Waxholm Space atlas of the Sprague Dawley rat brain

Coordinates v1 vs v1.01

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	WHS SDr v1		WHS SDr v1.01					
			High resolution (39µm)			Low resolution (78µm)		
	Voxels	**WHS voxels**	**Voxels**	**WHS voxels**	**WHS mm**	**Voxels**	**WHS voxels**	**WHS mm**
WHS origin								
x	623	0	244	0	0.0000000	122	0	0.0000000
y	268	0	623	0	0.0000000	311.5[1]	0	0.0000000
z	248	0	248	0	0.0000000	124	0	0.0000000
Bregma								
x	653	30	246	2	0.0781250	123	1	0.0781250
y	266	-2	653	30	1.1718750	326.5[1]	15	1.1718750
z	440	192	440	192	7.5000000	220	96	7.5000000
Lambda								
x	442	-181	244	0	0.0000000	122	0	0.0000000
y	268	0	442	-181	-7.0703125	221	-90.5[1]	-7.0703125
z	464	216	464	216	8.4375000	232	108	8.4375000
Calculating v1.01 coordinates for any point with v1 coordinates (a; b; c)								
x	a	a - 623	512 - b	(512-b) - 244	0.0390625* [(512 - b) - 244]	(512-b)/2	(512-b)/2 - 122	0.078125* [(512-b)/2 - 122]
y	b	b - 268	a	a - 623	0.0390625* (a - 623)	a/2	a/2-311.5	0.078125* (a/2-311.5)
z	c	c - 248	c	c - 248	0.0390625* (c - 248)	c/2	c/2-124	0.078125* (c/2-124)

[1] We use voxel coordinates with a .5 value so that identical metric WHS coordinates are retrieved for identical anatomical points of interest in both the high resolution and the low resolution datasets. This is realized in the NIfTI files by storing the WHS origin in metric coordinates (see the `qoffset` and `srow` fields of the header).

Note that voxel coordinates are not identical to slice numbers. For example, in an 512*512*1024 volume, slice numbers range between (1..512; 1..512; 1..1024), while voxel coordinates range between (0..511; 0..511; 0..1023).