Geodynamo chaos

$$\nu = \quad 1$$
$$\sigma = \quad 5$$
$$R = \quad 0.1$$

$$\frac{di_L}{dt} = \sigma(i_B - i_B)$$
$$\frac{di_B}{dt} = \omega i_L - i_B$$
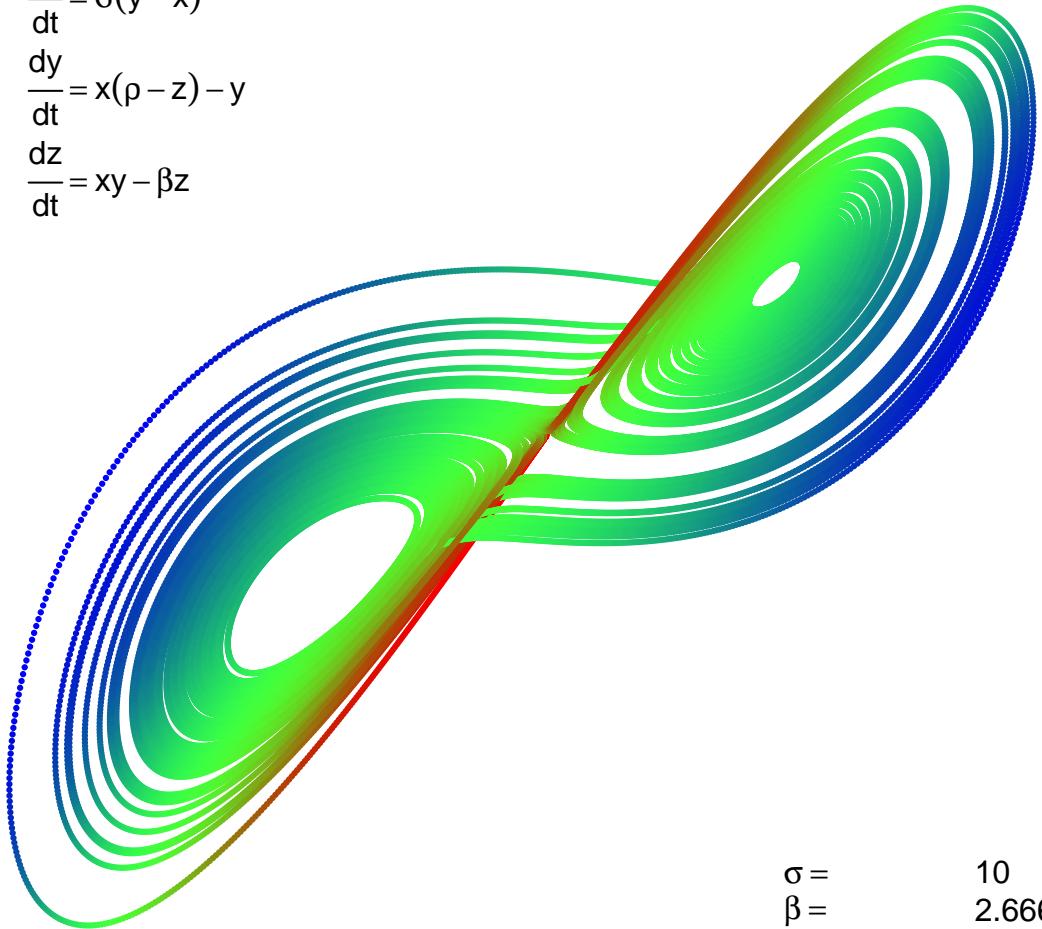$$\frac{d\omega}{dt} = R - i_L i_B - \nu\omega$$

i_B

ω
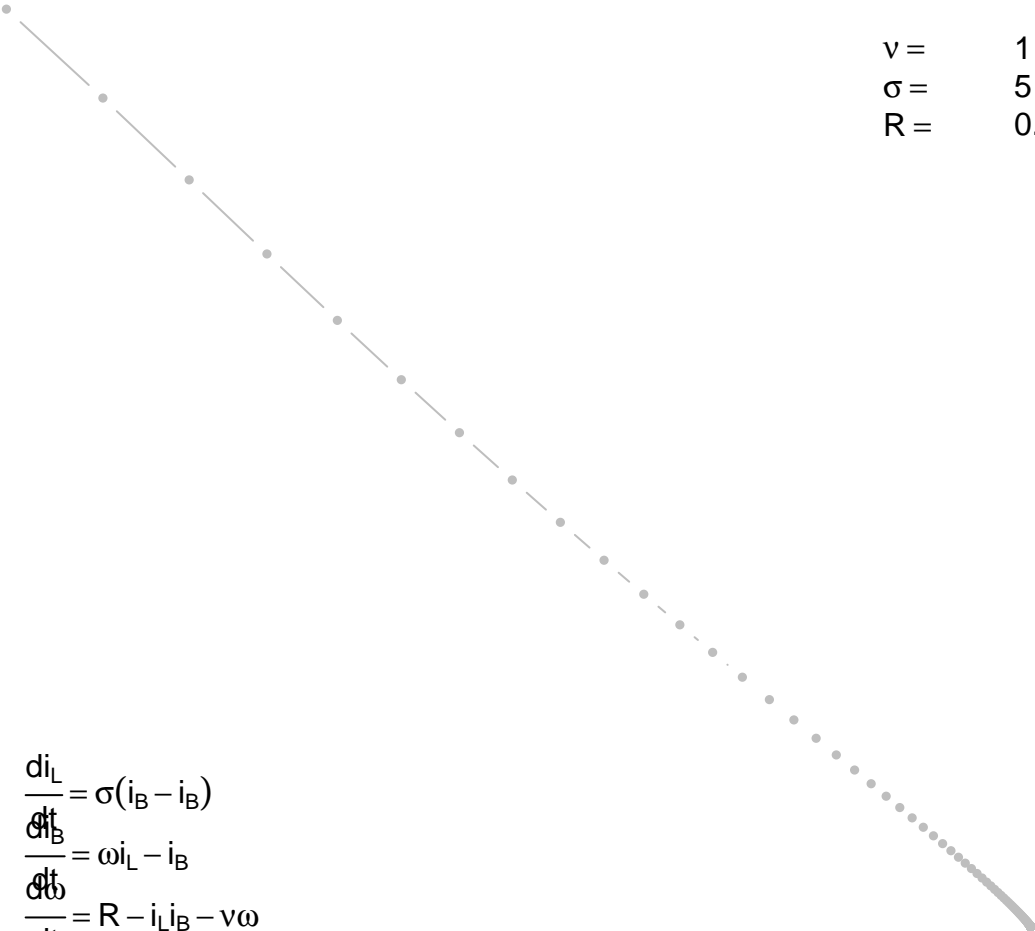
The Lorenz system

$$\frac{dx}{dt} = \sigma(y - x)$$

$$\frac{dy}{dt} = x(\rho - z) - y$$

$$\frac{dz}{dt} = xy - \beta z$$

y

x

σ =	10
β =	2.666667
ρ =	28