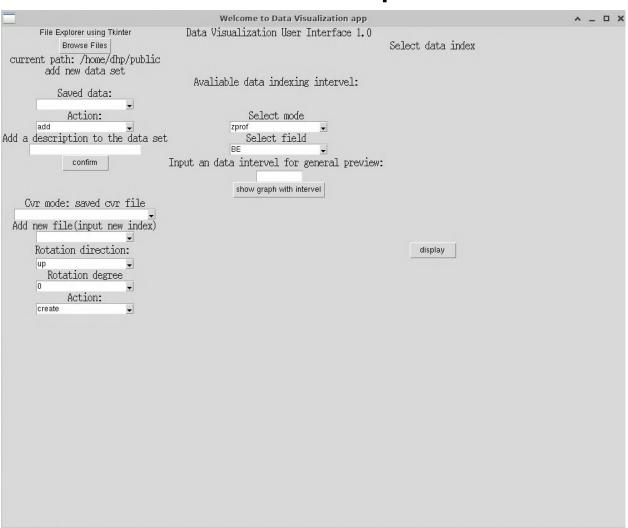
Before opening the program, there is some prepared work to do.

First, download the ee.sh and available.sh. Then put these shell files in the same directory as the user_interface.py or user_interface.ipynb.

Then run the notebook or py file.

This is how it look like when open the notebook:



There are four zones in this notebook:



Red one is prepared zone
Yellow one is normal visualization
Blue is selected data index region
Green is cvr area

The correct order for using it is visualization for interval: Prepared zone-> normal visualization

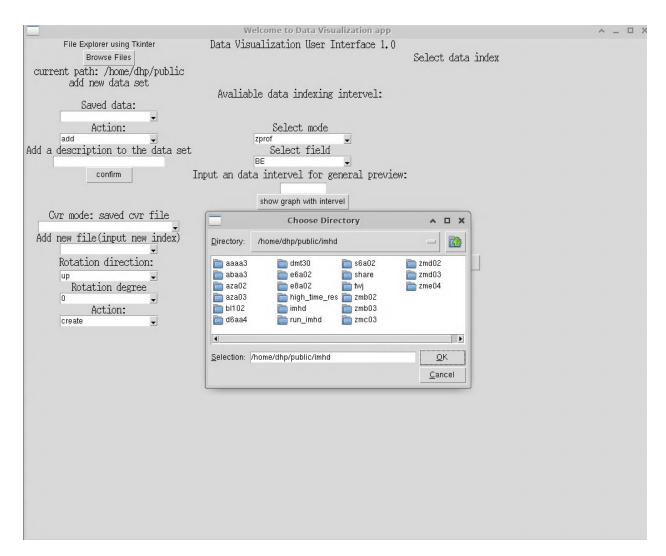
visualization for specific data: Prepared zone-> normal

visualization->selected data index

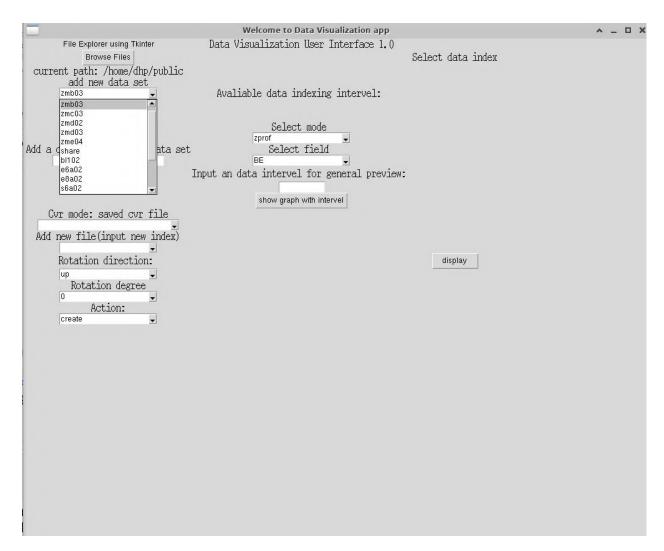
Cvr mode: Prepared zone-> normal visualization -> cvr area

For prepared zone:

First you need to select a directory, which includes a list of data directory. For example, in this case, we choose /home/dhp/public/imhd. In imhd directory, it contains all the dataset with five characters. After choosing the directory, then click Ok.



Then all the data is loaded into "add new data set". In ComboBox, there is a list of options you can choose.



Then select one and click "add" in the action box and click confirm

Welcome to Data Visualization app								^ _	o x
File Explorer using Tkinter Browse Files current path: /panfs/roc/groups/11/jonestw/jiz	an0250/test1		isualizatio	n User Iı	nterface 1		elect data	a index	
add new data set s6a02 Saved data:			iable data :	indexing	intervel:				
Action: Action: add Action Add a description to the data set			zprof	ct mode t field	•				
confirm		Input an o	BE fata interve		▼ neral pre	view:			
Cvr mode: saved cvr file			show grap	h with interv	el				
Add new file(input new index) Rotation direction:							display		
Rotation degree Action:									
create y									

Then in the saved data box, s6a02 is shown. It will save here even if you open the program next time.

	W	elcome to Dat	a Visualiza	tion app			^ _	o x
File Explorer using Tkinter Browse Files current path: /home/dhp/public add new data set \$8a02 Saved data: \$8a02 Action: USE Add a description to the data set confirm Cvr mode: saved cvr file Add new file(input new index)	Data Vis Avalia t	ole data inde 0-659 1637 Select of Select f BE ta intervel in	exing inter- exing inter- 7-1900 mode	eface 1.0	t data index			
Rotation direction: up Rotation degree 0					display			
Action: create confirm								

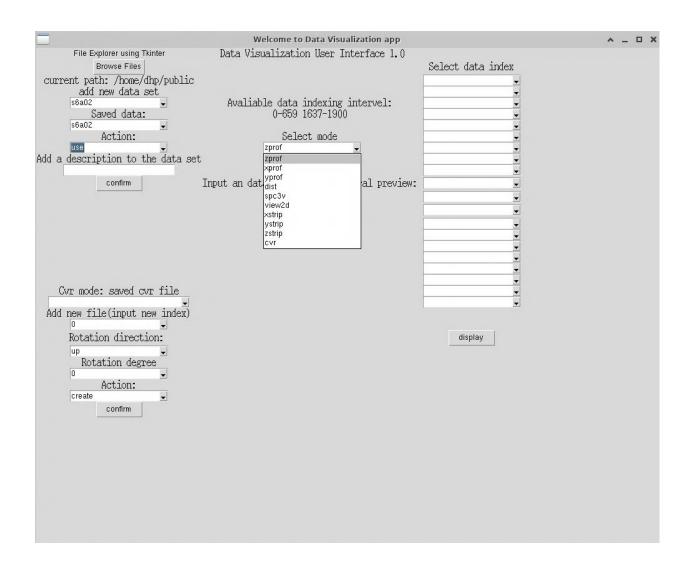
At this point, you may want to use this dataset. Select "s6a02" from saved data, then choose action "use". This is what is look like after clicking "confirm".

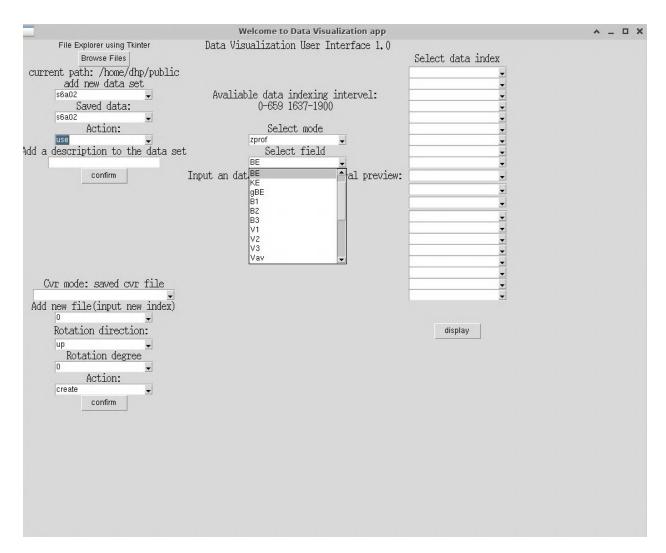
w	elcome to Da	ta Visualizati	on app			^	_ D X
File Explorer using Tkinter Browse Files current path: /panfs/roc/groups/11/jonestw/ji add new data set s6a02 Saved data: s6a02 Action: use Add a description to the data set confirm	an0250/test	Data Vi 1 Avali	sualization able data i 0-659 1 Select zprof Select BE ata interve	ndexing int 637-1900 t mode t field	ervel:	Select data in	
Cvr mode: saved cvr file Add new file(input new index) Rotation direction: up Rotation degree						display	
0 ♣ Action: create ♣ confirm							

The available data indexing interval appear below the text. It means what data index is available from this dataset. In s6a02, you can only choose data index 0-659 and 1637-1900, or you will get a segmentation fault.

	V	Velcome to Dat	ta Visualizat	ion app				^ _ D X
File Explorer using Tkinter Browse Files current path: /home/dhp/public add new data set		sualization (Select	data index		
s8a02 Saved data: s8a02 Action:	Avalia	ble data ind 0-659 163 Select	7-1900	rvel:				
Add a description to the data se		Select 1 BE ta intervel	field	l preview:				
		show graph w	ith intervel			5		
Cvr mode: saved cvr file								
Add new file(input new index) Rotation direction: up Rotation degree					di	splay	and the second	
Action:								

The next step is select mode and field: There are a few options which are fixed.

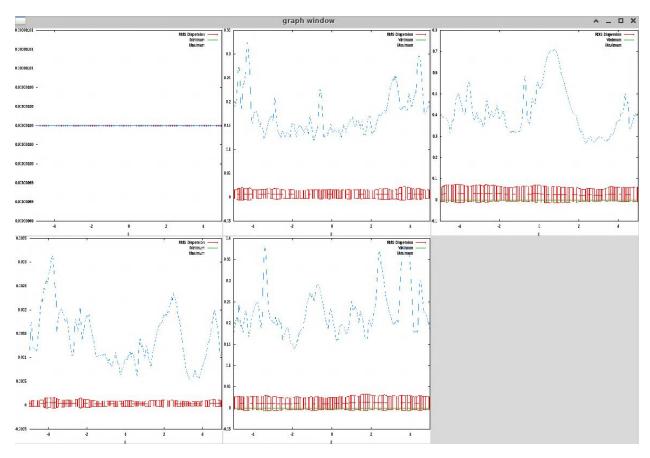




After selecting the mode and field, this is what is look like:

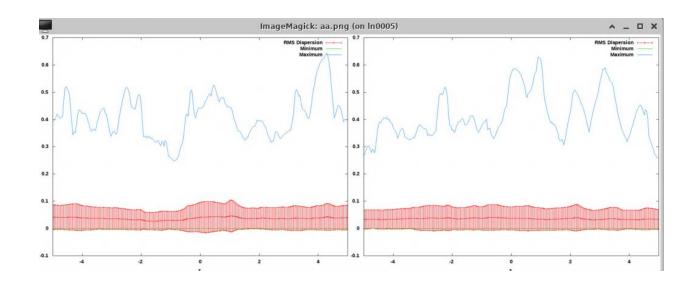
Welcome t	to Data Visualization app	^ _ D X
File Explorer using Tkinter Browse Files current path: /panfs/roc/groups/11/jonestw/jian0250/- add new data set s6a02 Saved data: s6a02 Action: Use Add a description to the data set confirm	Data Visualization User Interface 1.0	Select data index 1800 1900
Cvr mode: saved cvr file Add new file(input new index) Rotation direction: up Rotation degree Action: create confirm		display

You can choose "interval mode" or "select data index mode". For interval mode, simply input an interval number in the text box. It will sample over all the data interval by this value. In this case (s6a02), if we input a interval value of 300, it will demonstrate figures of 0,300,600,1800 Here is an example:



For the selected mode, input a number in the interval or choose from the combo box. You can choose up to 20 images at the same time. Then the figures will be displayed.

Here is an example: choose 1800 and 1900:

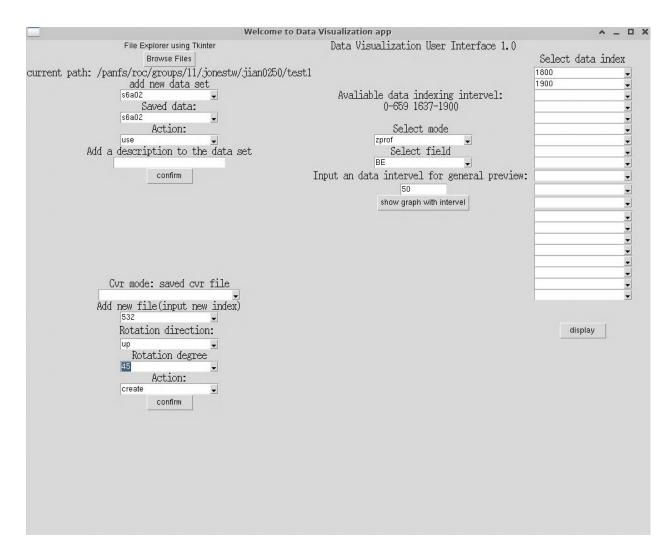


Then If you want start with CVR mode:

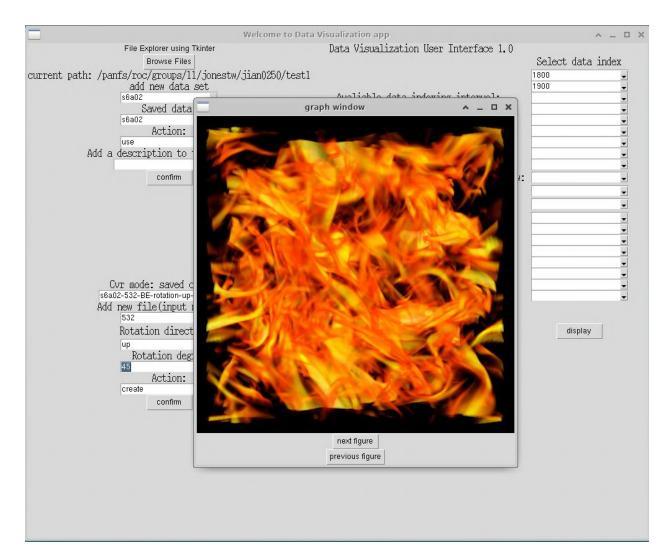
Three parameter will need:

- 1.Input new index, the data index you want manipulate
- 2. Rotation direction, up, eye or horizontal
- 3. Rotation degree, range from 0 to 360.

 Rotation degree affects the frame number. If you select a degree of 90, then there will be 4 frames. If selected 30, it will have 12 frames.



After filling three parameters, choose "create" and click "confirm".



An extra window will appear, you can simply click the next figure or previous figure to rotate around 360 degrees. But it will stop if you reach the end of the figures.