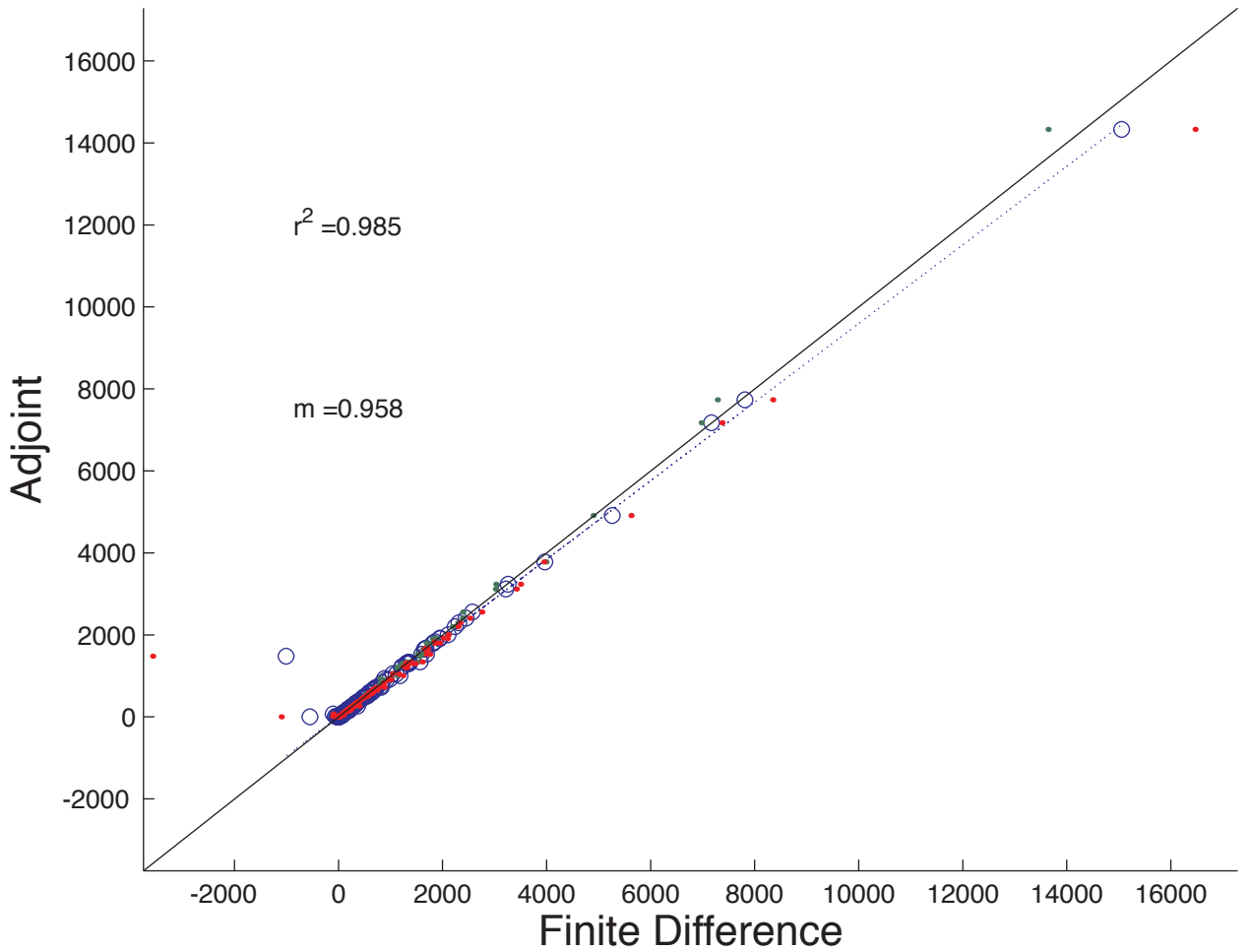


1 wk test: transport off, GEOS-3, dNIT/dENH3\_an, rdaer offline, emis reduced by x10  
ADJv29\_bench\_fd\_geos3\_nh3



- Finite difference sensitivity with -10% perturbation
- Finite difference sensitivity with +10% perturbation
- Centered finite difference sensitivity =  $( J(s+0.1s) - J(s-0.1s) ) / 0.2s$

Solid line 1:1 line

Dotted line Regression of adjoint vs centered finite difference sensitivities

Any ○ not on the 1:1 line, but bounded by ● and ●, is validated.