$$\nabla_v \tilde{S}_y \left(h_x(-2r_4/(1 + (\sigma((-2r_2r_4\cos((\theta_2)_j) + 2r_1r_4\cos(\theta_1))^2 + (-2r_2r_4\sin((\theta_2)_j) + 2\right.$$

$$\nabla_v \tilde{S}_y \left(-h_x(2r_4/(1 + (\sigma((-2r_2r_4\cos((\theta_2)_j) + 2r_1r_4\cos(\theta_1))^2 + (-2r_2r_4\sin((\theta_2)_j) + 2\right.$$

$$\frac{\partial \tilde{S}_x}{\partial(\theta_2)_j} = h_y(r_2\cos((\theta_2)_j) - 2r_4/(1 + (\sigma((-2r_2r_4\cos((\theta_2)_j) + 2r_1r_4\cos(\theta_1))^2 + (-2r_2r_4\sin$$

$$\frac{\partial \tilde{S}_y}{\partial(\theta_2)_j} = h_y(-r_2\sin((\theta_2)_j) + 2r_4/(1 + (\sigma((-2r_2r_4\cos((\theta_2)_j) + 2r_1r_4\cos(\theta_1))^2 + (-2r_2r_4\,\text{si}$$

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