Table S1. Refinement and Model Statistics, Related to Figure 1

Data Collection	py48S PIC	PIC-2
Particles	29,698	100,709
Pixel size (Å)	1.34	1.34
Defocus range (μm)	1.6-4.0	1.6-4.0
Voltage (kV)	300	300
Electron dose (e$^-$ Å^{-2})	28	28
Model Composition		
Non-hydrogen atoms	81,867	77,702
Protein residues	5,389	5,109
RNA bases	1,874	1,778
Refinement		
Resolution used for refinement (Å)	4.10	3.85
Map sharpening B-factor (Å)	-52	-88
Average B-factor (Å)	201	189
R factor #	28.9	26.9
Fourier Shell Correlation (FSC)*	0.82	0.85
Rms deviations		
Bonds (Å)	0.006	0.007
Angles (°)	1.07	1.18
Ramachandran plot		
Favored (%)	82.7	82.5
Outliers (%)	8.0	8.1

\# Rfactor = $\Sigma||F_{obs}|-||F_{calc}| / \Sigma|F_{obs}|$

* FSC= $\Sigma(N_{shell} FSC_{shell})/ \Sigma(N_{shell})$, where FSC$_{shell}$ is the FSC in a given shell, N$_{shell}$ is the number of "structure factors" in the shell. FSC$_{shell}$ = $\Sigma(F_{model} F_{EM})/ (\sqrt{(\Sigma(|F|^2_{model}))} \sqrt{(\Sigma(|F|^2_{EM}))})$