

AFNI Makes Group Templates Quickly & Easily!

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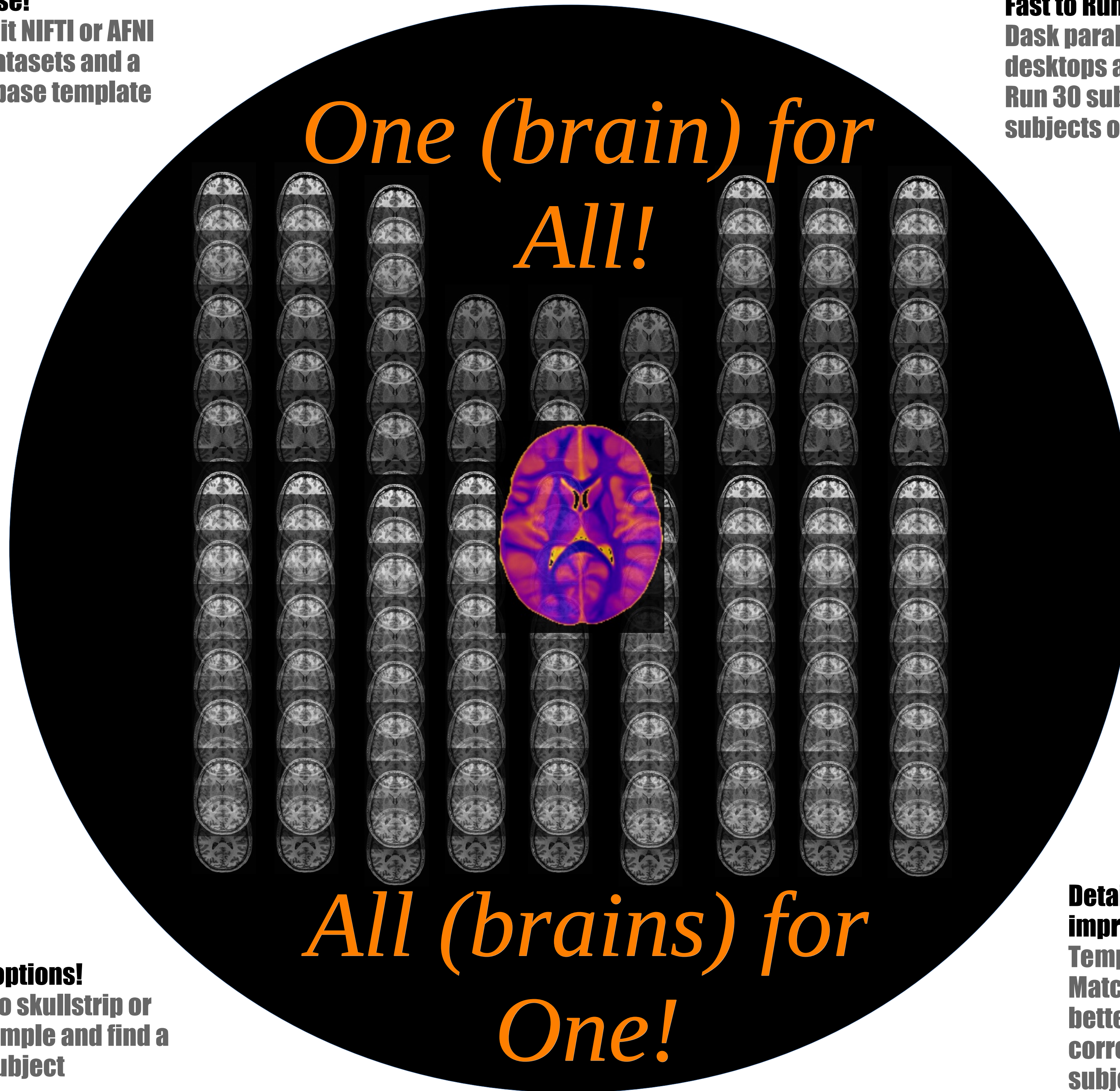
Contact: glend@nih.gov <https://afni.nimh.nih.gov>



In AFNI, use `make_template_dask.py` to combine groups of subjects into a new template

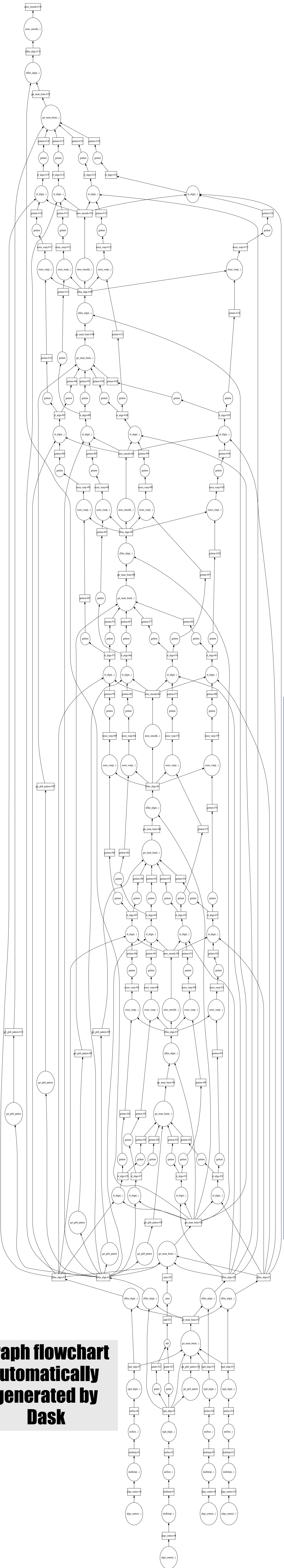
Easy to Use!
Just give it NIFTI or AFNI format datasets and a starting base template

Fast to Run!
Dask parallelizes on desktops and clusters!
Run 30 subjects, 100's of subjects or 1000's.



Flexible options!
Options to skullstrip or not, upsample and find a typical subject

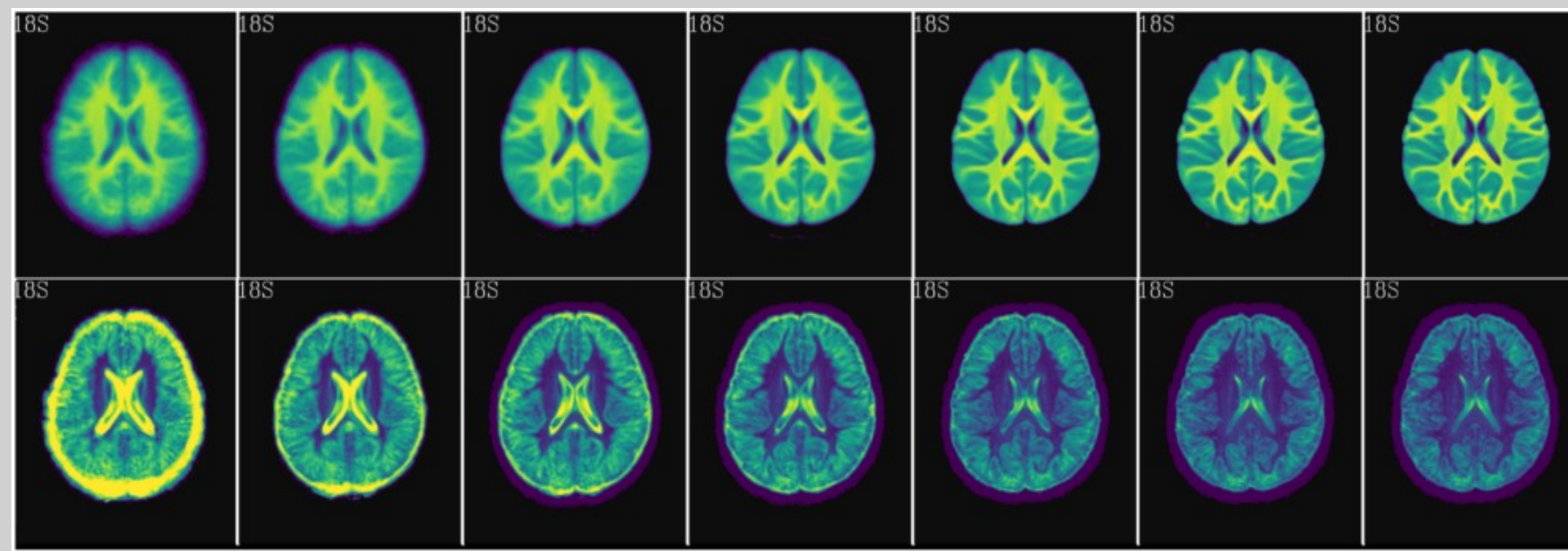
Detailed templates and improved analysis!!!
Templates for your data!
Match your population better and improves correspondence across subjects!



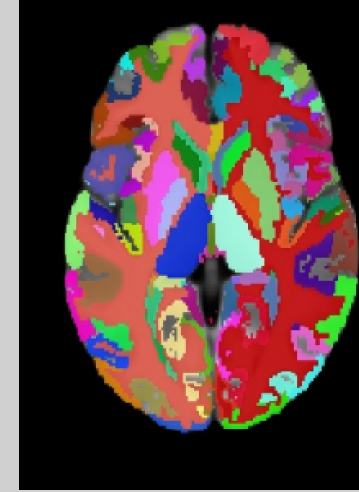
Example Templates



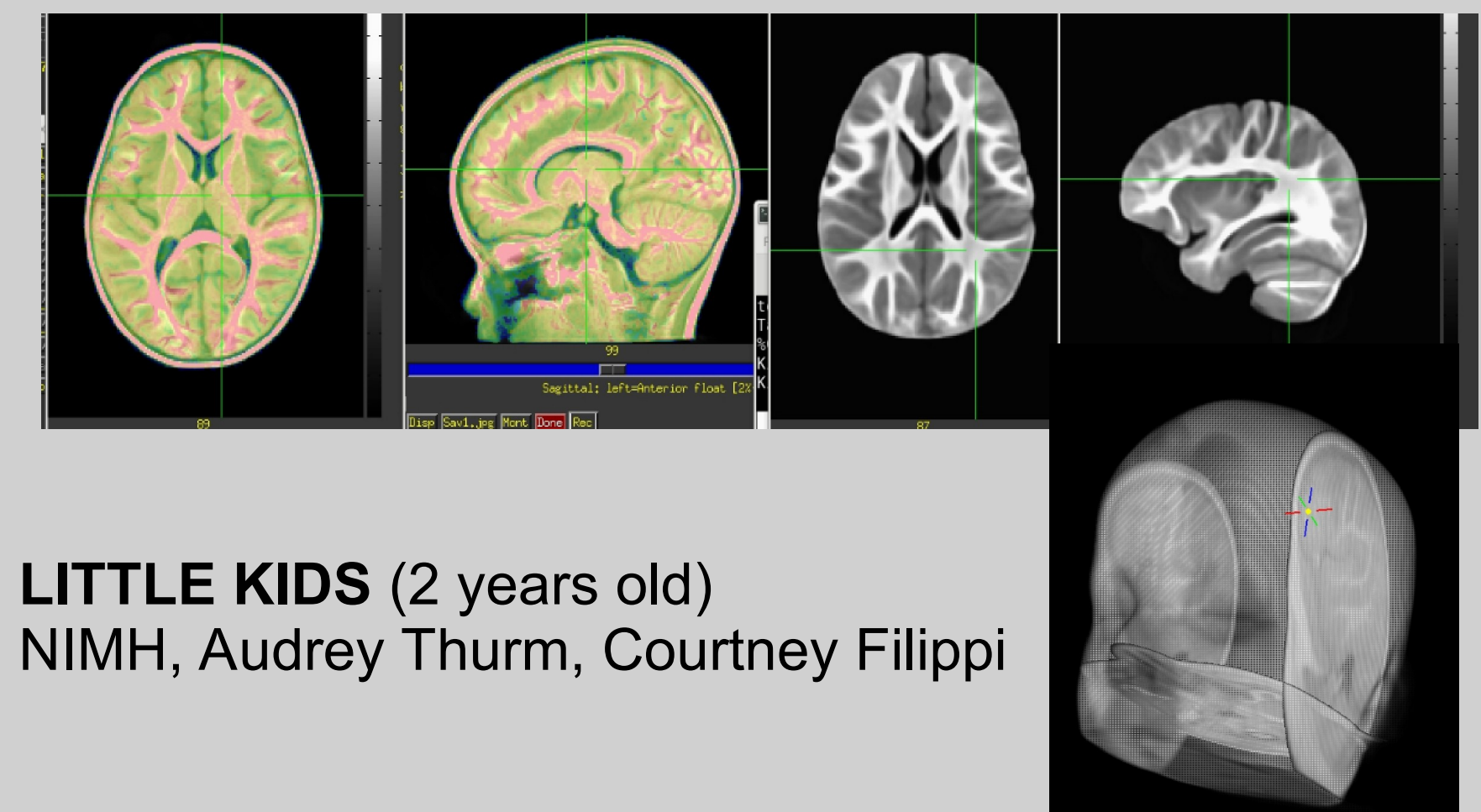
BIG KIDS (4 years old)
SDSU, Jillian Wiggins



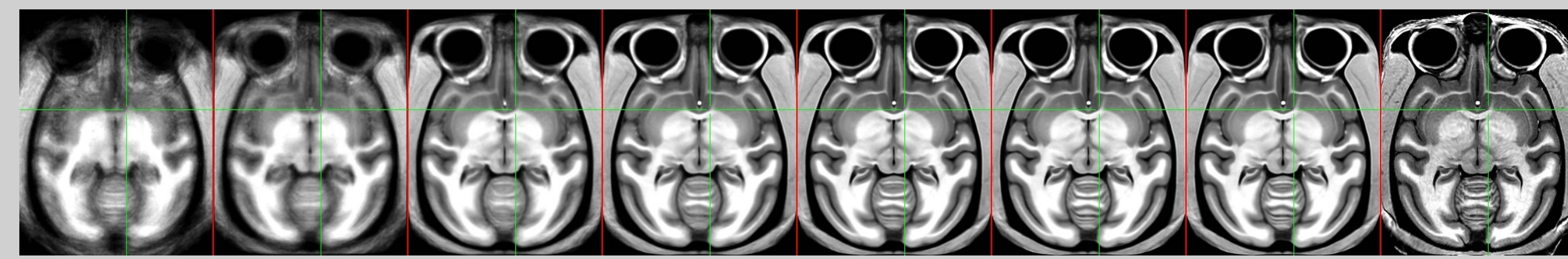
IBT - Indian Brain Template for Asian Indian Subcontinent
Mean templates above, Standard deviations below
NIMHANS - Bharath Holla, Rose Dawn Bharath, Vivek Benegal
(See OHBM 2019 poster T142)



Make Atlases Too!
with all of your subjects' FreeSurfer segmentation or only from the typical subject in the final space of your template, and use them with AFNI's whereami. (In progress)



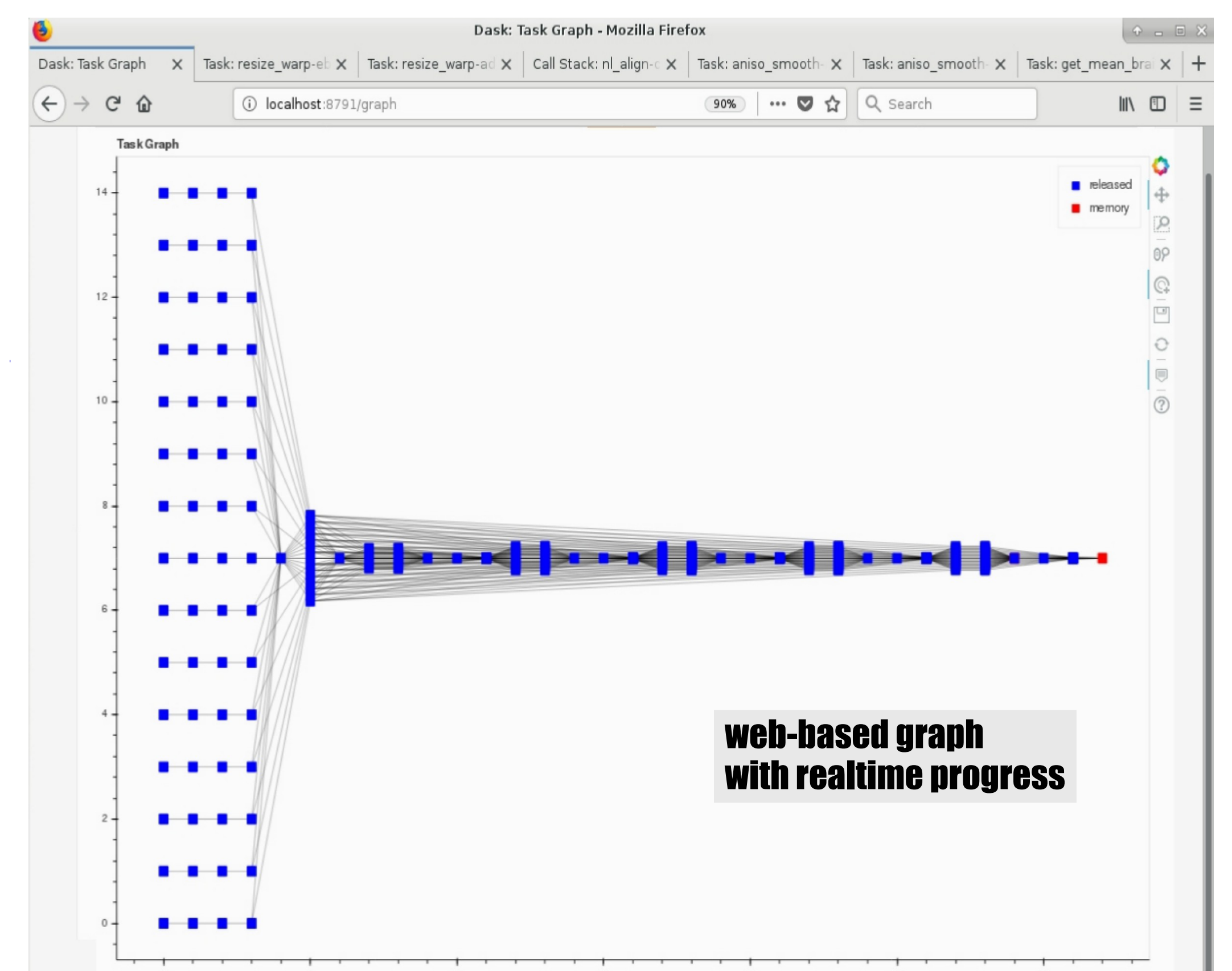
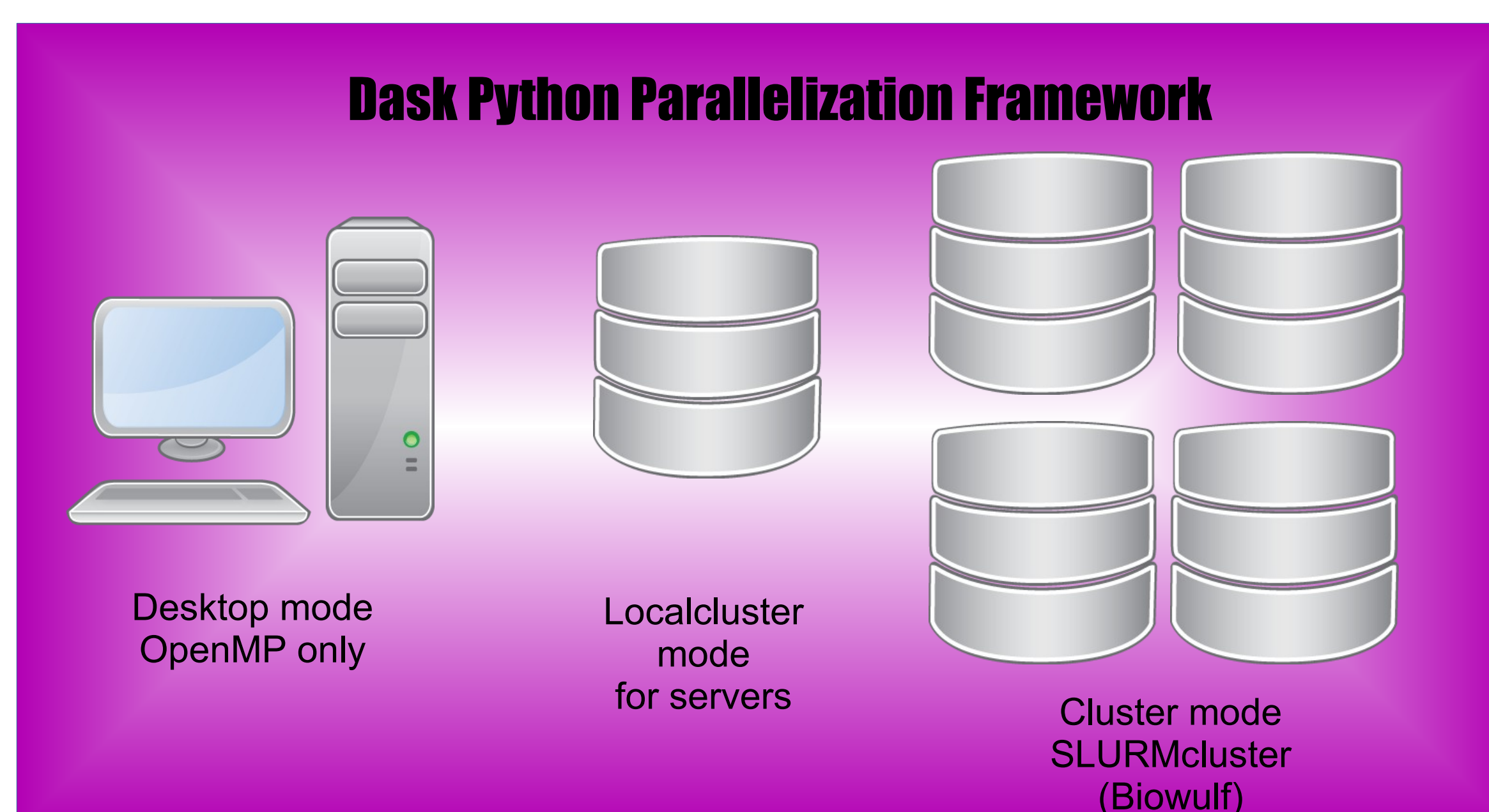
LITTLE KIDS (2 years old)
NIMH, Audrey Thurm, Courtney Filippi



MACAQUES
NIMH, Adam Messinger

USAGE

```
make_template_dask.py -ok_to_exist -dsets mydata/*.*.nii.gz \
-init-base oldtemplate.nii.gz -final_space MyDataSpace
```



Graph flowchart automatically generated by Dask

References

[1] Cox RW. 1996. Comput Biomed Res 29:162-173

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See these software demos (Wed, 12:45-14:45):

+ 4590 on the AFNI QC interface, by PA Taylor

+ 3114 on `afni_proc.py`, by RW Cox

See poster W470 on `afni_proc.py`, by RW Cox