Geodynamo chaos
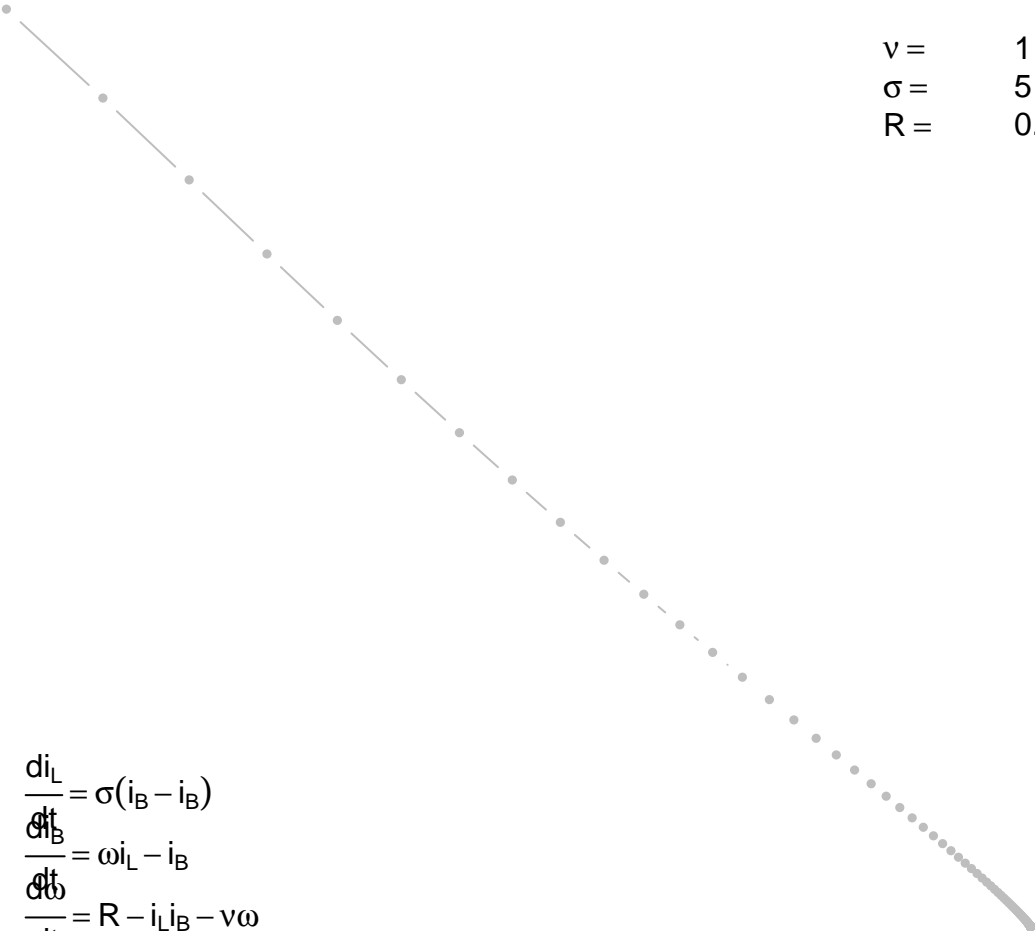

$\nu =$ 1
$\sigma =$ 5
$R =$ 0.1

$$\frac{di_L}{dt} = \sigma(i_B - i_B)$$

$$\frac{di_B}{dt} = \omega i_L - i_B$$
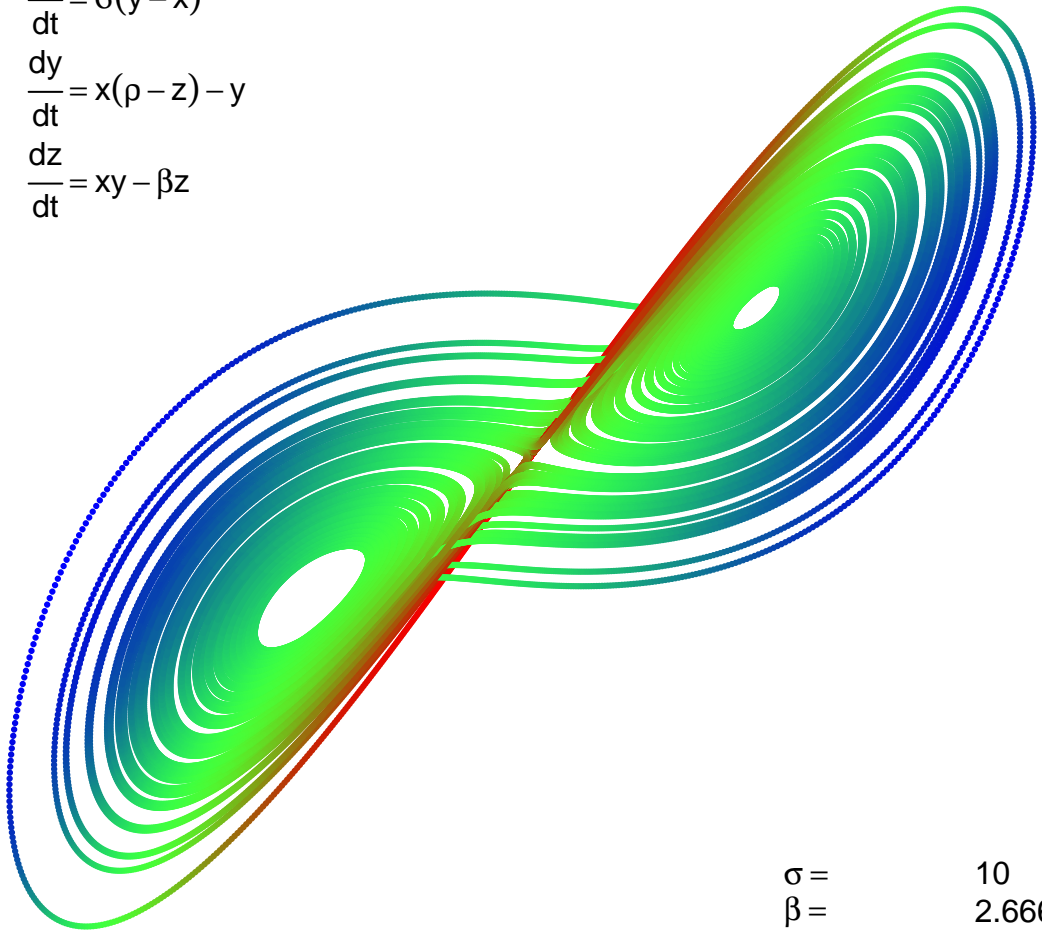
$$\frac{d\omega}{dt} = R - i_L i_B - \nu\omega$$

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