

# Convergence Verdict

MESH CONVERGENCE VERDICT

Study: 7 resolutions (dp = 0.020 to 0.003 m)  
Boulder: BLIR3 (d\_eq = 10.0 cm)  
Hardware: NVIDIA RTX 5090  
Total compute: 1269 min (21.1 h)

Metric	Last delta	Status
● Displacement	3.9%	CONVERGED
● SPH Force	2.8%	CONVERGED
● Velocity	0.8%	CONVERGED
● Rotation	6.3%	CONVERGED
○ Contact Force	81.7%	NOT CONV.

VERDICT: CONVERGENCIA ALCANZADA

Las 3 metricas primarias (desplazamiento, fuerza SPH, velocidad) muestran delta < 5% entre los dos dp mas finos. dp=0.003 es ADECUADO para produccion.