

# Differentiation of DGRINS2D

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# 2-D Synthetic Jet Problem

text

# Performance of the AD-generated Code

Method	$CPU(\nabla F)$ (s)	Tape_size	$\frac{CPU(\nabla F)}{CPU(F)}$	Difference
Tapenade(adj)	7774.6	1.585 GB	254.9	$\mathcal{O}(10^{-11})$
One-sided FD (new)	57.6	—	3.1	$\mathcal{O}(10^{-6})$
Tapenade(new, fwd)	75.2	—	4.0	0.0
Tapenade(new, adj)	450.8	0.12GB	24.2	$\mathcal{O}(10^{-11})$
Tapenade(new, adj,FP)	384.2	0.09GB	20.7	$\mathcal{O}(10^{-6})$