

$$\frac{y_s}{y} = \frac{ds}{d\theta + z} ; \frac{x_s}{x} = \frac{ds}{d\theta + z}$$

$$\begin{pmatrix} x_s \\ y_s \end{pmatrix} = \frac{ds}{d\theta + z} \begin{pmatrix} x \\ y \end{pmatrix}$$

Rotieren des Objekts

$$\begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} c & 0 & s \\ 0 & 1 & 0 \\ -s & 0 & c \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix}$$

$c = \cos \theta$

$s = \sin \theta$

θ ist eine Rotation um die y-Achse.

Um x:

$$\begin{pmatrix} 1 & 0 & 0 \\ 0 & c & s \\ 0 & -s & c \end{pmatrix}$$

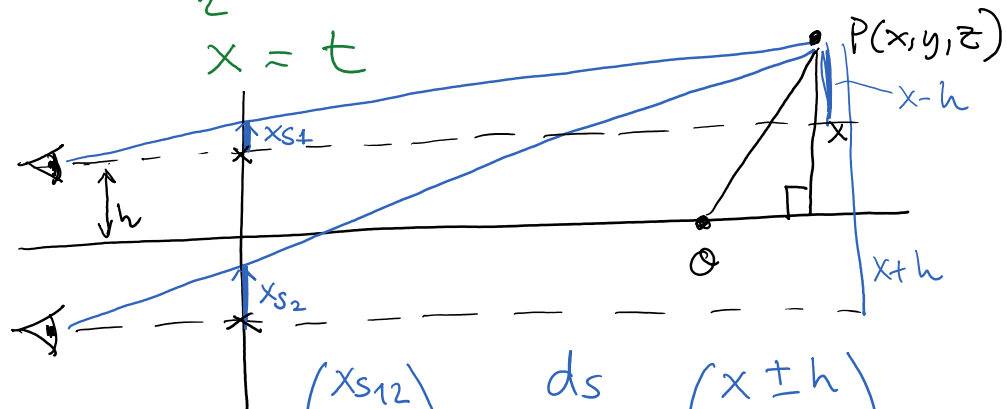
$c = \cos \theta$

$s = \sin \theta$

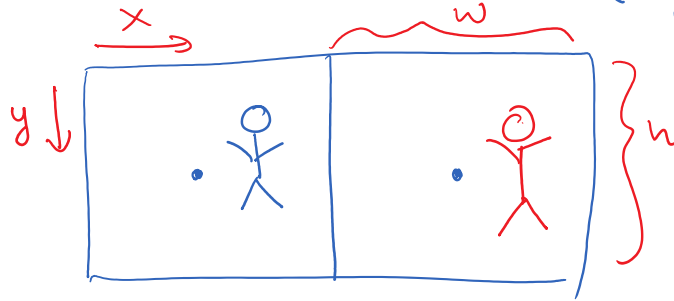
$t = x * c + z * s$

$z = z * c - x * s$

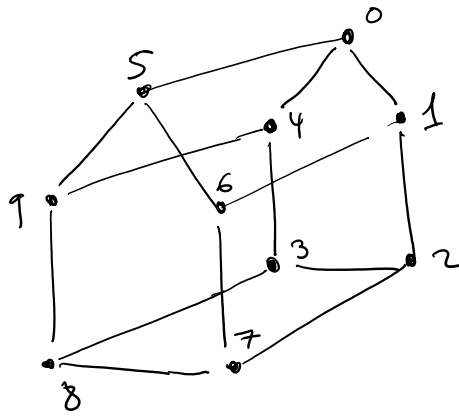
$x = t$



$$\begin{pmatrix} x_{s12} \\ y_s \end{pmatrix} = \frac{ds}{d_0 + z} \begin{pmatrix} x \pm h \\ y \end{pmatrix}$$



$$\begin{aligned} ix &= (int)(x_s * S) + w/2 \\ iy &= h/2 - (int)(y_s * S) \end{aligned}$$



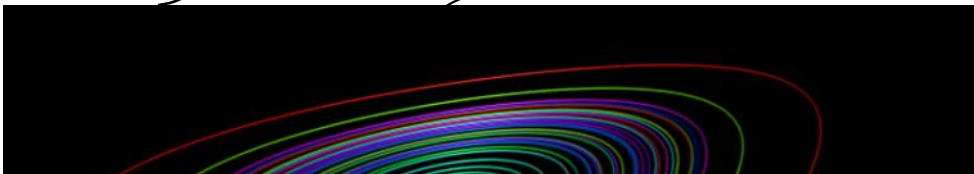
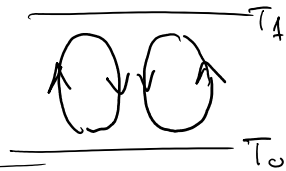
LORENZ ATTRAKTOR: 1962

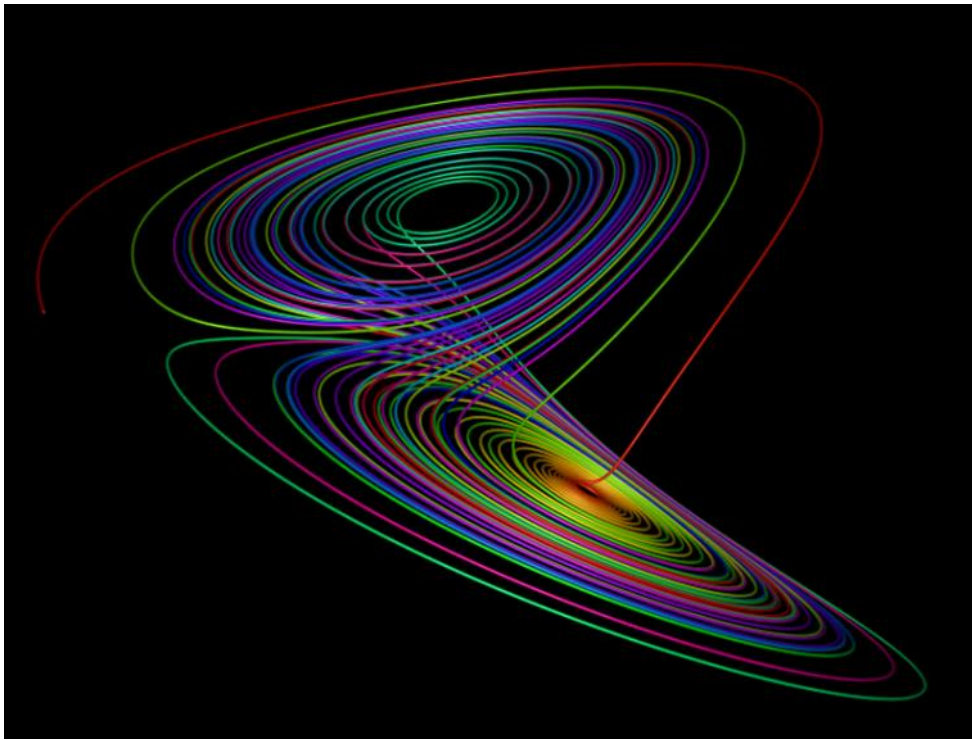
$$\frac{dx}{dt} = -\sigma x + \sigma y$$

$$\frac{dy}{dt} = \rho x - y - xz$$

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

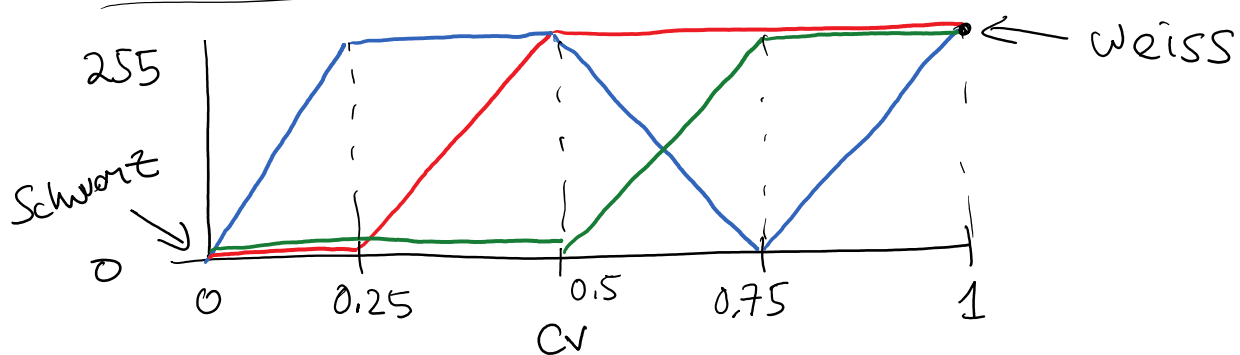
$\sigma = 10$ $\beta = 8/3$ $\rho = 28$	$\rho < 24.74$





COLOR MAP

$t \rightarrow$ Farbe



Rössler:

$$\frac{dx}{dt} = -y - z$$

$$a=0.2 \quad b=0.2 \quad c=5.7$$

$$a=0.1 \quad b=0.1 \quad c=14$$

$$\frac{dy}{dt} = x + ay$$

$$\frac{dz}{dt} = b + z(x - c)$$