Enhanced AASPI Algorithms: August 2019

Application Name	Application Description	Location	Software Documentation	AASPI References
compensate_for_migration stretch	Can now apply corrects to zones defined between fixed time slices or between two picked horizons.	under aaspi_util_prestack > Prestack Data Conditioning	http://mcee.ou.edu/aaspi/documentation/Prestack_Data_Conditioning-compensate_for_migration_stretch.pdf	http://mcee.ou.edu/aaspi/publications/2019/Patel_et_al_Compensating_for_migration_stretch%20.pdf
azimuthal_fault_density	Generalized to compute fault proximity/hypothesized flow intensity for lineaments defined by azimuths (e.g. fault probability, aberrancy) as well as those defined by strike (most-positive and most-negative curvature)	under aaspi_util > Attribute Correlation Tools	http://mcee.ou.edu/aaspi/documentation/Attribute_Correlation-azimuthal_fault_density.pdf	
generate_roses	Generalized to compute rose diagrams for lineaments defined by azimuths (e.g. fault probability, aberrancy) as well as those defined by strike (most-positive and most-negative curvature)	under aaspi_util > Display Tools	http://mcee.ou.edu/aaspi/documentation/Attribute_Correlation-azimuthal_fault_density.pdf	
similarity3d	Modified more flexible multispectral capabilities allowing a user to define a suite of equal size filter-banks, equal-octave filter-banks, or user-defined filter-banks	under aaspi_util > Geometric Attributes	http://mcee.ou.edu/aaspi/documentation/Geometric_Attributes-similarity3d.pdf	
similarity_multiple_input	A generalized version of similarity3d and similarity_prestack that allows the user to define a mix of input seismic data or impedance volumes	under aaspi_util > Geometric Attributes	http://mcee.ou.edu/aaspi/documentation/Geometric_Attributes-similarity_multiple_input.pdf	
dip3d_gst	Reworked to better handle mute zones and no-permit zones. Now the dip components are only computed in areas where all samples necessary to construct a complete gradient structure tensor are available. Output headers contain updated dead trace and mute flags. These fixes avoid erratic dip estimates that give rise to annoying curvature impulse responses.	under aaspi_util > Geometric Attributes	http://mcee.ou.edu/aaspi/documentation/Geometric_Attributes-dip3d.pdf	

dip3d_gst	Added multispectral capabilities	under aaspi_util > Geometric Attributes	http://mcee.ou.edu/aaspi/documentation/Geometric_Attributes-dip3d.pdf	
instantaneous_attributes	simplified output file naming convention to be consistent with other AASPI algorithms	under aaspi_util>Single_trace_attributes	http://mcee.ou.edu/aaspi/documentation/Single_trace_attributes-Instantaneous_attributes.pdf	