Enhanced AASPI Algorithms: September 2022			
Application Name	**Application Description**	**Location**	**Software Documentation**
aaspi_plot	Depth migrated data now plot with 1:1 ratio as default	aaspi_util > QC Plotting	http://mcee.ou.edu/aaspi/documentation/Display_Tools-The_AASPI_QC_Plotting_Tab_and_program_aaspi_plot.pdf
pnn	training data are now binned to provide in N-dimensional space which significantly improved performance when using large amounts of training data	aaspi_util > Machine Learning Toolbox > Shallow Learning > Unsupervised Learning > Clustering Techniques	http://mcee.ou.edu/aaspi/documentation/Machine_Learning_Toolbox-create_model.pdf
sof3d	Added an option filter along zero dip (i.e., time slices) for use with flattened data. This allows the capabilities of flattening on the water bottom to enhance bottom simulating reflectors or of flattening on a multiple generator to potential suppress interbed multiples	aaspi_util > Data Conditioning	http://mcee.ou.edu/aaspi/documentation/Poststack_Data_Conditioning-sof3d.pdf
sof3d	Changed the order of processes when asking for spectrally balanced output. Now each bandpass filtered volume is trace-by-trace spectrally balanced first and then subjected to structure-oriented filtering, thereby avoiding the introduction of high frequency artifacts for non-vertical edges in the data.	aaspi_util > Data Conditioning	http://mcee.ou.edu/aaspi/documentation/Poststack_Data_Conditioning-sof3d.pdf
51 of 116 programs	Documentation restructured and updated to have a consistent layout including Objectives, Motivation, Computation Flow Chart, Output Naming Convention, Invoking the GUI followed by step-by-step instructions, Theory, Examples, and References	The most commonly used algorithms	http://mcee.ou.edu/aaspi/documentation.html

spec_cwt and spec_cmp	Added kurtosis and skewness measures of the magnitude spectra	aaspi_util > Spectral Attributes	http://mcee.ou.edu/aaspi/documentation/Spectral_Attributes-spec_cwt.pdf ; http://mcee.ou.edu/aaspi/documentation/Spectral_Attributes-spec_cmp.pdf
hsplot, hlplot	Now provide an additional output display that corenders the color bar with the 2D histogram	aaspi_util > Display Tools	http://mcee.ou.edu/aaspi/documentation/Display_Tools-hsplot.pdf ; http://mcee.ou.edu/aaspi/documentation/Display_Tools-hlplot.pdf
Multiple programs	Improved defaults for depth-migrated data	The most commonly used algorithms	
All graphics program	Replaced *.sep format colorbars with the more commonly available *.alut format. This *.alut color bar also allows explicit control of opacity.	aaspi_util > Display Tools	
aaspi_plot	Provide a means to display latent space attribute vectors used in SOM and GTM classification	aaspi_util > Display Tools	http://mcee.ou.edu/aaspi/documentation/Display_Tools-The_AASPI_QC_Plotting_Tab_and_program_aaspi_plot.pdf
SLURM script	now allow for site specific modifications for SLURM batch processing scripts		http://mcee.ou.edu/aaspi/documentation/Software_Structure-AASPI_software_parallelization.pdf