	Quad	Tri	Comment
Current state			
Base formulation	3 parameter	5 parameter	
Element technology	ANDES-DKQ (incl. drilling stiffness)	DSG +drilling stiffness +shear stabilization	
Formulation options?	- Can switch off ANDES and use basic membrane formulation	- Can switch off DSG and use basic transverse shear formulation - Can switch off shear stabilization of transverse shear material matrix	
Mass matrices	Both lumped and consistent implemented		* consistent mass matrix should be verified with Daniel Baumgartner's eigenvalue analysis
Analysis types	Linear static, linear dynamic, geometrically non-linear static, geometrically non-linear dynamic		
General shell outputs	Strain, curvature, force resultants, moment resultants (All can be local or global)		
Isotropic material shell outputs	Stresses (top, mid and bottom surfaces) (All can be local or global), Von Mises Stress (top, mid, bottom and MAX)		
Laminate material shell outputs	Stresses (top and bottom surfaces of laminate) (All can be local or global), Tsai-Wu reserve factor (MIN of all surfaces across all laminae)		* only top and bottom surfaces due to output options in GiD
Tests - isotropic material			
Linear static	Shell obstacle course		
Nonlinear static	Curved roof snapthrough, Cylinder pullout		
Nonlinear dynamic	Shell pendulum		
Linear dynamic	Oscillating clamped plate		
Force resultant and VM recovery	Simply supported dome with oculus		
Stress and VM recovery	Navier plate under sinusoidal load	Navier plate under UDL	* node numbering may be affecting transverse shear stress results
Tests - orthotropic laminates			
Linear static	Composite barrel vault (Scordelis Lo roof)		
	Clamped cylinder under internal pressure		
Nonlinear static	Curved roof snapthrough		
Nonlinear dynamic	Shell pendulum		
Linear dynamic	Vibrating square plate		
Stress, strain and Tsai-Wu recovery	Laminate tensile test		
	Navier plate under sinusoidal load	Navier plate under sinusoidal load	* not the best transverse shear stress results
Current issues			
Gauss result visualization	Seems mesh dependent. Occurs with Massimo's quad element too. Likely an input file or Kratos/GID issue	Currently overcome by repeating 1GP result to 3GPs	
Orthotropic materials	Can only run with OMP_THREADS=1		
Transverse shear stresses		Seems to be effected by node numbering, more investigation needed	