 464.979...

21 training_data_0020.tif 242.888... 358.813... 421.123... 464.768... 243.228... 357.688... 420.845... 465.281...

22 training_data_0021.tif 242.698... 358.444... 420.908... 464.381... 243.663... 357.750... 420.867... 465.377...

23 training_data_0022.tif 242.699... 358.321... 420.815... 464.462... 243.215... 358.088... 421.351... 465.482...

24 training_data_0023.tif 242.690... 358.296... 420.704... 464.320... 243.462... 357.775... 421.637... 465.302...

data files

The screenshot shows a software interface for importing CSV files. At the top, there's a toolbar with various icons. Below it is a main window titled 'Import - /Volumes/SSD Volume/myProject/dStore/myData_exCaking.csv'. The window has tabs for 'IMPORT' and 'VIEW'. Under 'IMPORT', there are options for 'Delimited' (selected) and 'Fixed Width', with 'Comma' chosen as the delimiter. The 'Range' is set to 'A1:I50'. The 'Output Type' is 'Table'. A red arrow points to the 'data files' section at the bottom left, which lists 24 entries, each consisting of a file name and nine numerical values. The file names follow a pattern like 'training_data_0000.tif' through 'training_data_0023.tif'. The numerical values are listed in columns labeled A through I.

Columns of xx-component of elastic strains

Import - /Volumes/SSD Volume/myProject/dStore/myData_exCaking.csv

IMPORT VIEW

Column delimiters: Comma

Fixed Width Delimiter Options

DELIMITERS

Variable Names

SELECTION

Output Type: Table

UNIMPORTABLE CELLS

Import Selection

IMPORT

myData_exCaking

4 selected rings!

	A	B	C	D	E	F	G	H	I	
	Number	VarName1	VarName2	VarName3	VarName4	VarName5	VarName6	VarName7	VarName8	VarName9
1	training_data_0000.tif	241.939...	357.596...	419.658...	463.901...	243.559...	357.850...	421.363...	464.683...	
2	training_data_0001.tif	241.858...	357.899...	419.758...	464.078...	243.459...	357.943...	421.259...	464.494...	
3	training_data_0002.tif	241.958...	357.747...	419.974...	463.862...	243.629...	358.004...	421.378...	464.975...	
4	training_data_0003.tif	242.094...	358.021...	420.329...	463.971...	243.487...	357.935...	421.348...	464.896...	
5	training_data_0004.tif	242.085...	357.890...	420.083...	464.439...	243.341...	357.795...	420.793...	464.675...	
6	training_data_0005.tif	242.350...	358.076...	420.386...	464.425...	243.399...	357.704...	420.964...	464.777...	
7	training_data_0006.tif	242.190...	358.212...	420.517...	464.552...	243.410...	357.729...	421.193...	464.688...	
8	training_data_0007.tif	242.289...	358.510...	420.648...	464.782...	243.299...	357.823...	420.599...	464.769...	
9	training_data_0008.tif	242.484...	358.518...	420.724...	464.886...	243.362...	357.750...	421.332...	464.943...	
10	training_data_0009.tif	242.451...	358.697...	420.995...	464.970...	243.225...	357.782...	420.682...	465.002...	
11	training_data_0010.tif	242.740...	358.843...	421.301...	465.217...	243.221...	357.694...	420.643...	465.023...	
12	training_data_0011.tif	242.749...	359.023...	421.476...	465.368...	243.349...	357.594...	420.967...	464.447...	
13	training_data_0012.tif	243.057...	358.899...	421.720...	465.280...	243.215...	357.340...	420.291...	464.822...	
14	training_data_0013.tif	243.256...	359.079...	421.810...	465.602...	243.289...	357.501...	420.791...	464.733...	
15	training_data_0014.tif	243.290...	359.318...	421.860...	465.379...	243.327...	357.693...	421.169...	464.949...	
16	training_data_0015.tif	243.305...	359.430...	422.102...	465.465...	243.425...	357.158...	420.431...	464.843...	
17	training_data_0016.tif	243.330...	359.149...	421.955...	465.365...	243.144...	357.419...	420.730...	464.896...	
18	training_data_0017.tif	242.976...	358.971...	421.969...	465.111...	243.201...	357.533...	420.947...	465.265...	
19	training_data_0018.tif	242.831...	358.989...	421.369...	465.061...	243.596...	357.509...	421.161...	464.913...	
20	training_data_0019.tif	242.912...	358.631...	421.026...	464.959...	243.185...	357.506...	421.400...	464.979...	
21	training_data_0020.tif	242.888...	358.813...	421.123...	464.768...	243.228...	357.688...	420.845...	465.281...	
22	training_data_0021.tif	242.698...	358.444...	420.908...	464.381...	243.663...	357.750...	420.867...	465.377...	
23	training_data_0022.tif	242.699...	358.321...	420.815...	464.462...	243.215...	358.088...	421.351...	465.482...	
24	training_data_0023.tif	242.690...	358.296...	420.704...	464.320...	243.462...	357.775...	421.637...	465.302...	

Columns of yy-component of elastic strains

Import - /Volumes/SSD Volume/myProject/dStore/myData_exCaking.csv

IMPORT VIEW

Column delimiters: Comma Range: A1:I50 Output Type: Table
Fixed Width Delimiter Options Variable Names Row: 1 Text Options
DELIMITERS SELECTION IMPORTED DATA UNIM CELLS Import Selection IMPORT

myData_exCaking.csv

4 selected rings!

	A	B	C	D	E	F	G	H	I
	myDataexCaking								
Number	VarName1	VarName2	VarName3	VarName4	VarName5	VarName6	VarName7	VarName8	VarName9
1	training_data_0000.tif	241.939...	357.596...	419.658...	463.901...	243.559...	357.850...	421.363...	464.683...
2	training_data_0001.tif	241.858...	357.899...	419.758...	464.078...	243.459...	357.943...	421.259...	464.494...
3	training_data_0002.tif	241.958...	357.747...	419.974...	463.862...	243.629...	358.004...	421.378...	464.975...
4	training_data_0003.tif	242.094...	358.021...	420.329...	463.971...	243.487...	357.935...	421.348...	464.896...
5	training_data_0004.tif	242.085...	357.890...	420.083...	464.439...	243.341...	357.795...	420.793...	464.675...
6	training_data_0005.tif	242.350...	358.076...	420.386...	464.425...	243.399...	357.704...	420.964...	464.777...
7	training_data_0006.tif	242.190...	358.212...	420.517...	464.552...	243.410...	357.729...	421.193...	464.688...
8	training_data_0007.tif	242.289...	358.510...	420.648...	464.782...	243.299...	357.823...	420.599...	464.769...
9	training_data_0008.tif	242.484...	358.518...	420.724...	464.886...	243.362...	357.750...	421.332...	464.943...
10	training_data_0009.tif	242.451...	358.697...	420.995...	464.970...	243.225...	357.782...	420.682...	465.002...
11	training_data_0010.tif	242.740...	358.843...	421.301...	465.217...	243.221...	357.694...	420.643...	465.023...
12	training_data_0011.tif	242.749...	359.023...	421.476...	465.368...	243.349...	357.594...	420.967...	464.447...
13	training_data_0012.tif	243.057...	358.899...	421.720...	465.280...	243.215...	357.340...	420.291...	464.822...
14	training_data_0013.tif	243.256...	359.079...	421.810...	465.602...	243.289...	357.501...	420.791...	464.733...
15	training_data_0014.tif	243.290...	359.318...	421.860...	465.379...	243.327...	357.693...	421.169...	464.949...
16	training_data_0015.tif	243.305...	359.430...	422.102...	465.465...	243.425...	357.158...	420.431...	464.843...
17	training_data_0016.tif	243.330...	359.149...	421.955...	465.365...	243.144...	357.419...	420.730...	464.896...
18	training_data_0017.tif	242.976...	358.971...	421.969...	465.111...	243.201...	357.533...	420.947...	465.265...
19	training_data_0018.tif	242.831...	358.989...	421.369...	465.061...	243.596...	357.509...	421.161...	464.913...
20	training_data_0019.tif	242.912...	358.631...	421.026...	464.959...	243.185...	357.506...	421.400...	464.979...
21	training_data_0020.tif	242.888...	358.813...	421.123...	464.768...	243.228...	357.688...	420.845...	465.281...
22	training_data_0021.tif	242.698...	358.444...	420.908...	464.381...	243.663...	357.750...	420.867...	465.377...
23	training_data_0022.tif	242.699...	358.321...	420.815...	464.462...	243.215...	358.088...	421.351...	465.482...
24	training_data_0023.tif	242.690...	358.296...	420.704...	464.320...	243.462...	357.775...	421.637...	465.302...