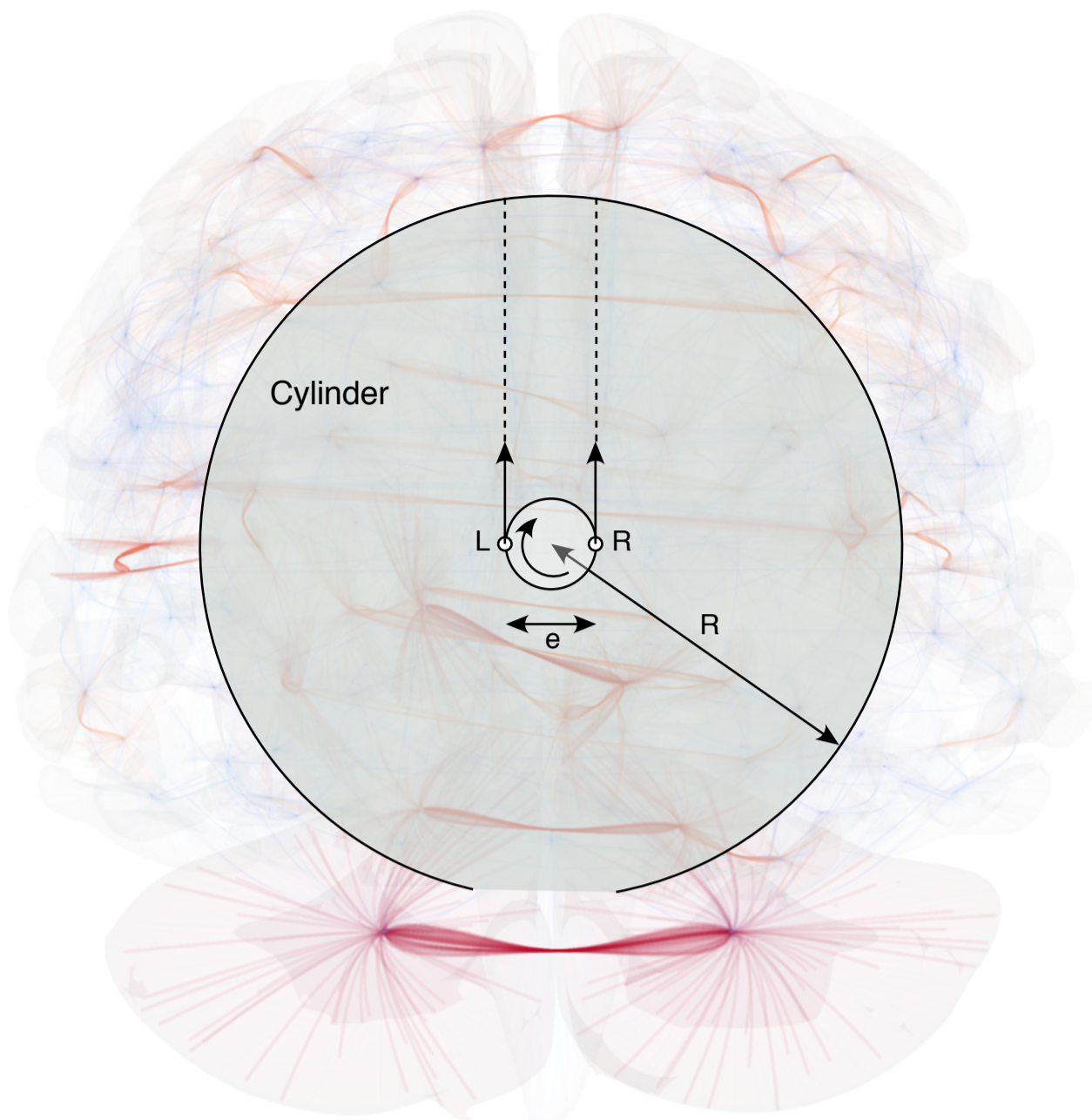


Omni-Directional Stereoscopic Panoramas

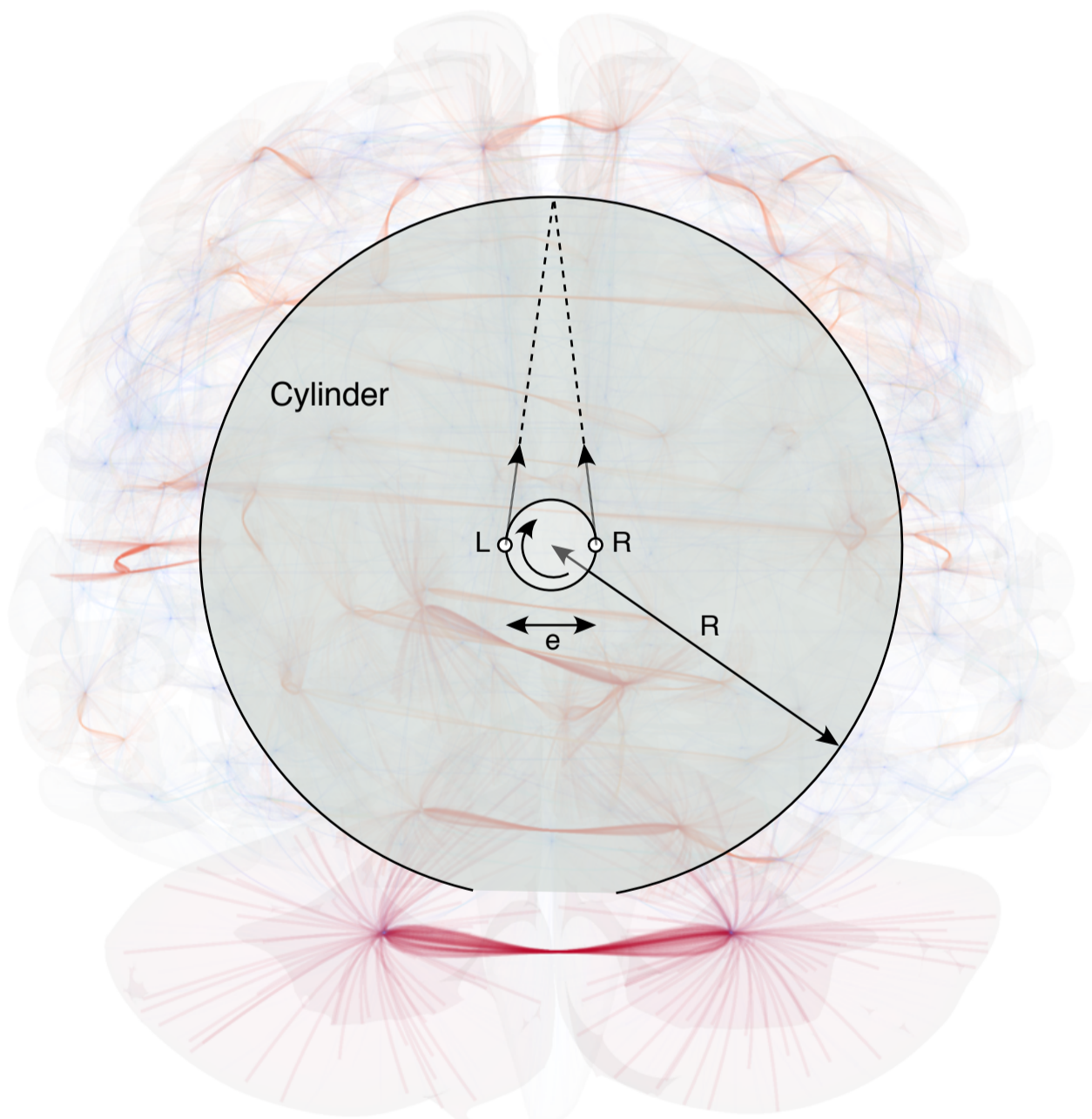
Method 1 - parallel cameras



The angular shift θ to set zero parallax to cylinder radius is $2 \arcsin(\frac{1}{2} e / R)$

The pixel shift is then $\frac{1}{2} W \theta / \pi$ where W is the final image width

Method 2 - focal point cameras



Vertical field of view is $2 \arctan(\frac{1}{2} H / R)$ where H is the height of the cylinder

Aspect ratio of the panorama image is $2 \pi R / H$

Comparisons

	AVIE	EPIC360
H	3615	2970
R	5000	3125
Aspect	8.7 : 1	6.6 : 1
FOV _v	40°	50°
θ_{shift}	0.74°	1.2° (e=65mm)
pixel _{shift}	34 (W=8192)	100 (W=28800)