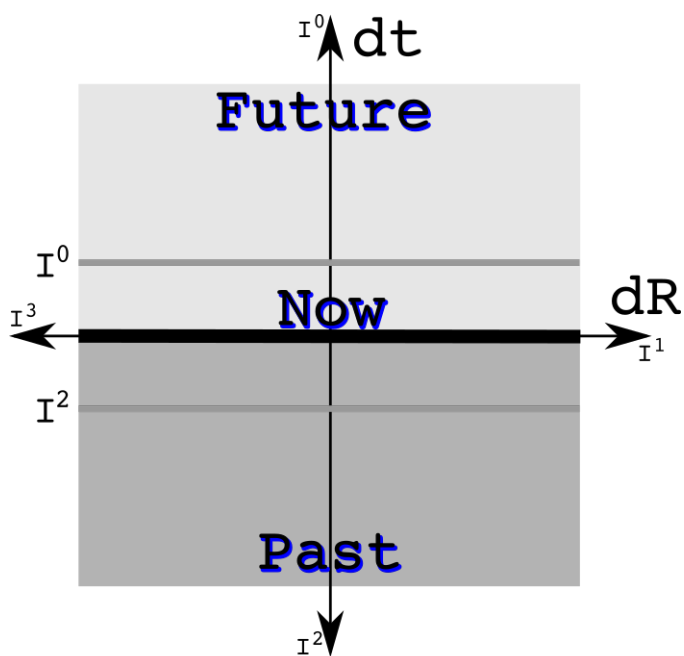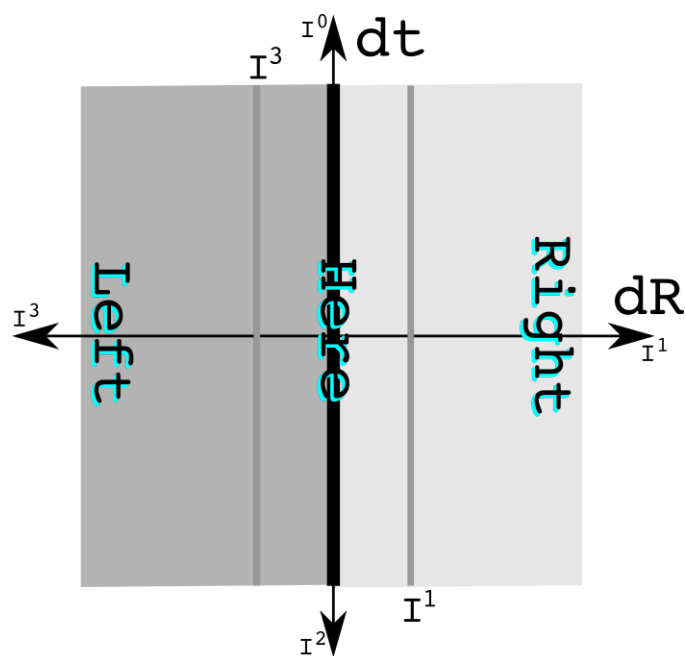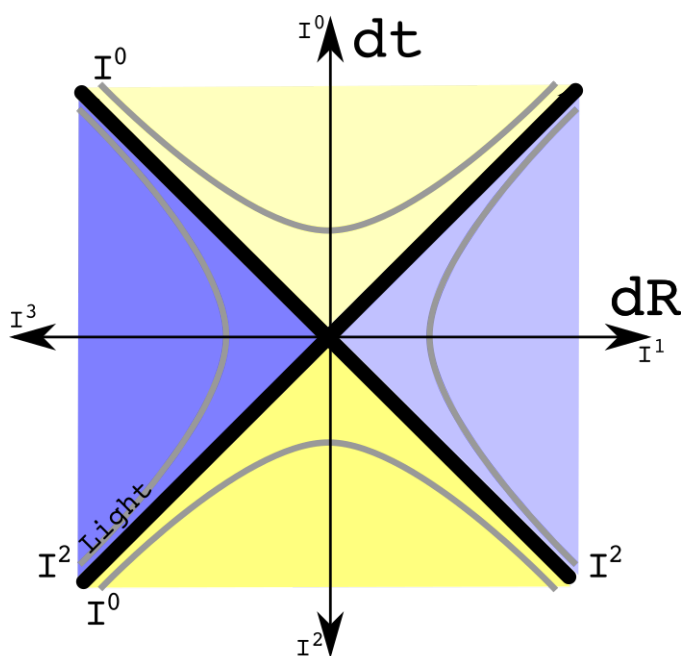# Space-Time Equivalence Classes
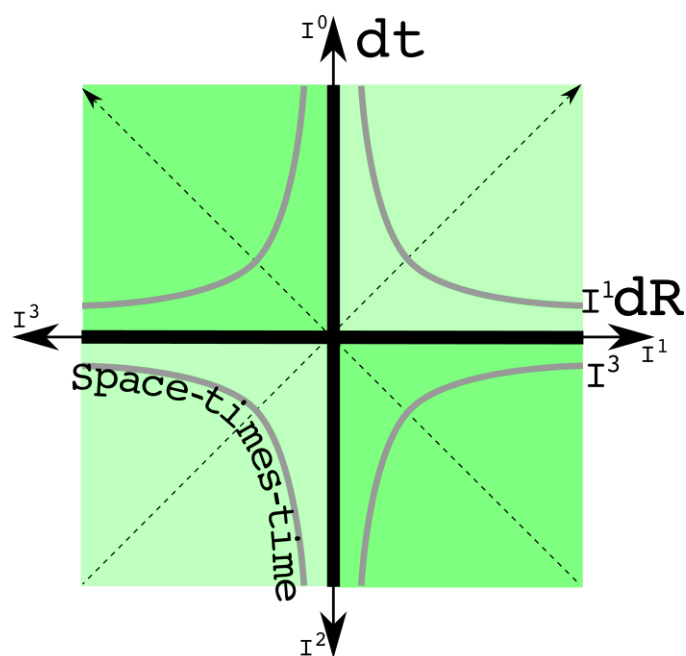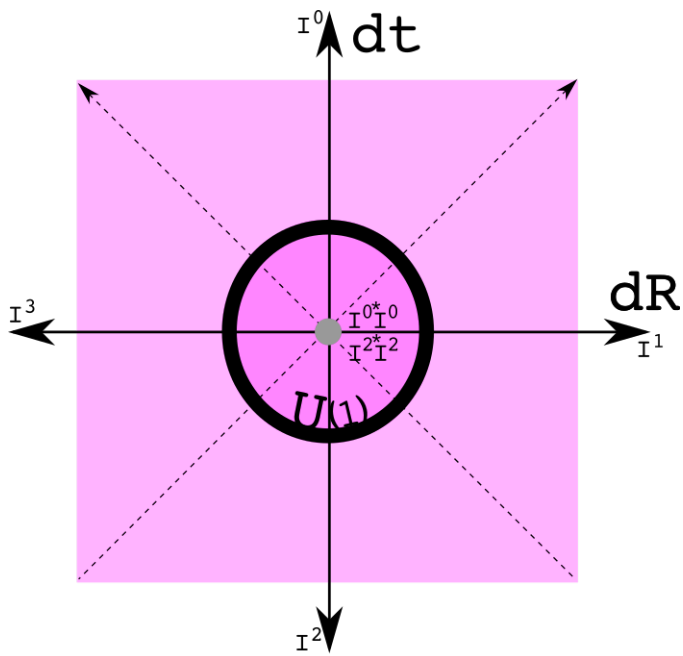

Time
dt

Space
dR

Causality
$dt^2 - dR^2$
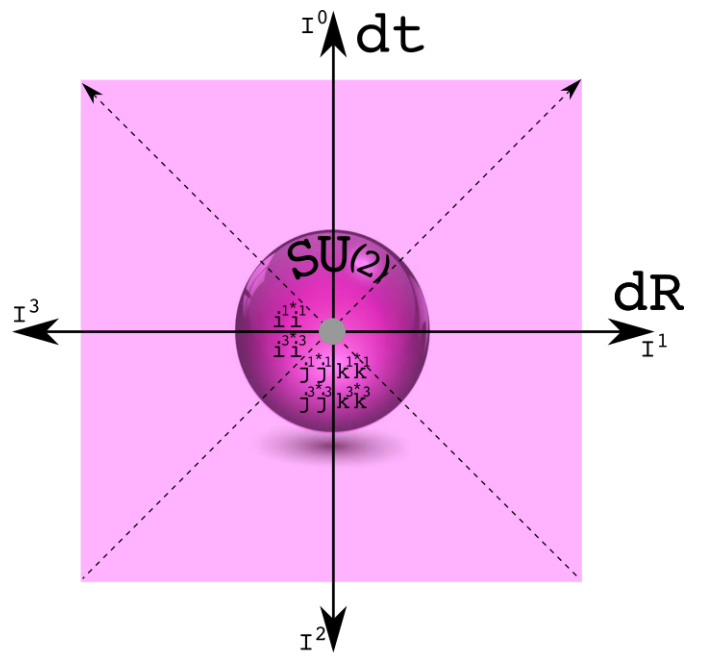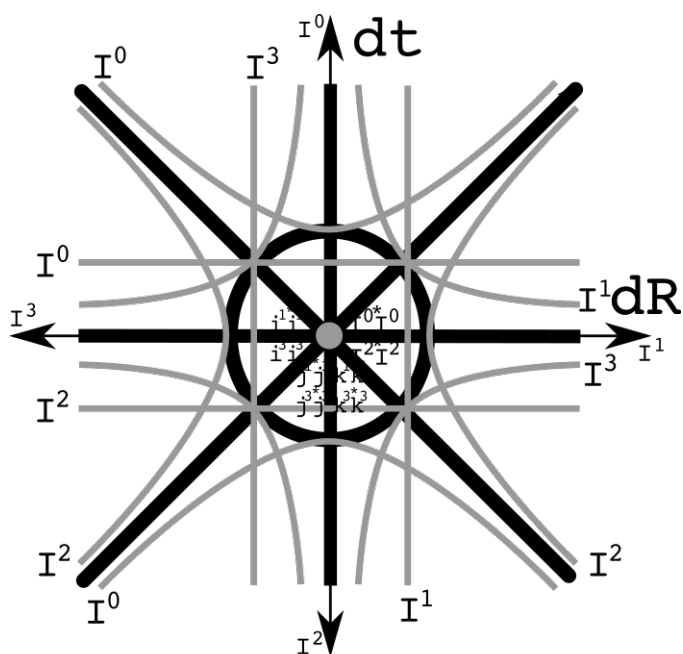
Gravity
dt dR

Space-Time Equivalence Classes
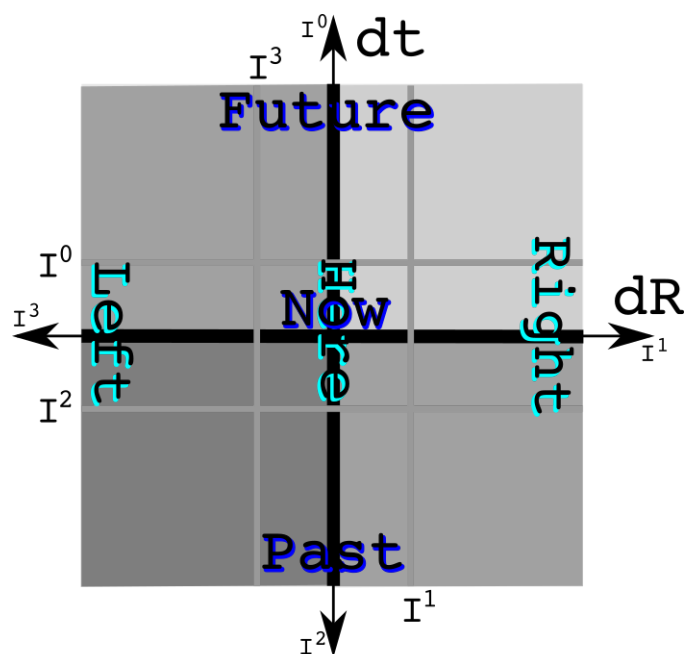

Light U(1)
$dt^2 + dR^2$
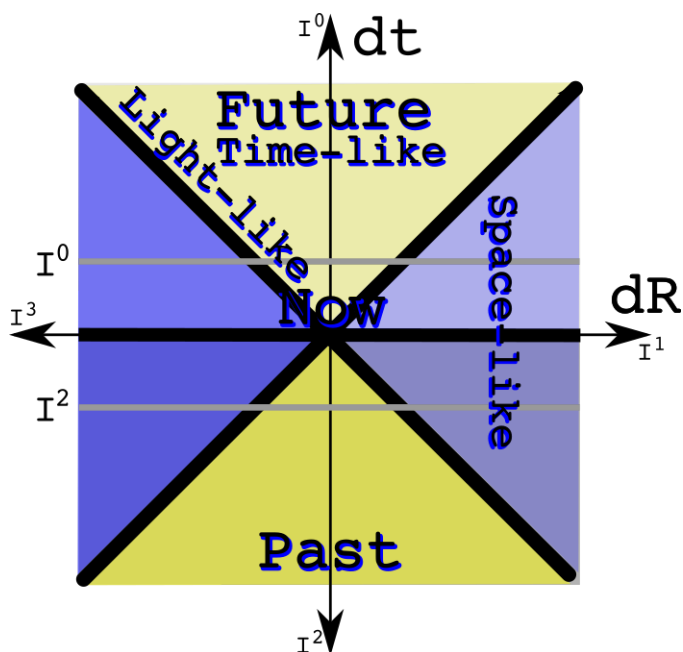
Weak Force SU(2)
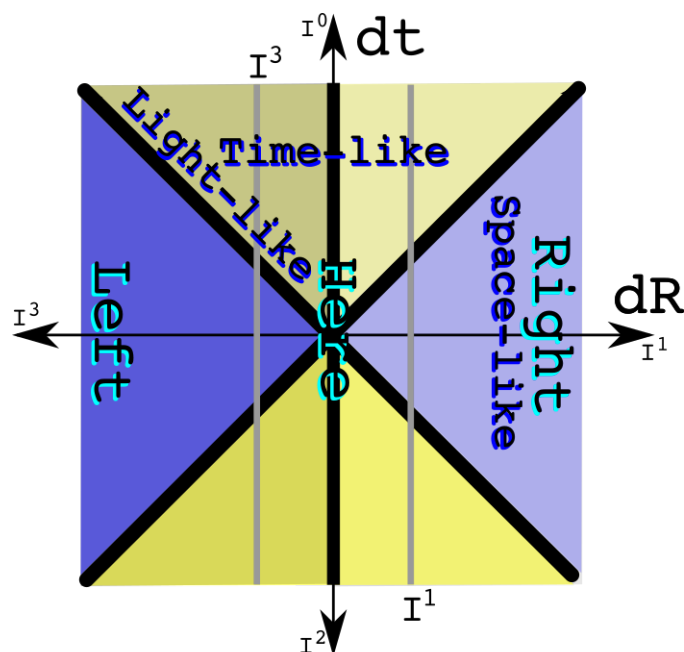$dt^2 + dx^2 + dy^2 + dz^2$

Overlapping Equivalence Classes

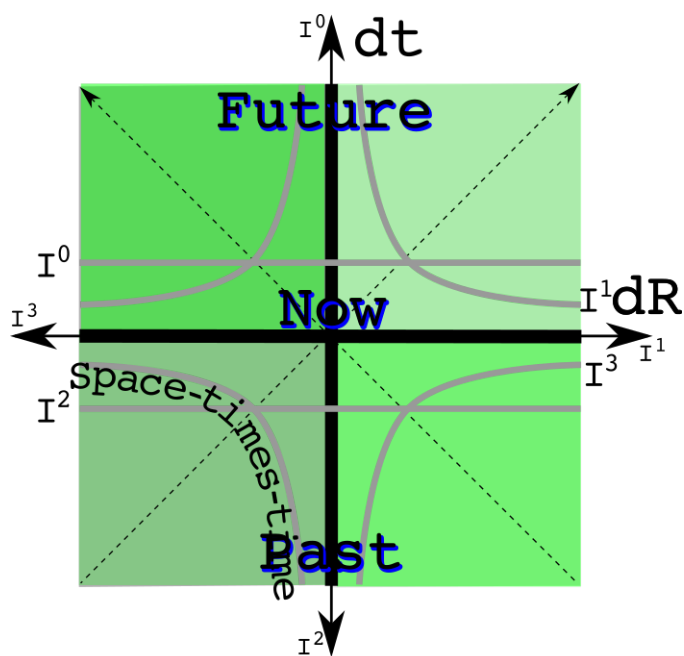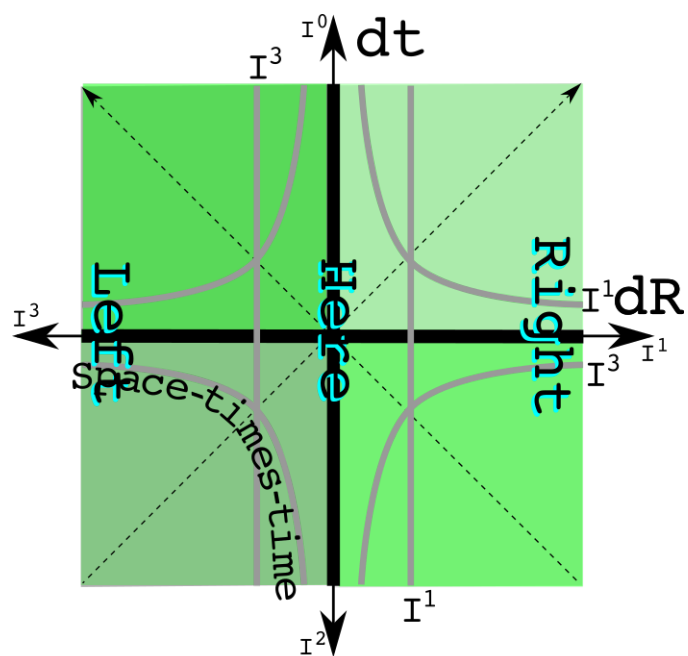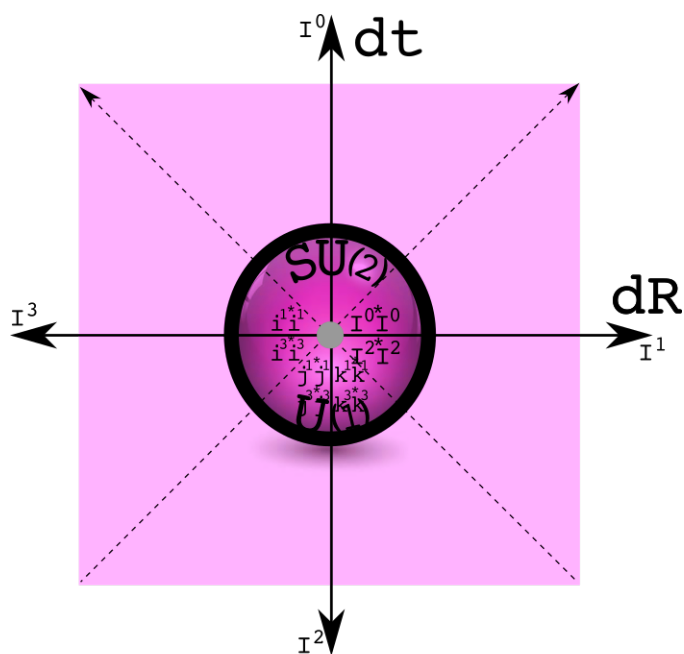All
0's and 1's

Space + Time
dR + dt

Two-tone
Space-like

Two-tone
Time-like

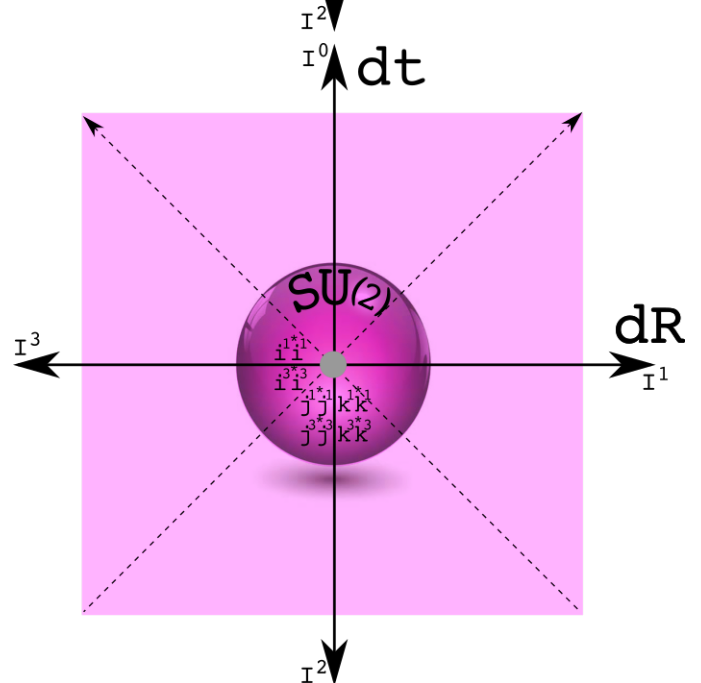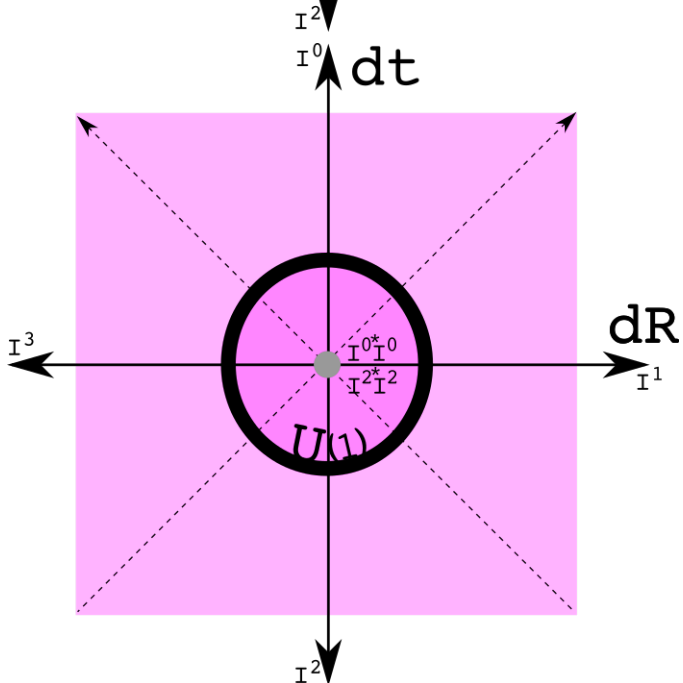# Overlapping Equivalence Classes

Gravity
monotone
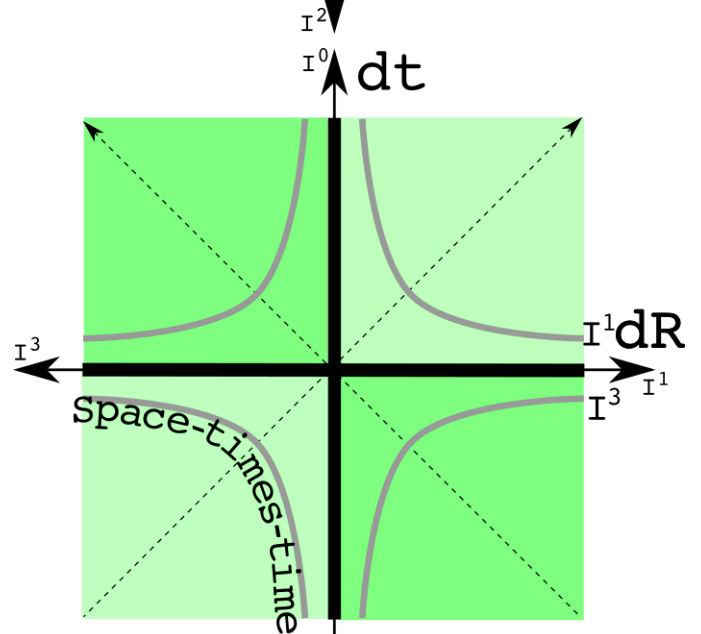
Gravity
monotone

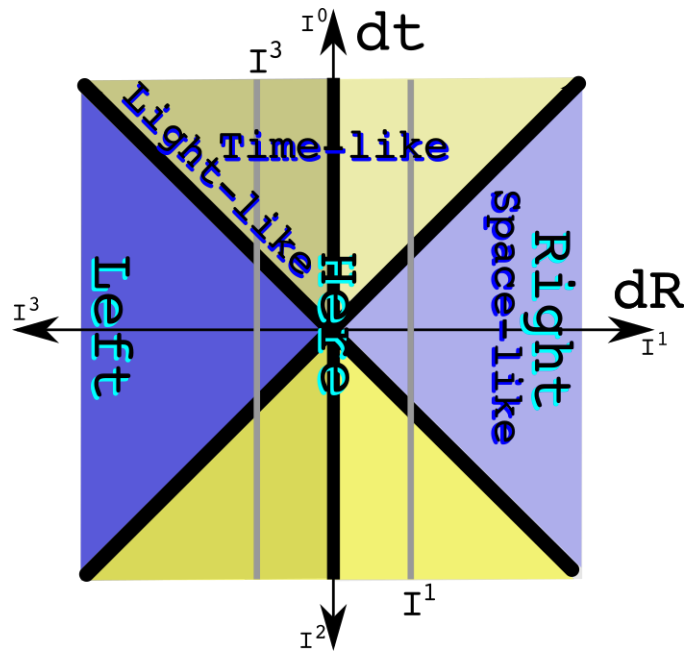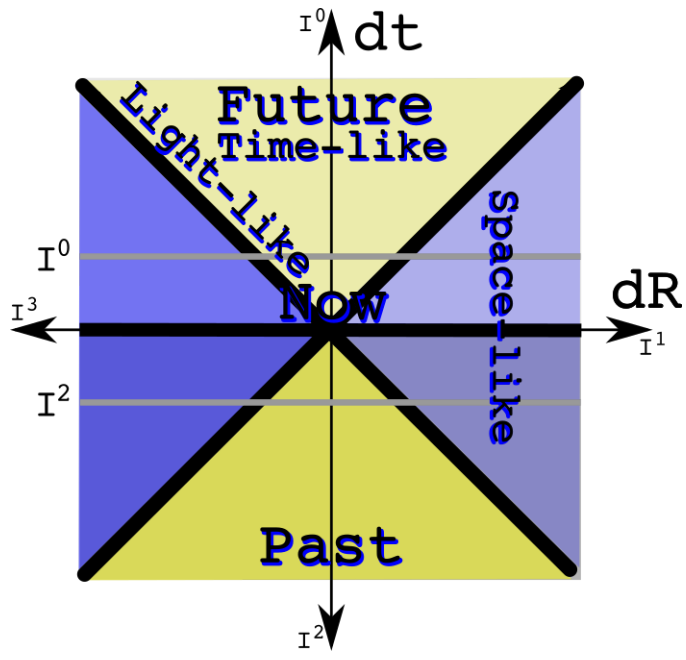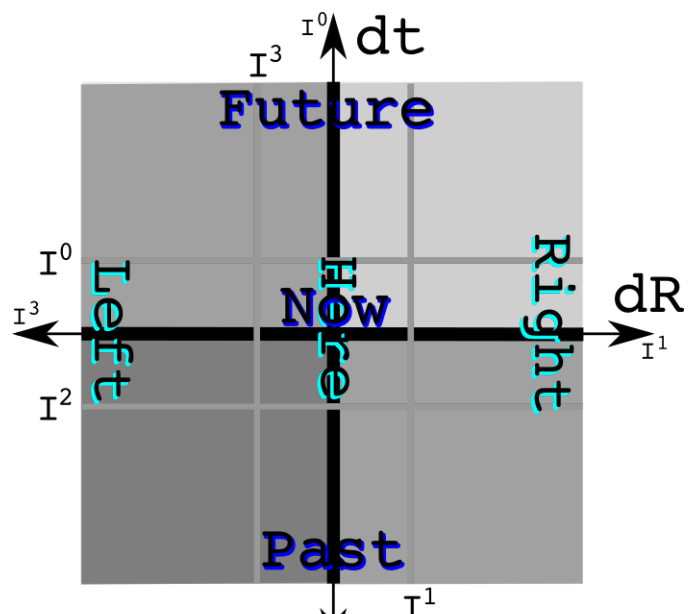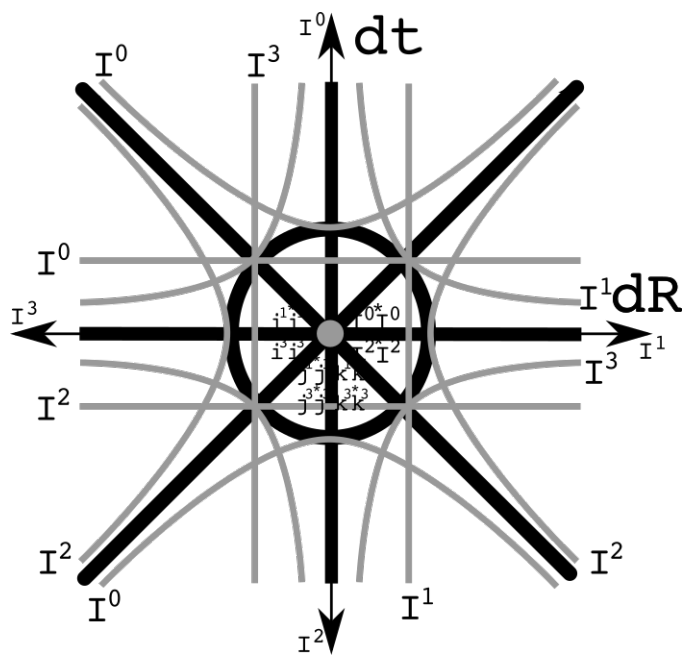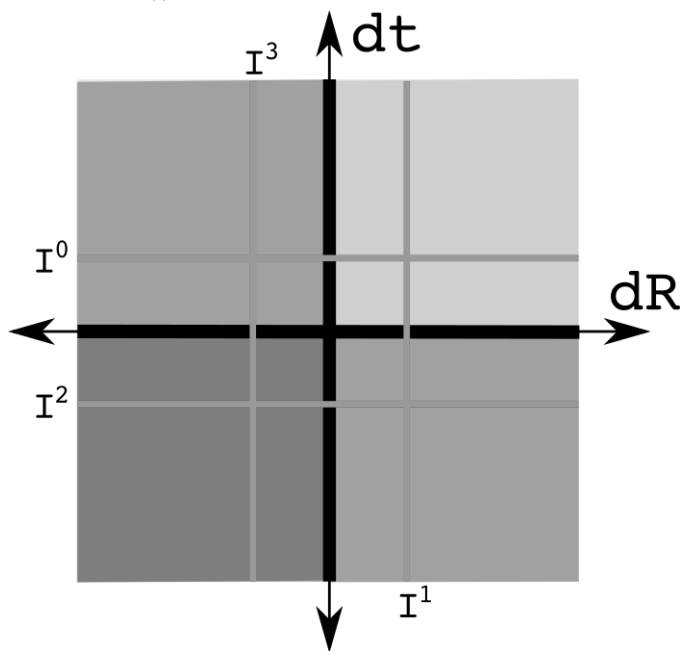Electro-weak
$$dt^2 + (dx^2 + dy^2 + dz^2)$$

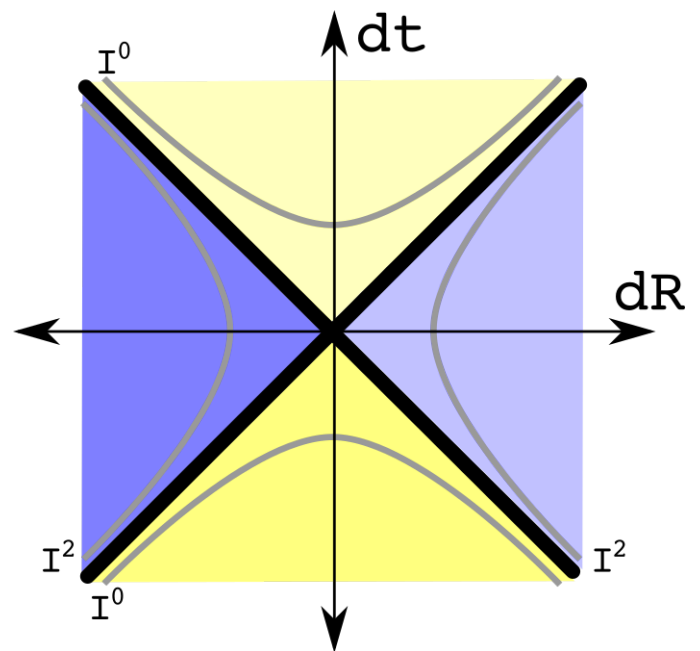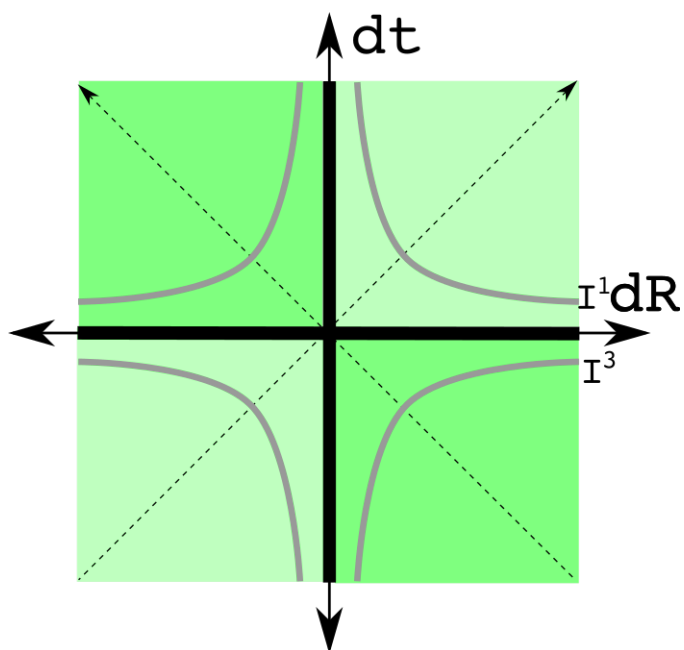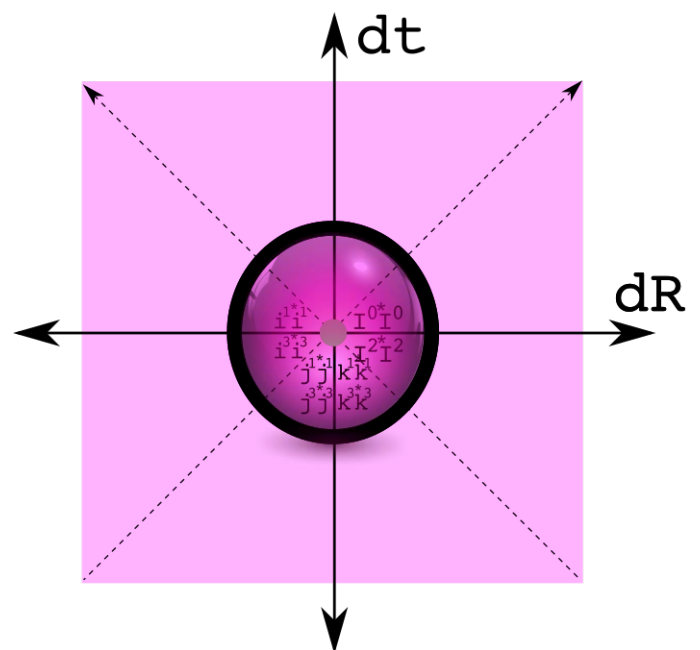# Space-Time Equivalence Classes
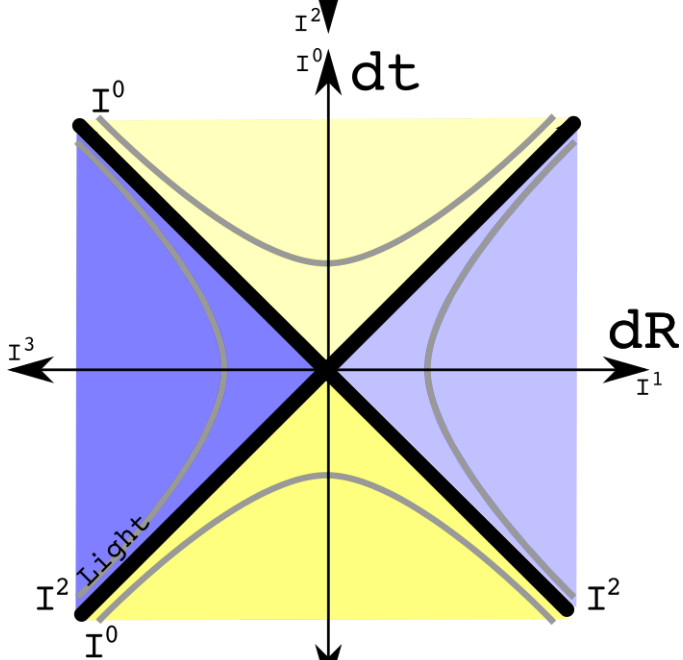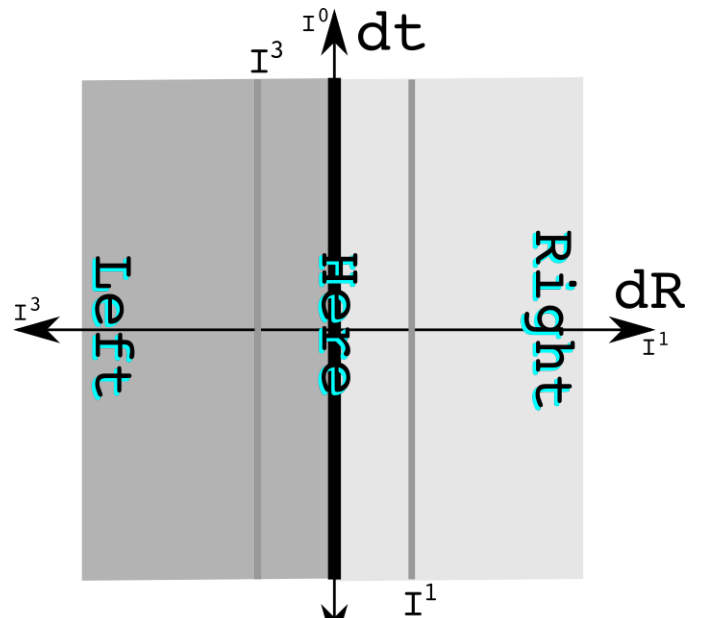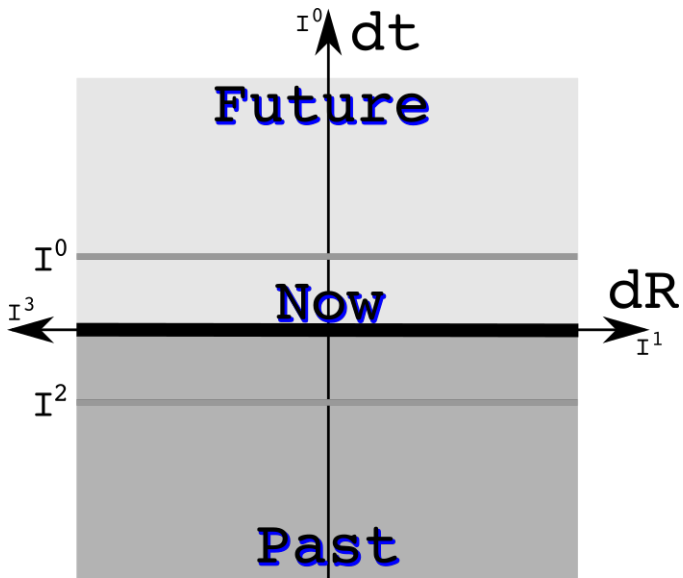
Overlapping Equivalence Classes
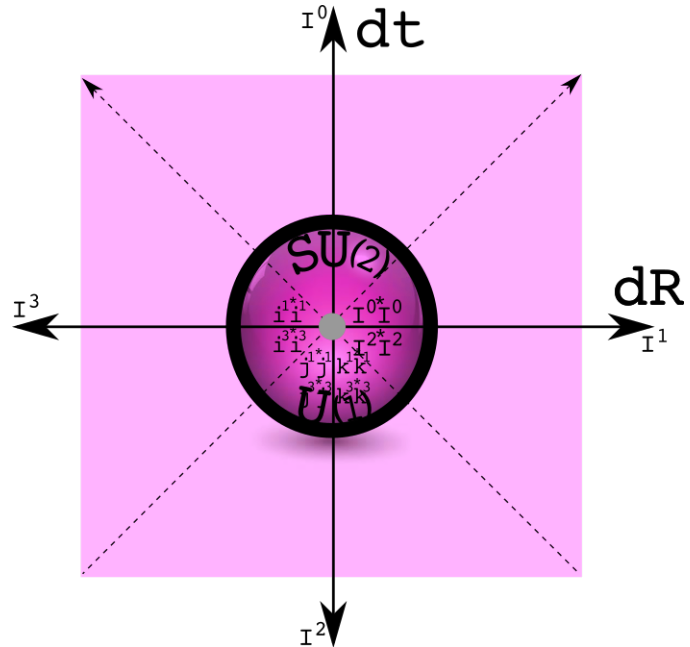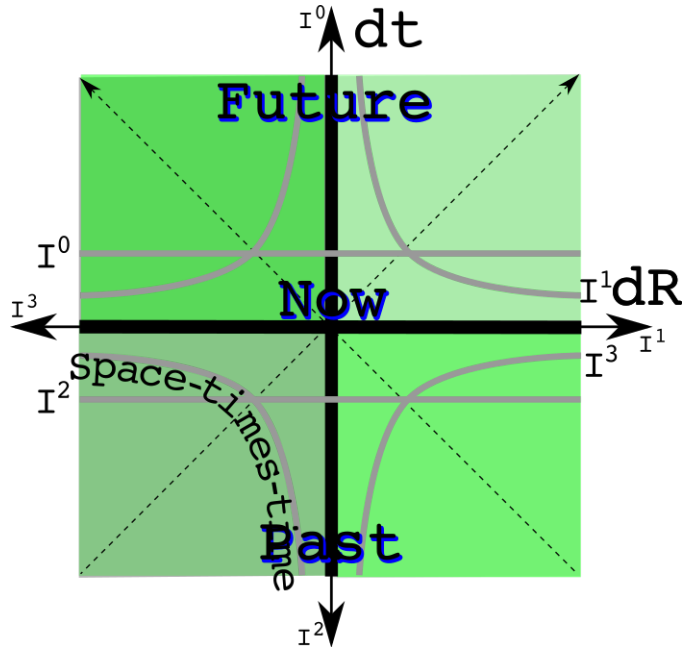
Space-time Geometries

Newtonian

Special Rel

Gravity

EM + Weak