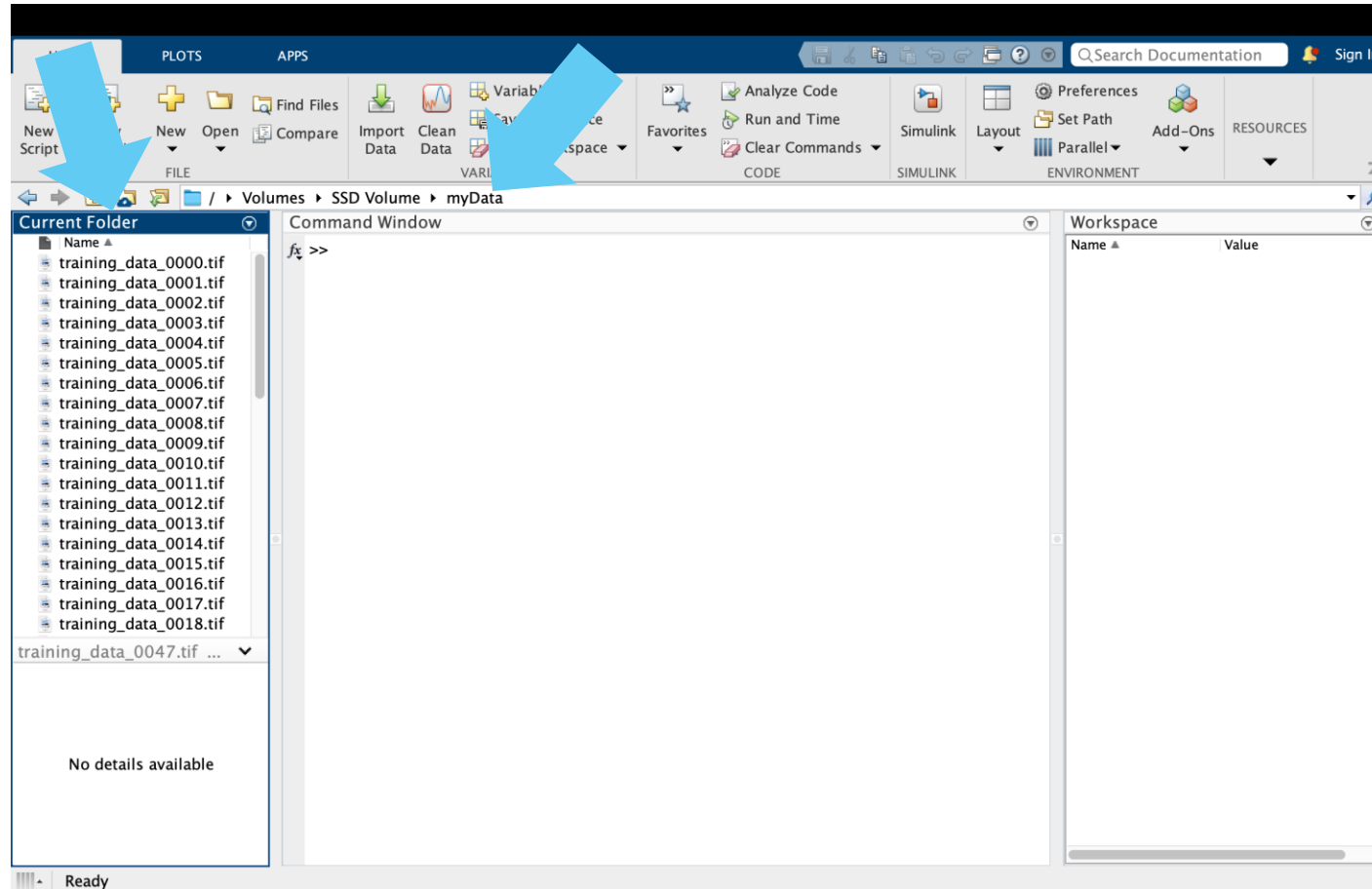


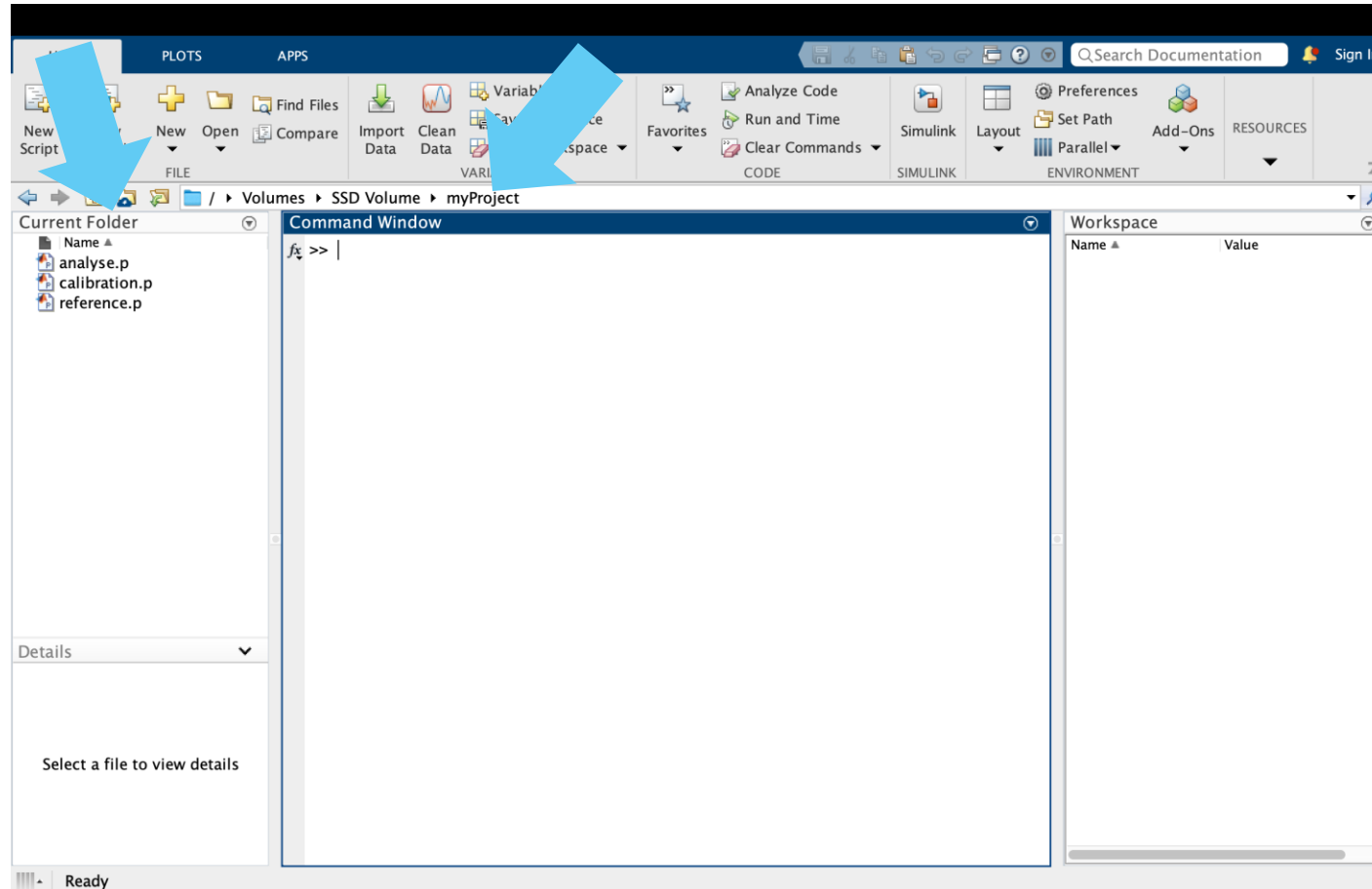
# exCaking

A guide for accurate elastic strain analysis  
using polycrystal diffraction data

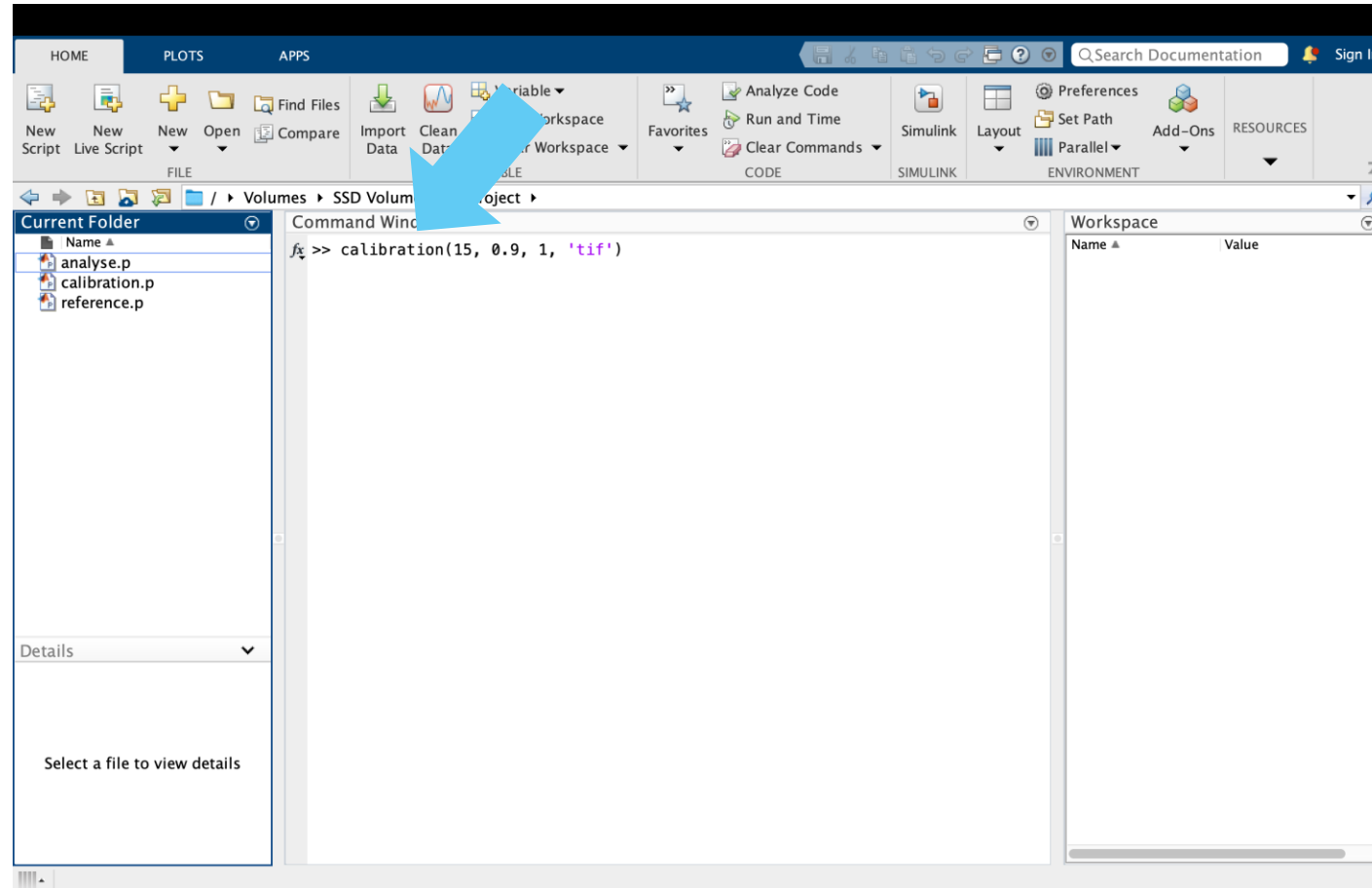
# Place polycrystal diffraction data in a folder



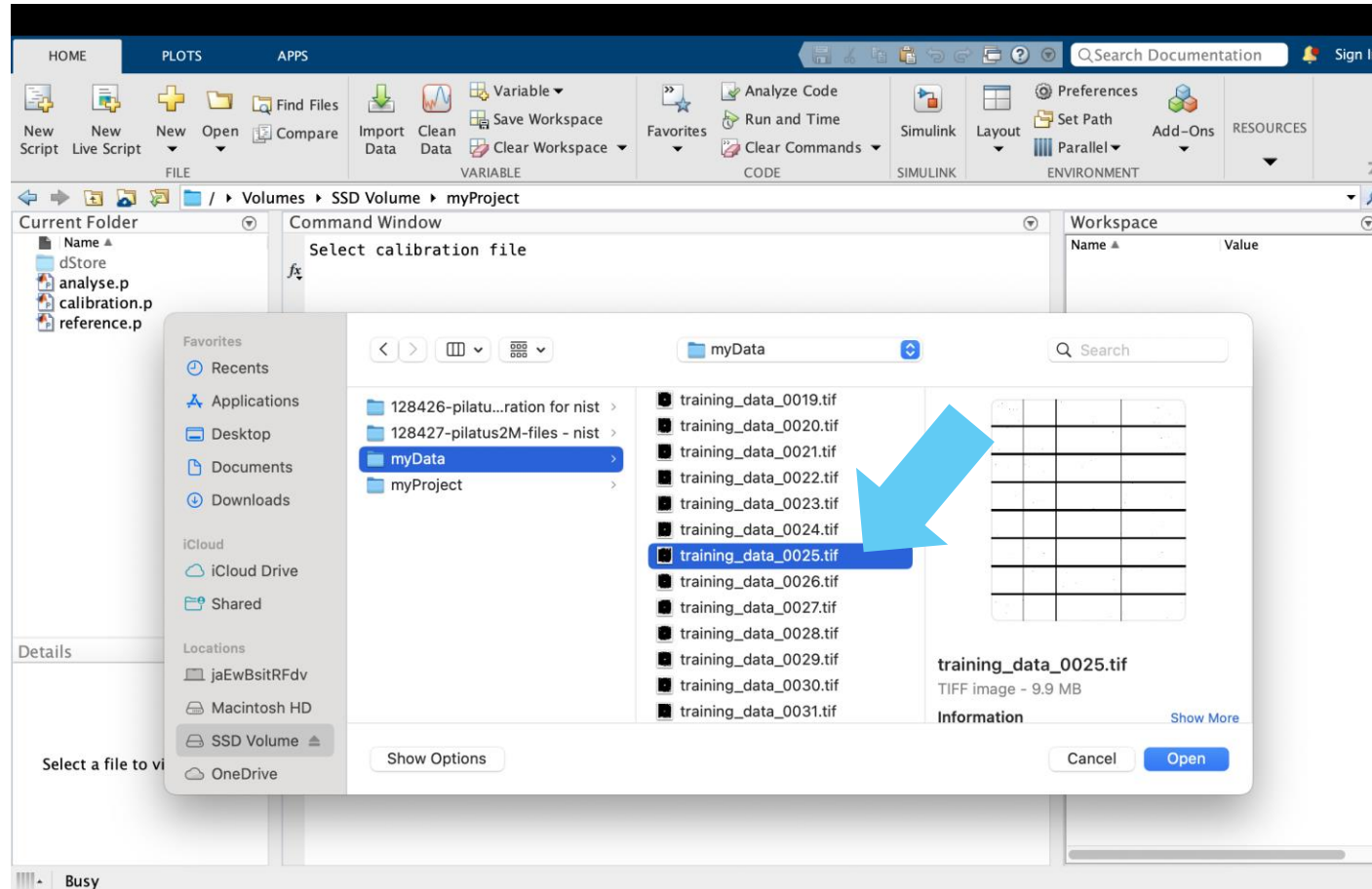
# Copy exCaking functions to project folder



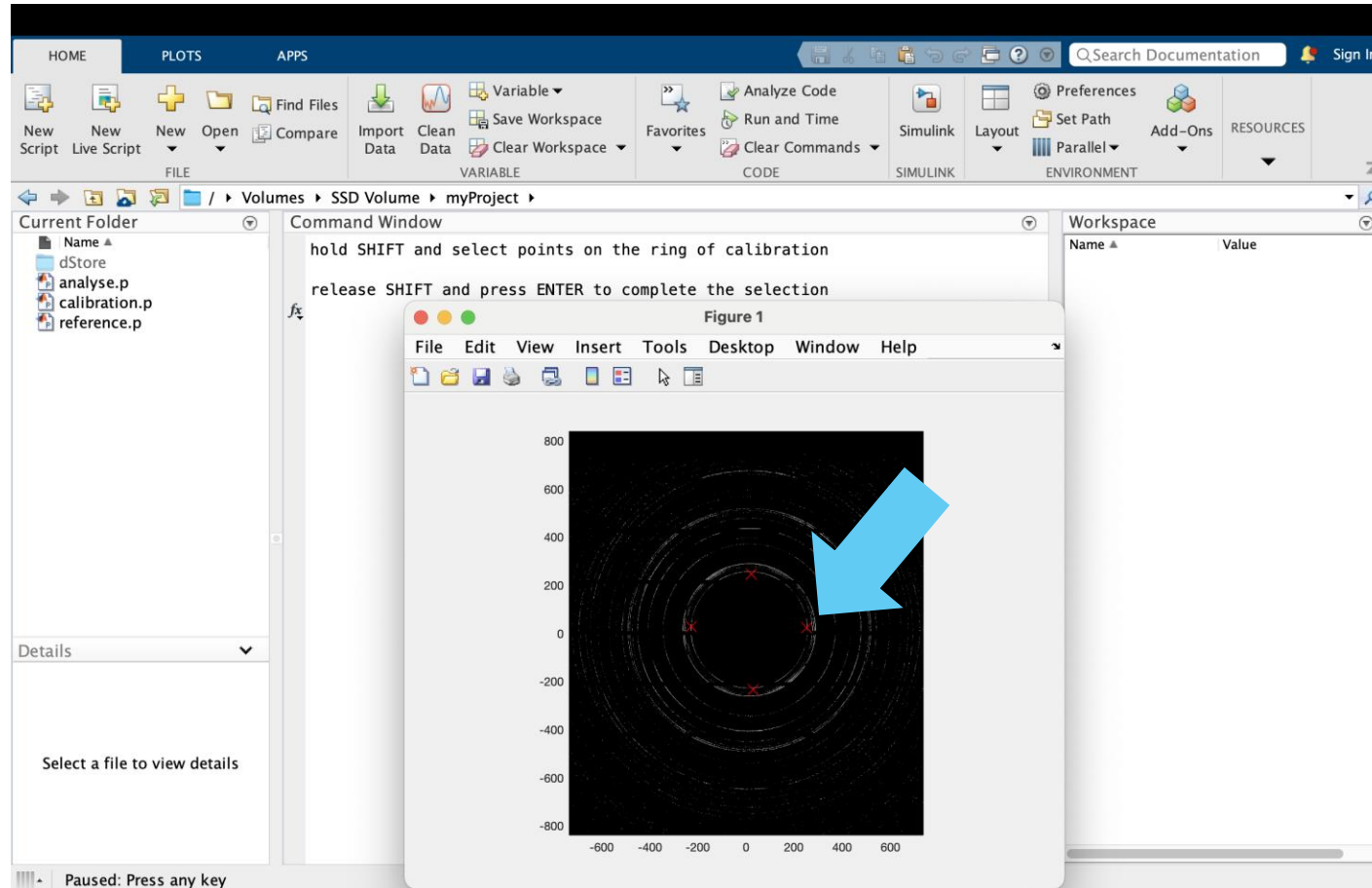
# Initiate **calibration** command



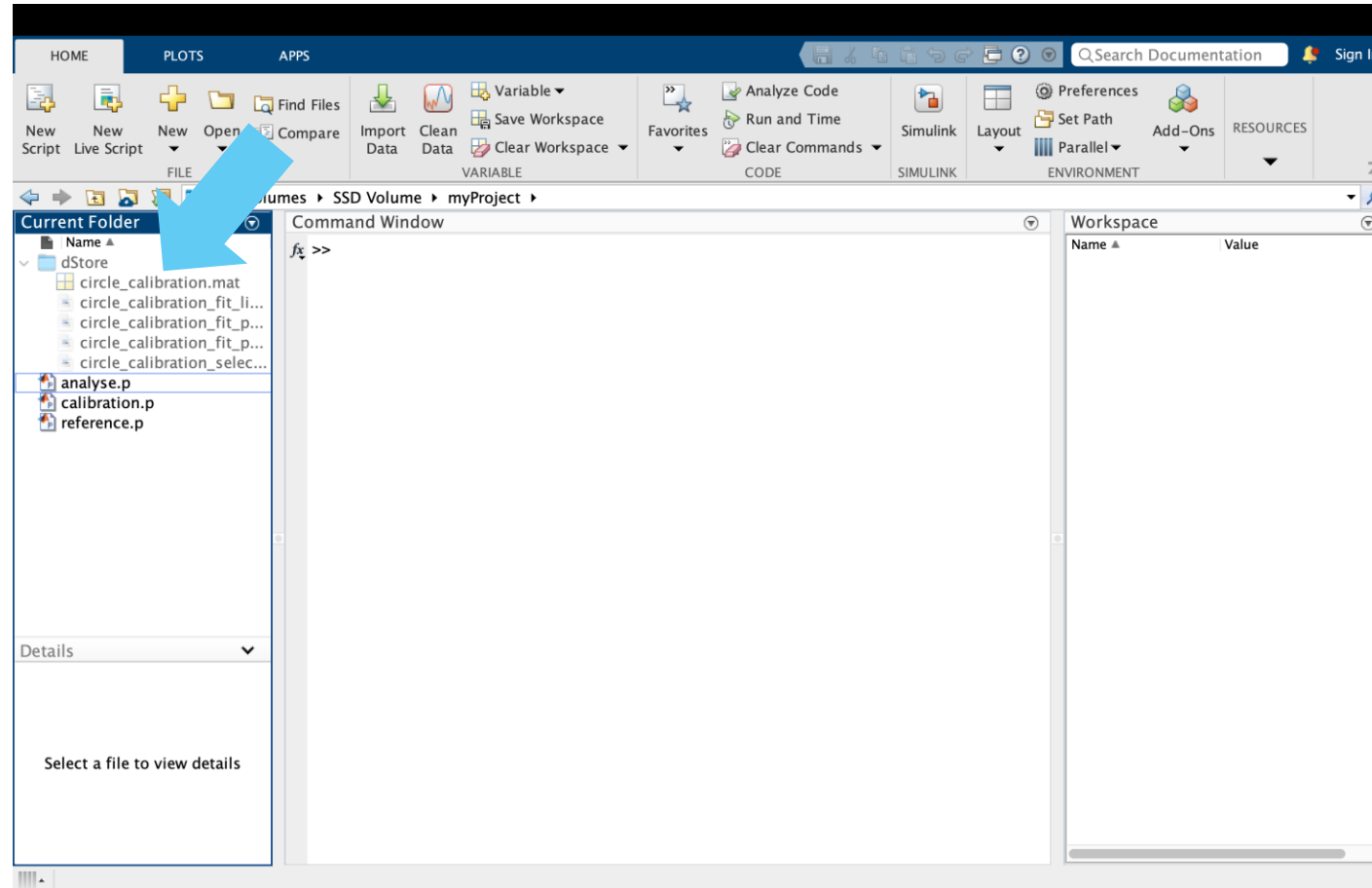
# Select calibration file



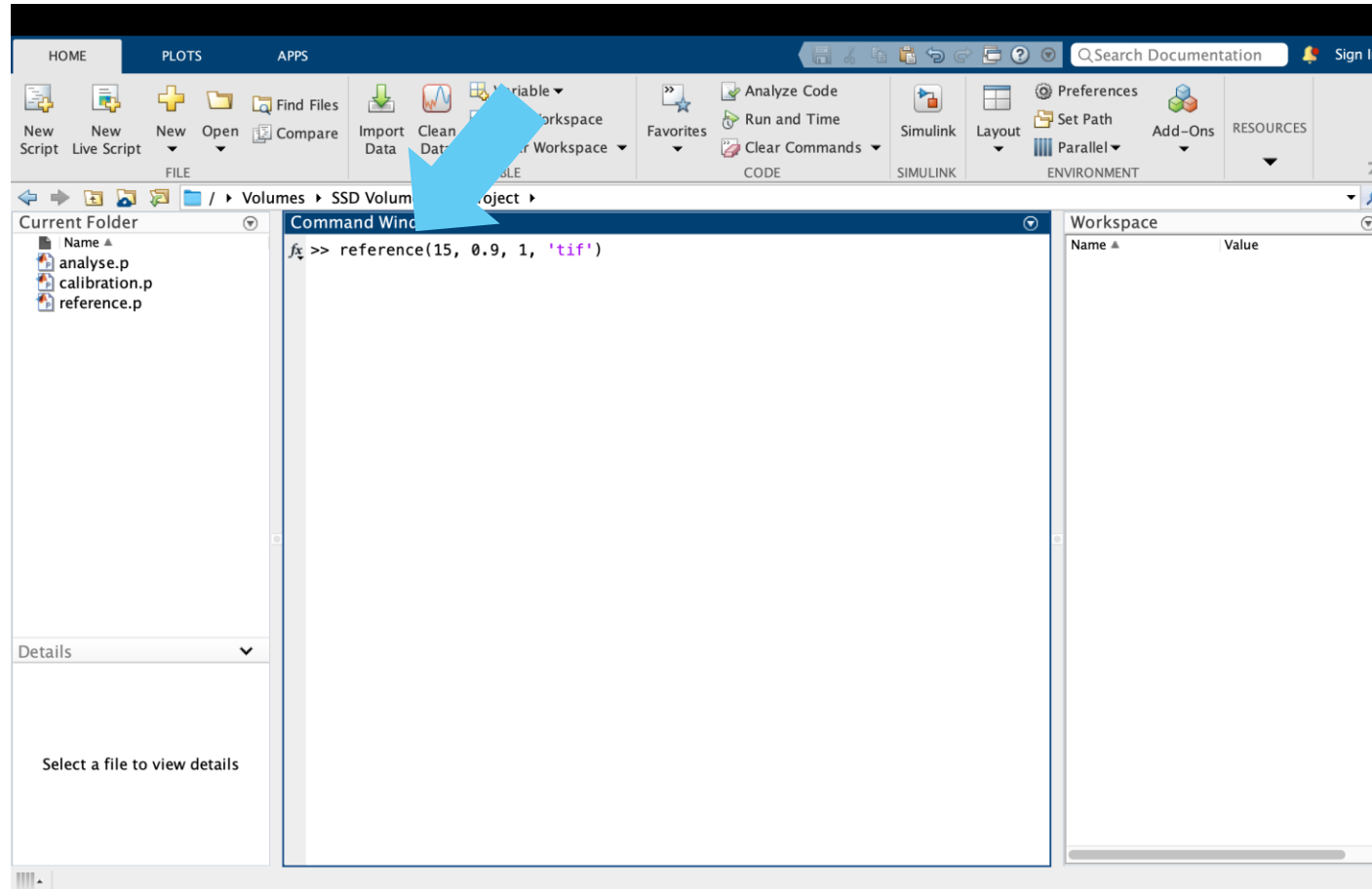
# Select fitting points on one of the rings



# Calibration files are stored in **dStore** folder

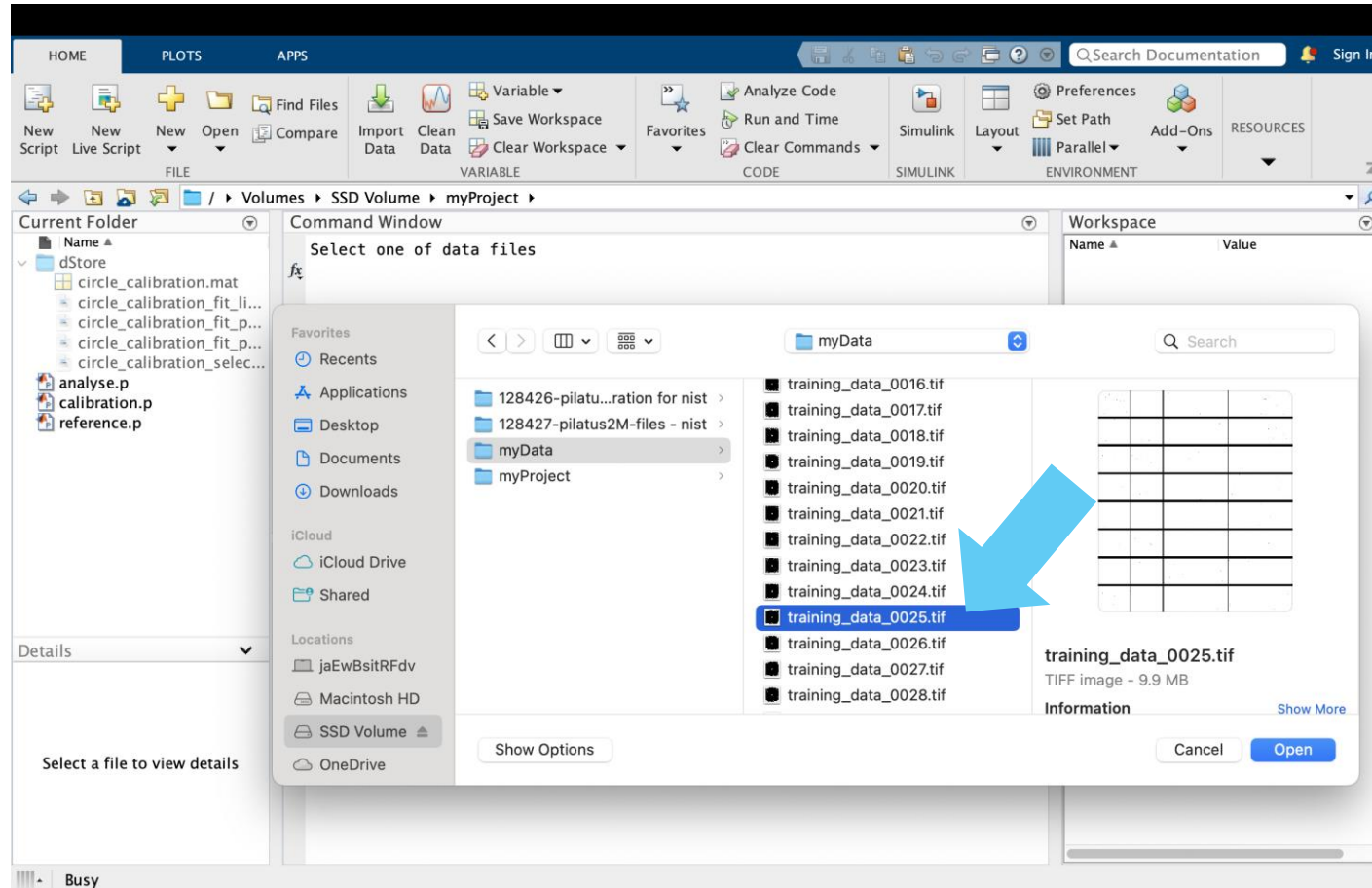


# Initiate **reference** command

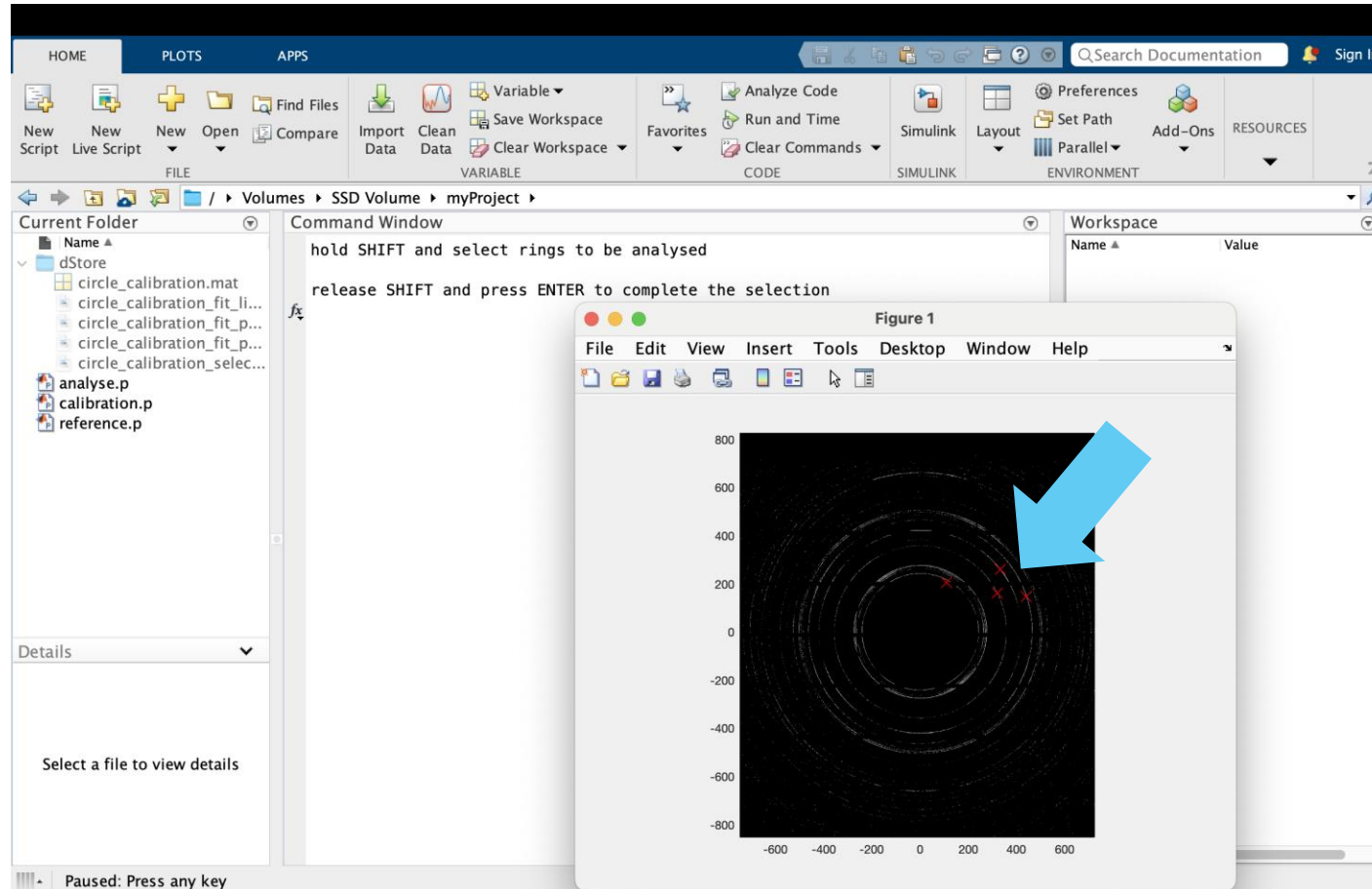




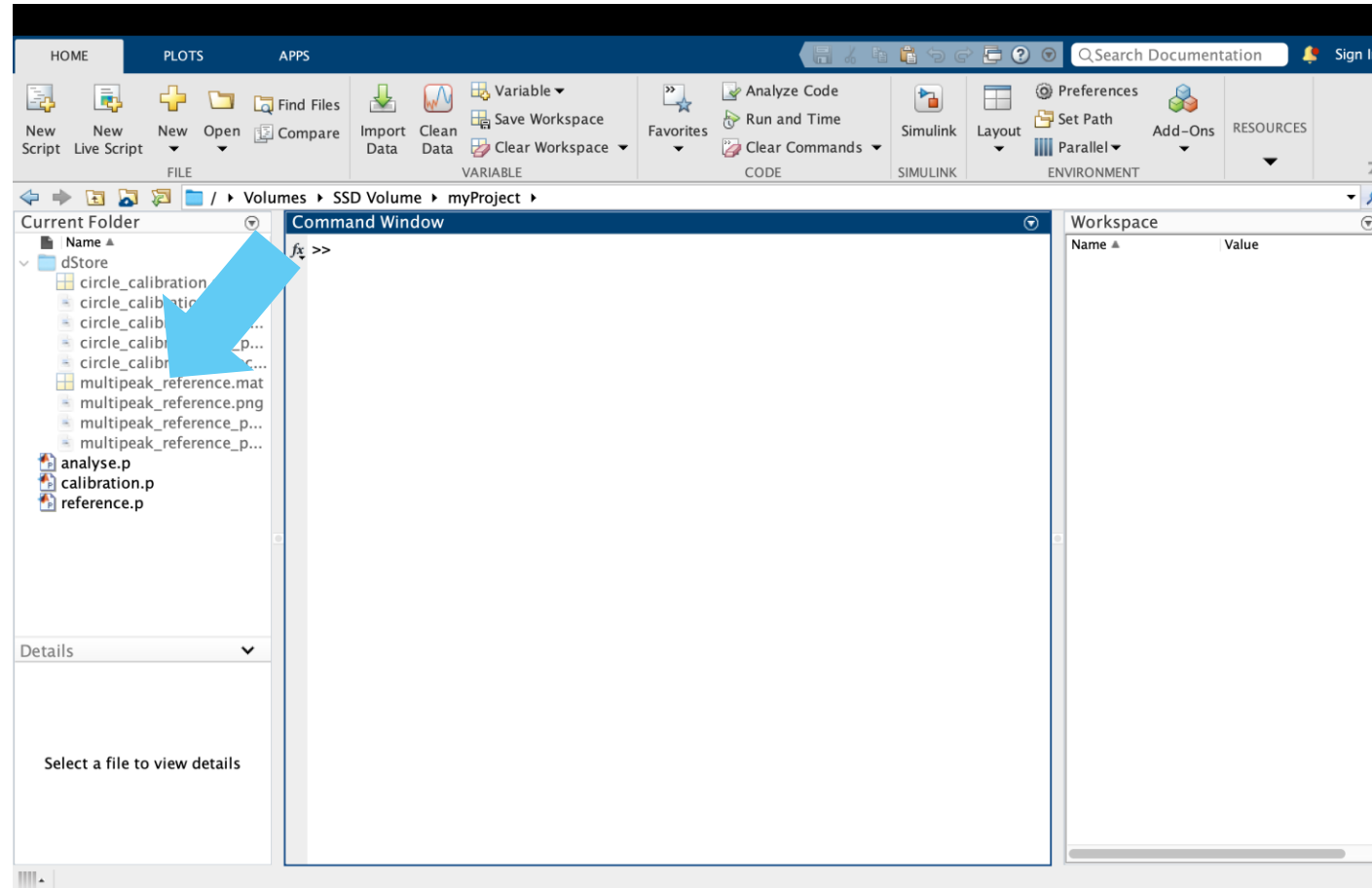
# Select reference file



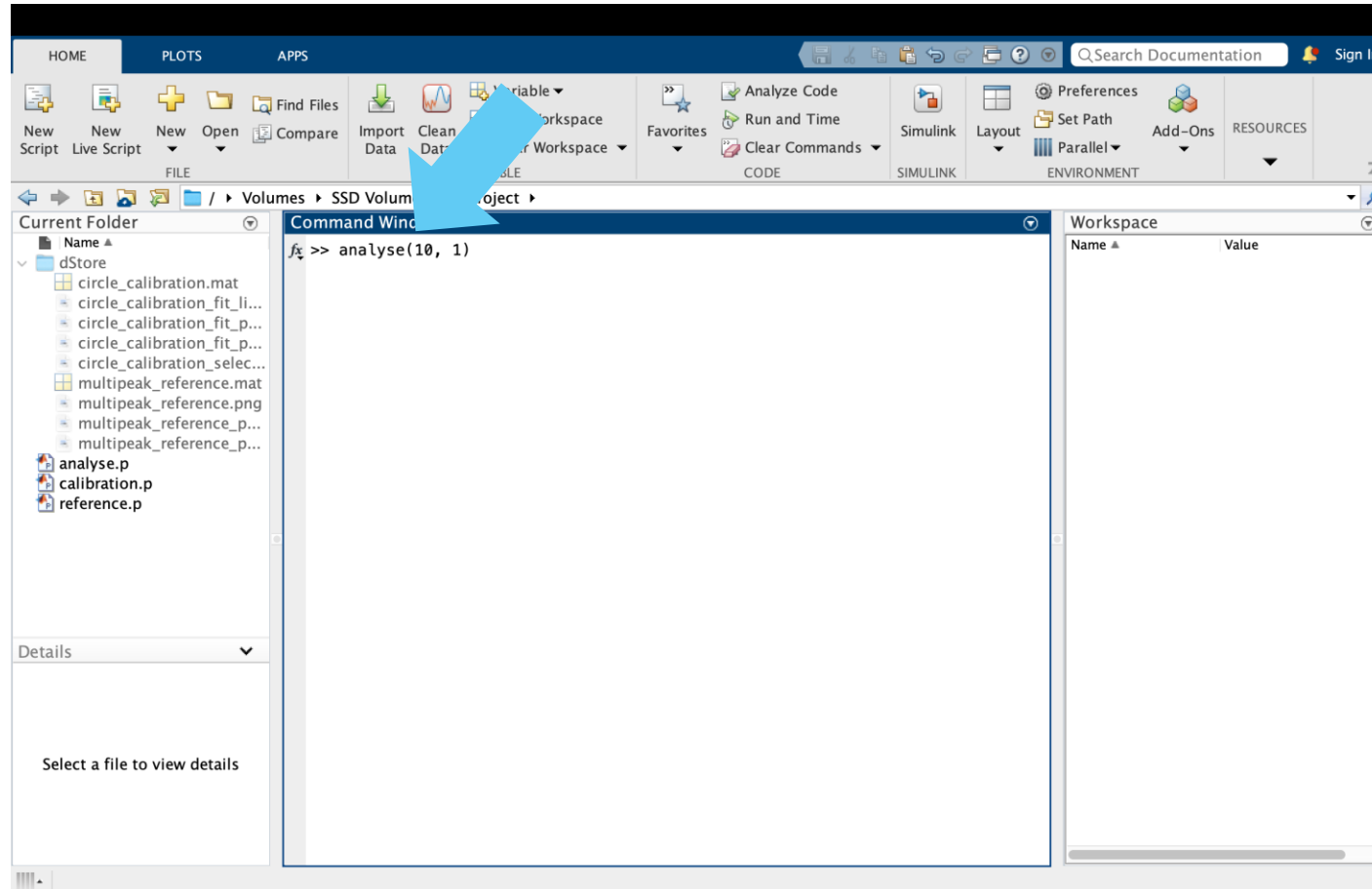
# Select rings to be analysed



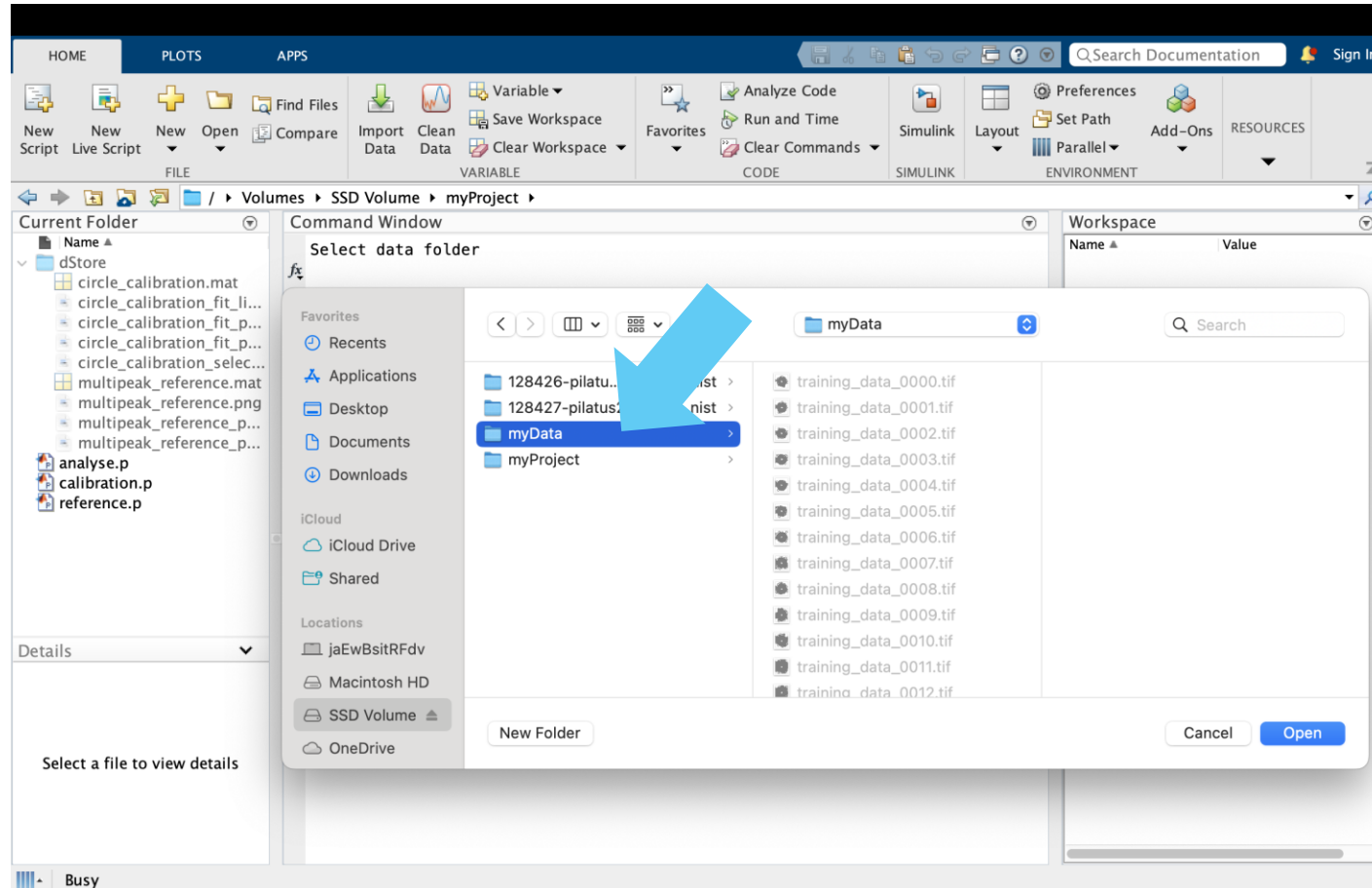
# Reference files are stored in **dStore** folder



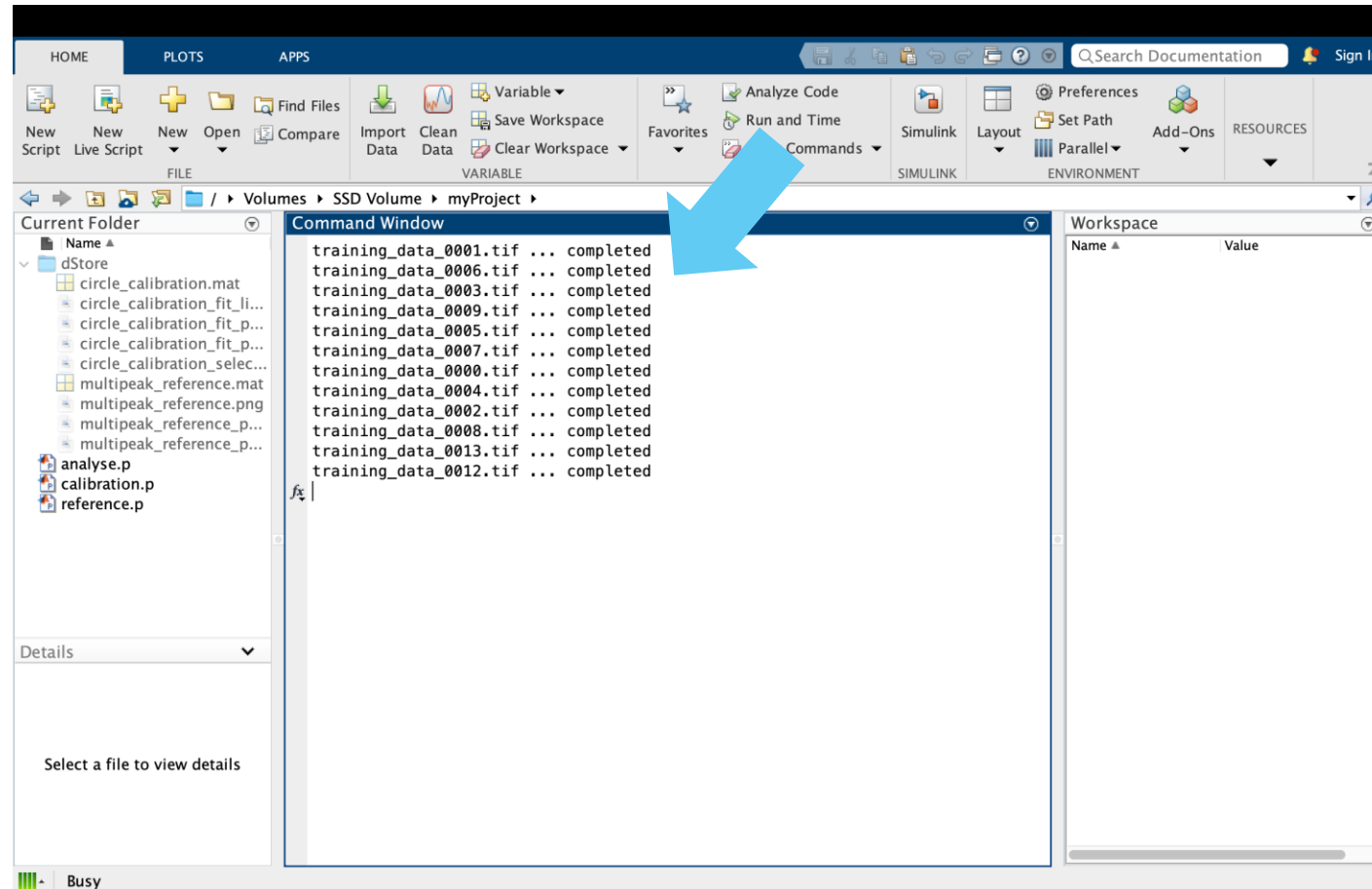
# Initiate the analysis



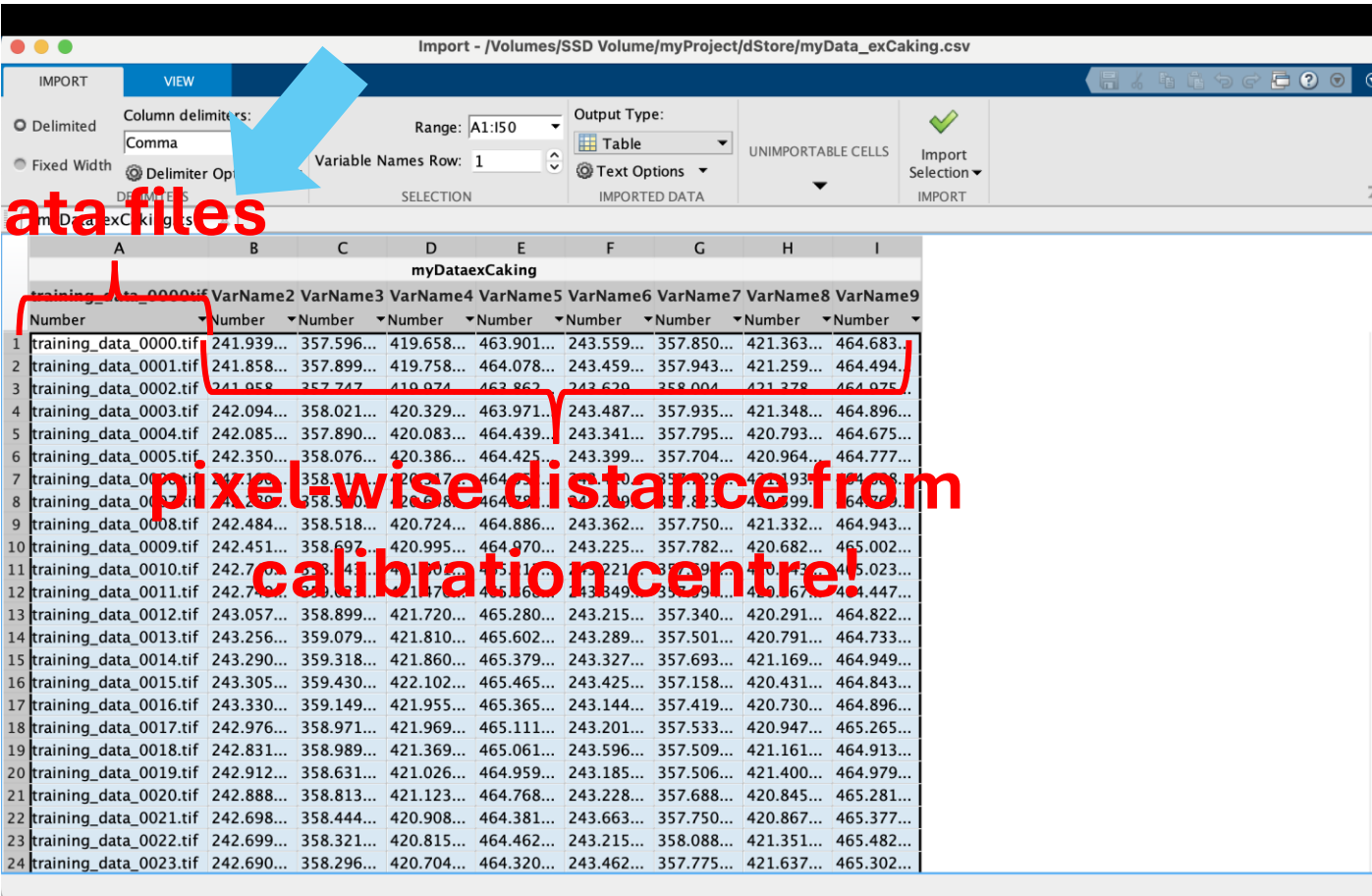
# Select data folder



# Follow the progress from Command Window



# Results are stored in **CSV** format

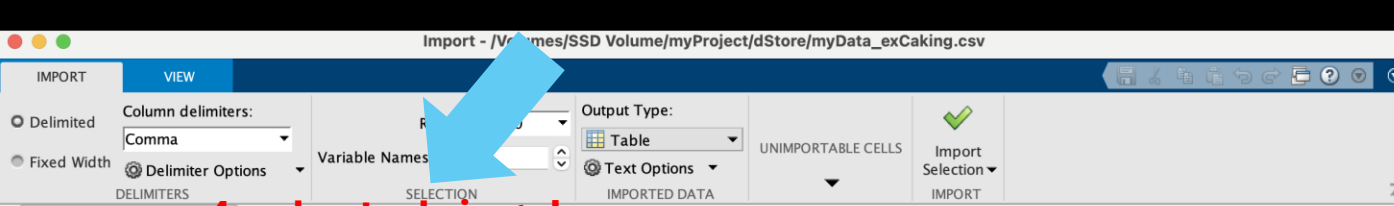


The screenshot shows a software window titled "Import - /Volumes/SSD Volume/myProject/dStore/myData\_exCaking.csv". The window has tabs for "IMPORT" and "VIEW". In the "VIEW" tab, there are settings for "Column delimiters" (set to "Comma"), "Range" (set to "A1:I50"), "Output Type" (set to "Table"), and "Variable Names Row" (set to "1"). A blue arrow points to the "Comma" delimiter setting. Below the settings, there is a table with the following structure:

	A	B	C	D	E	F	G	H	I
	myDataexCaking								
	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	241.959...	357.747...	419.074...	463.862...	243.629...	358.004...	421.378...	464.075...
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	242.710...	358.110...	420.170...	464.430...	243.300...	357.729...	420.193...	464.608...
8	training_data_0007.tif	242.290...	358.510...	420.618...	464.760...	243.209...	357.823...	420.199...	464.760...
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	242.710...	358.110...	420.170...	464.430...	243.300...	357.729...	420.193...	464.608...
12	training_data_0011.tif	242.710...	358.110...	420.170...	464.430...	243.300...	357.729...	420.193...	464.608...
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...

Red text annotations are present: "data files" with an arrow pointing to the first column, and "pixel-wise distance from calibration centre" with a bracket spanning the numerical columns.

# Columns of horizontal x-component



Import - /Volumes/SSD Volume/myProject/dStore/myData\_exCaking.csv

IMPORT VIEW

Delimited Column delimiters: Comma Output Type: Table

Fixed Width Delimiter Options Variable Names

DELIMITERS SELECTION IMPORTED DATA

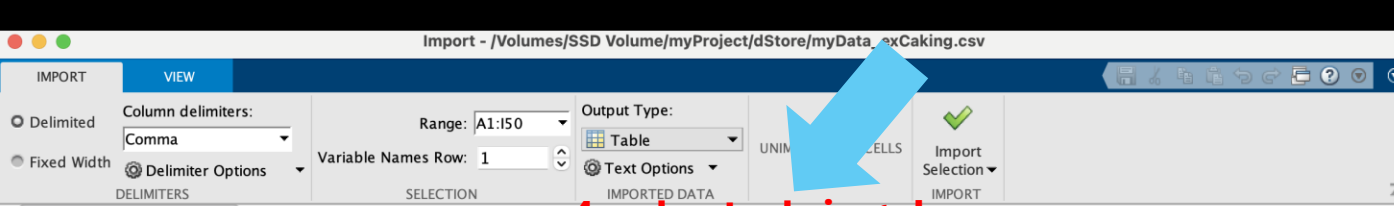
myData\_exCaking.csv

4 selected rings!

	A	B	C	D	E	F	G	H	I
	myDataexCaking								
	training_data_0000.tif	VarName2	VarName3	VarName4	VarName5	VarName6	VarName7	VarName8	VarName9
	Number	Number	Number	Number	Number	Number	Number	Number	Number
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 vertical y-component



Import - /Volumes/SSD Volume/myProject/dStore/myData\_exCaking.csv

IMPORT VIEW

Delimited Column delimiters: Comma Range: A1:I50 Output Type: Table

Fixed Width Delimiter Options Variable Names Row: 1 Text Options

DELIMITERS SELECTION IMPORTED DATA

myData\_exCaking.csv

4 selected rings!

	A	B	C	D	E	F	G	H	I
	myDataexCaking								
	training_data_0000.tif	VarName2	VarName3	VarName4	VarName5	VarName6	VarName7	VarName8	VarName9
Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
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...