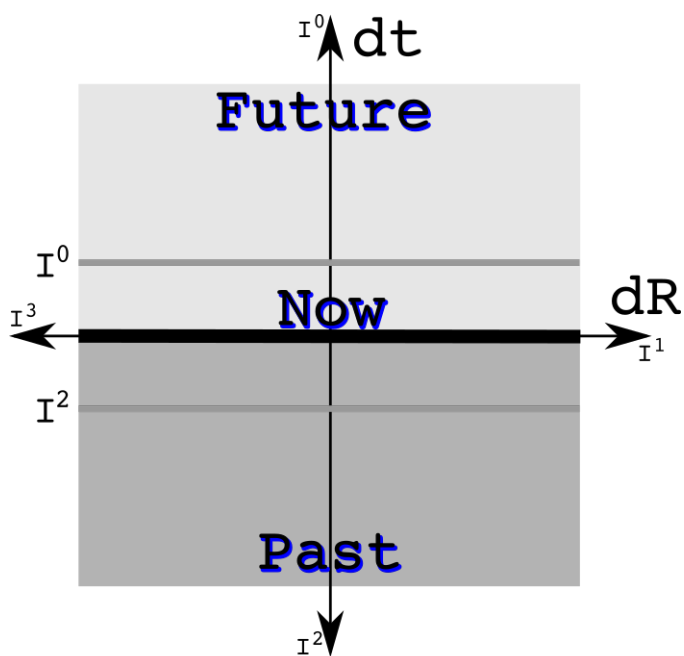
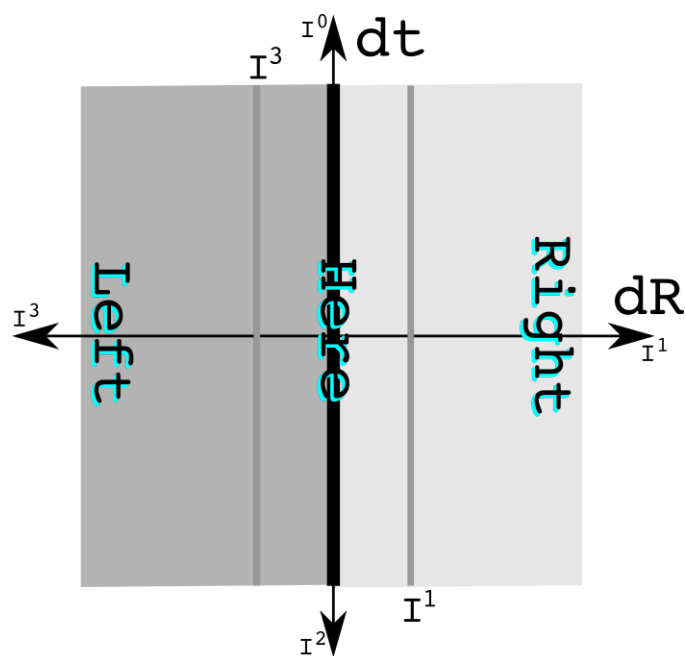


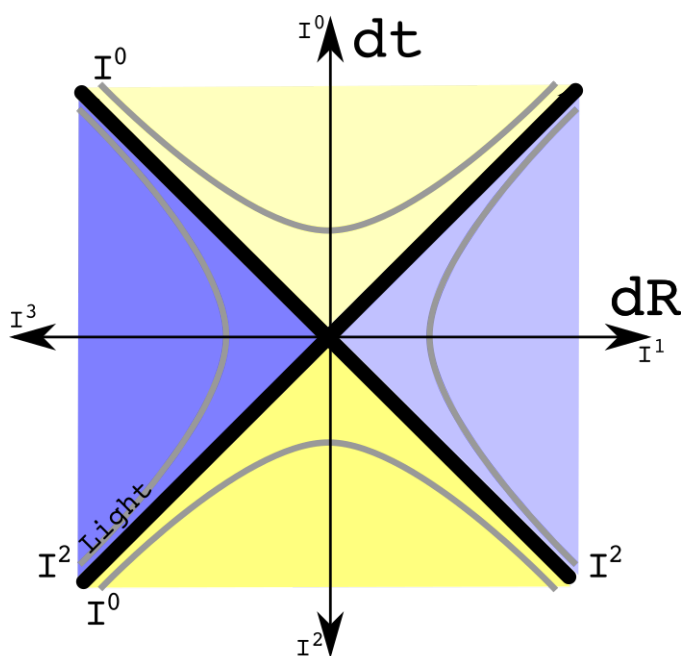
Space-Time Equivalence Classes



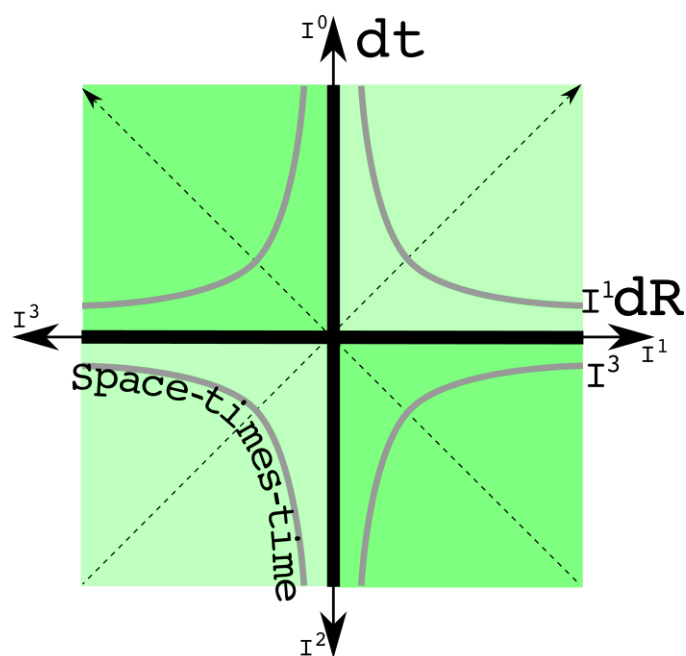
Time
 dt



Space
 dR

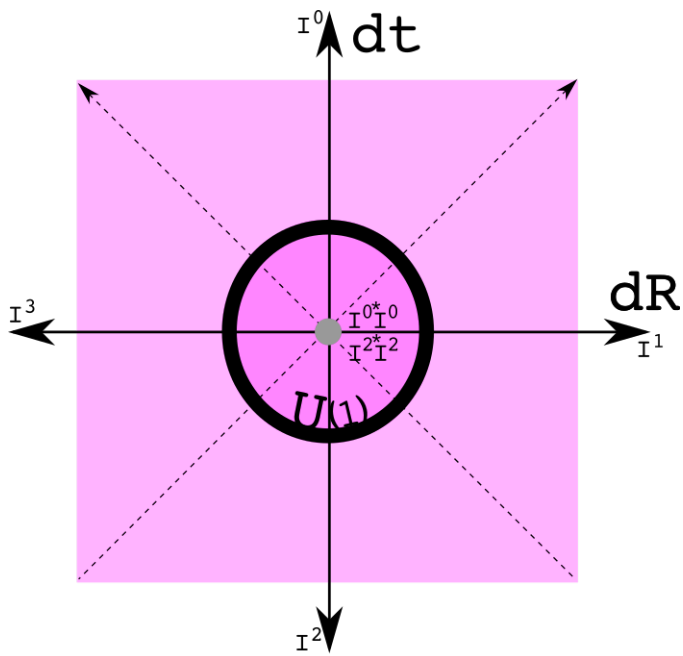


Causality
 $dt^2 - dR^2$

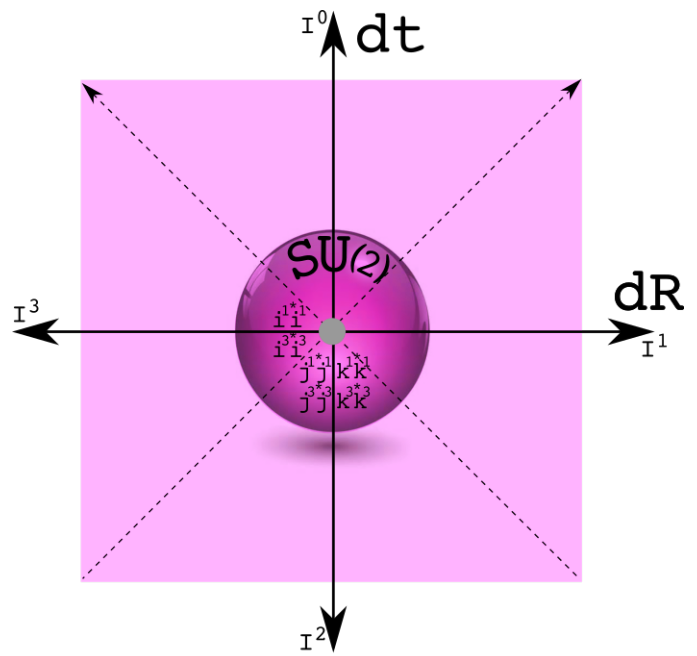


Gravity
 $dt \ dR$

Space-Time Equivalence Classes

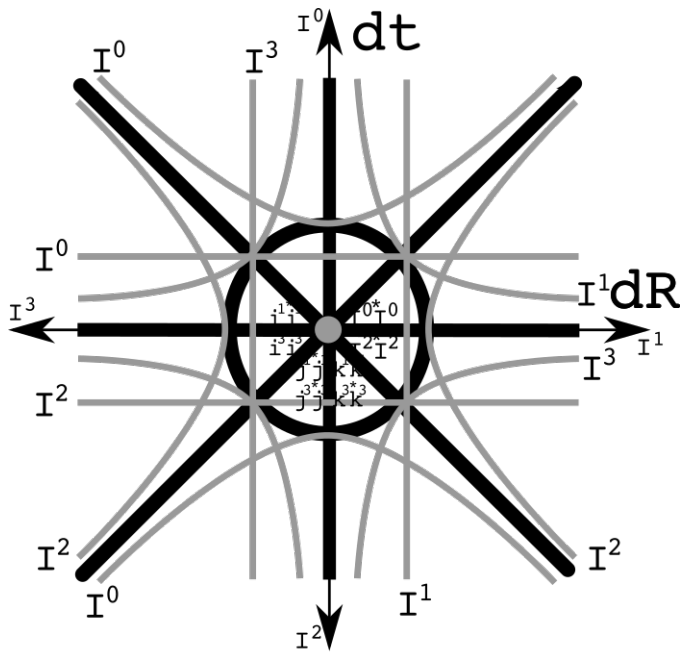


Light $U(1)$
 $dt^2 + dR^2$

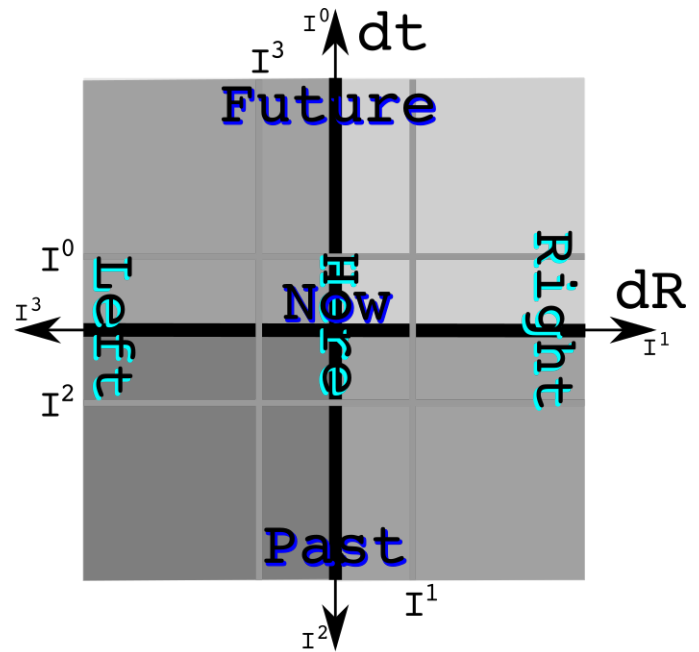


Weak Force $SU(2)$
 $dt^2 + dx^2 + dy^2 + dz^2$

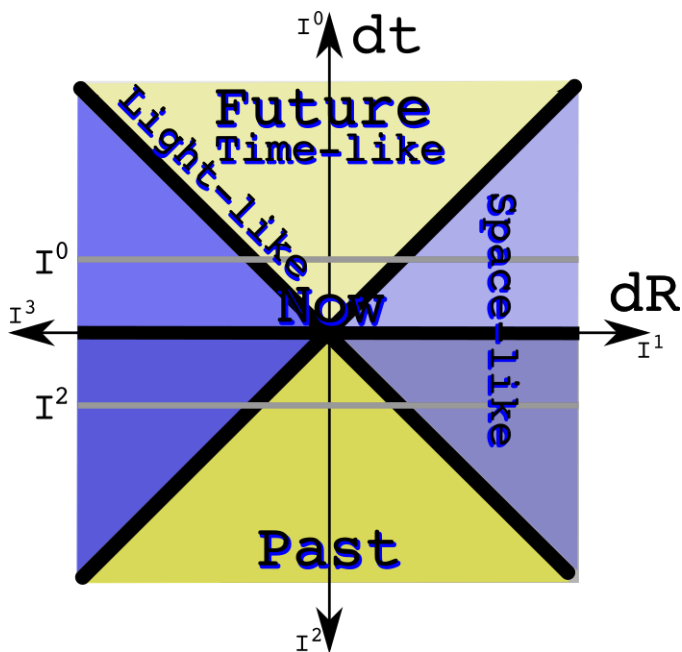
Overlapping Equivalence Classes



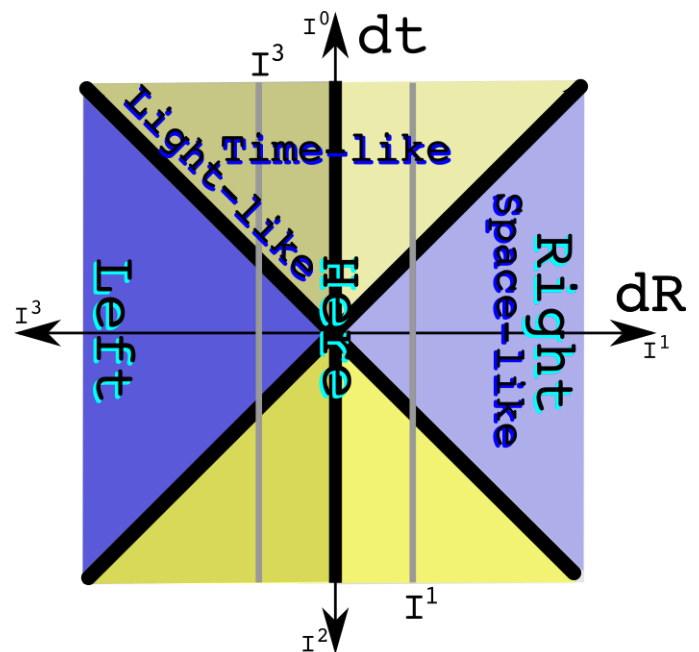
All
0's and 1's



Space + Time
dR + dt

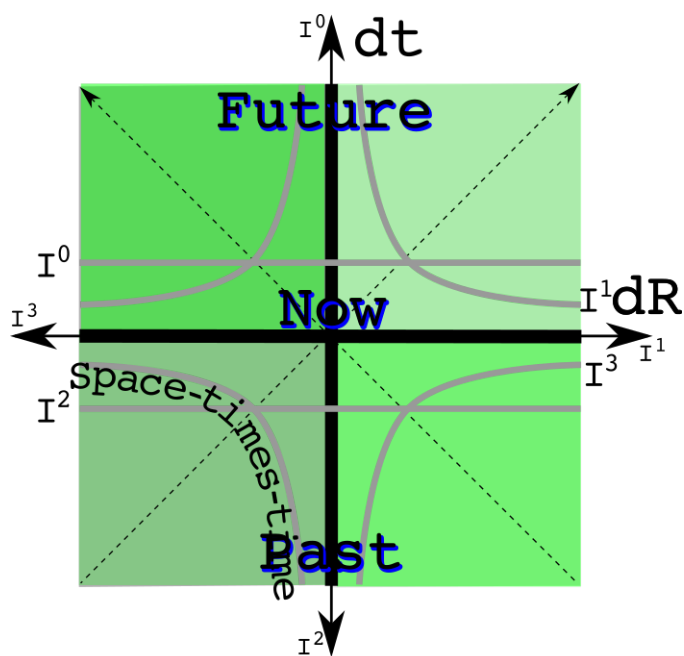


Two-tone
Space-like

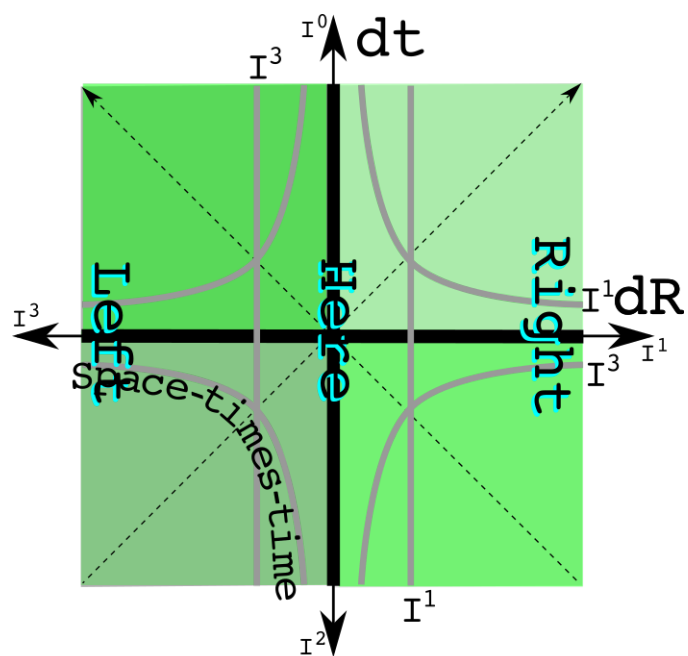


Two-tone
Time-like

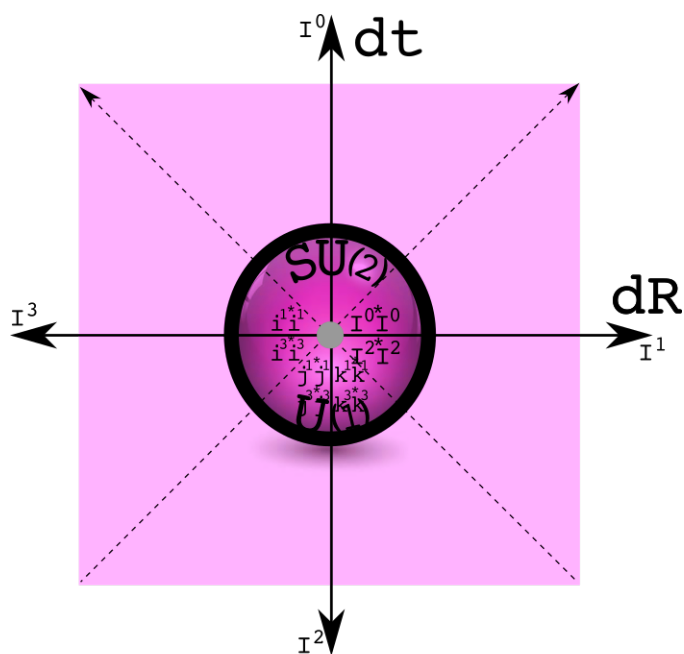
Overlapping Equivalence Classes



Gravity
monotone

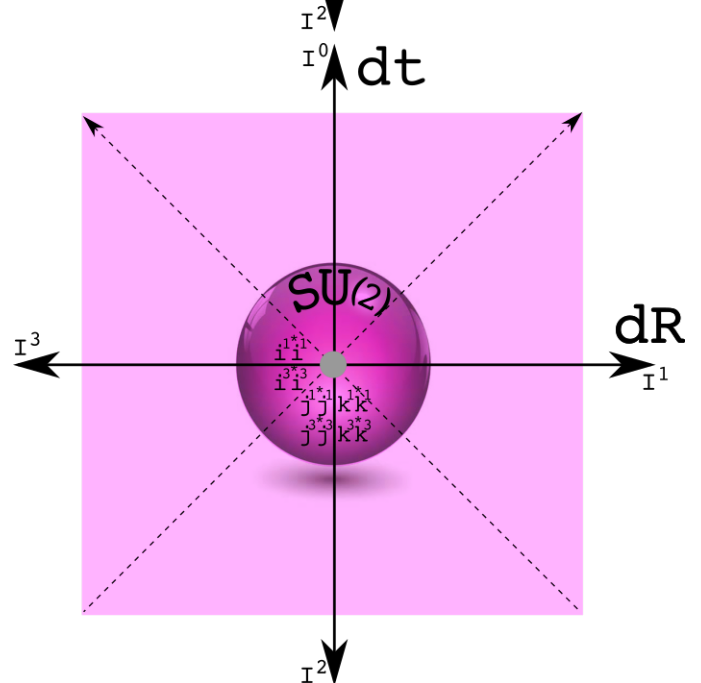
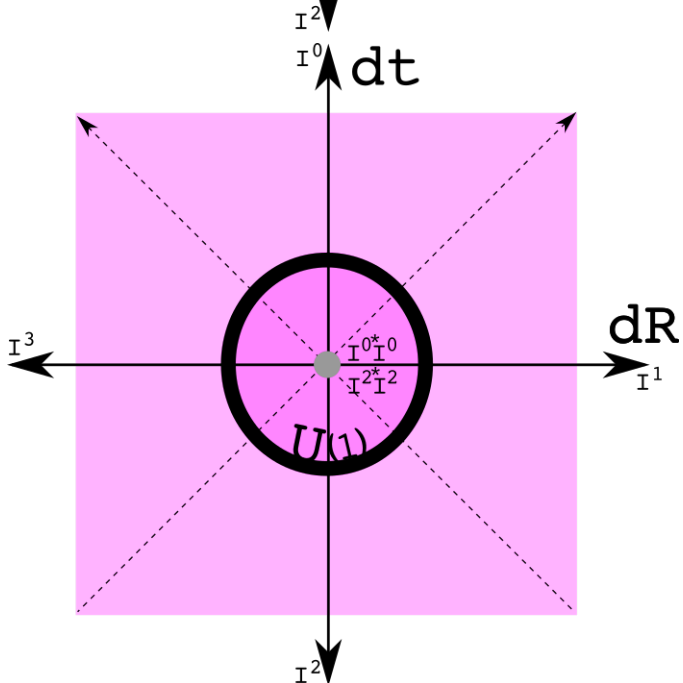
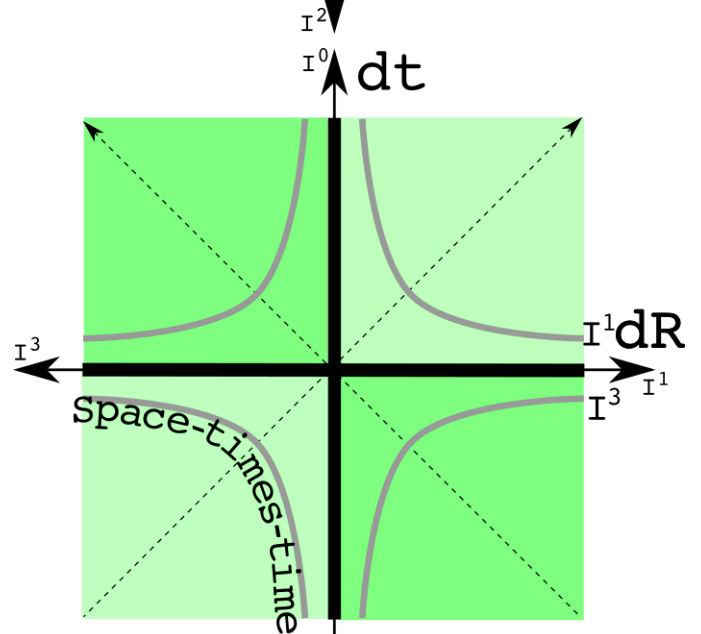
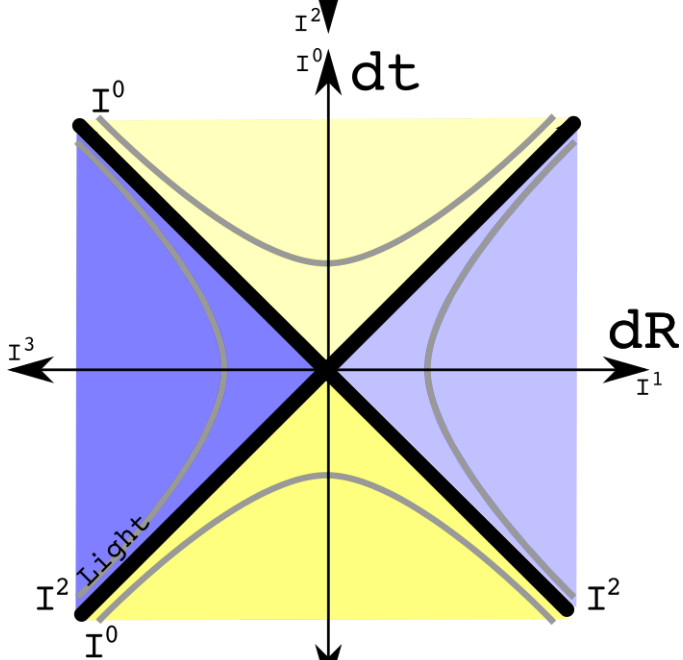
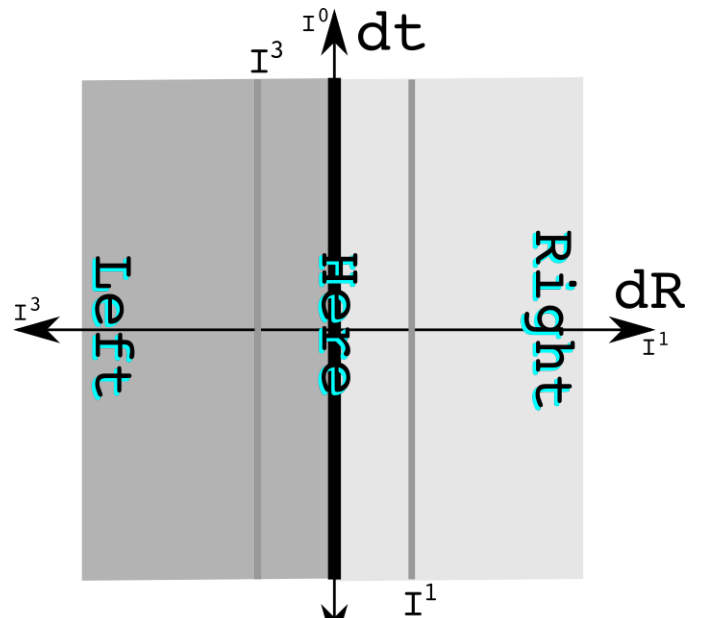
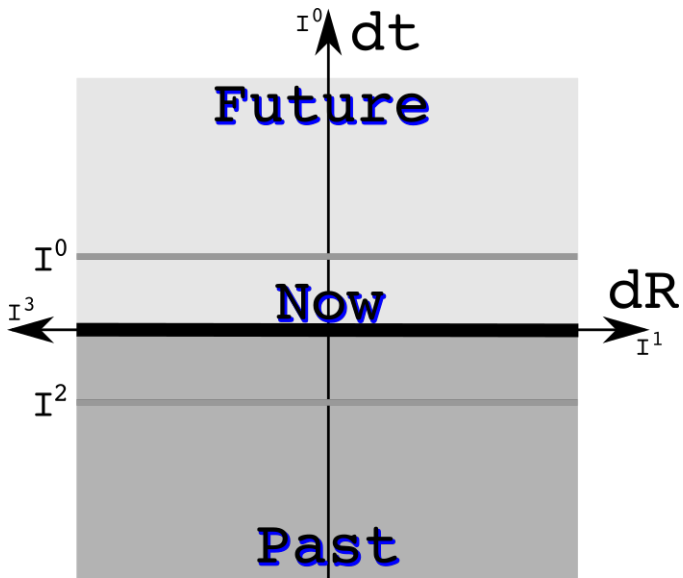


Gravity
monotone

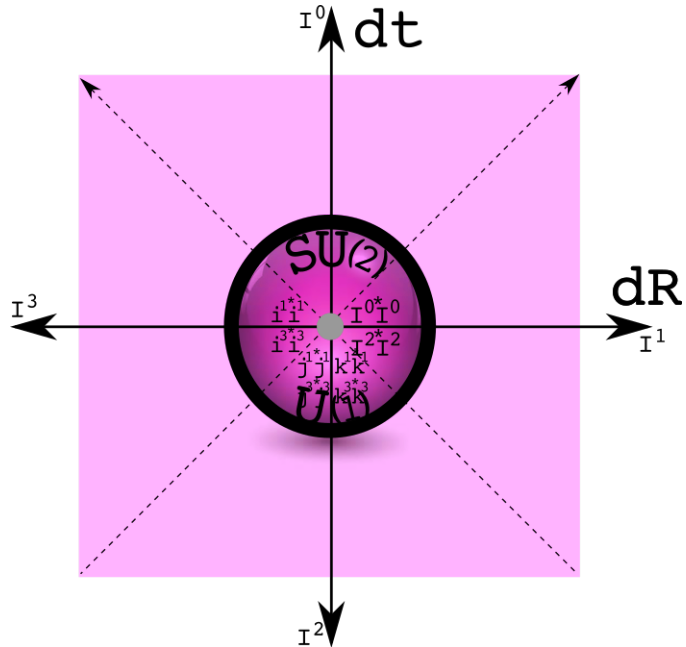
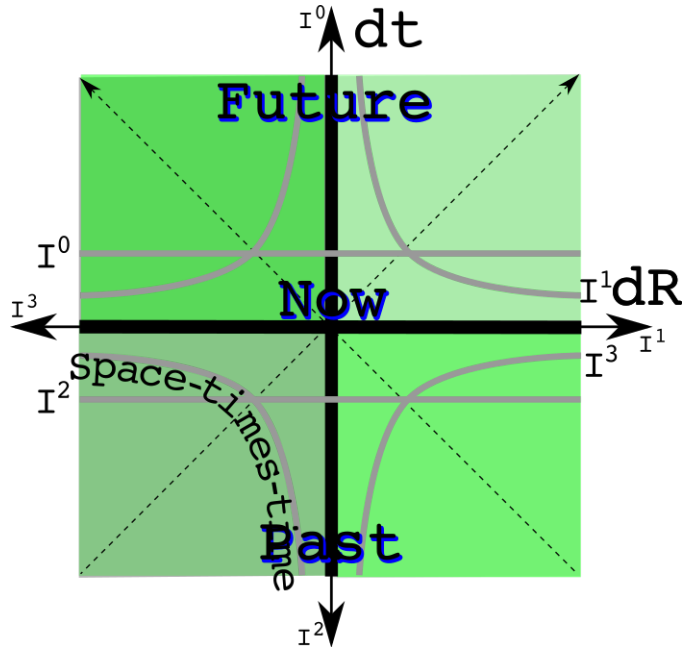
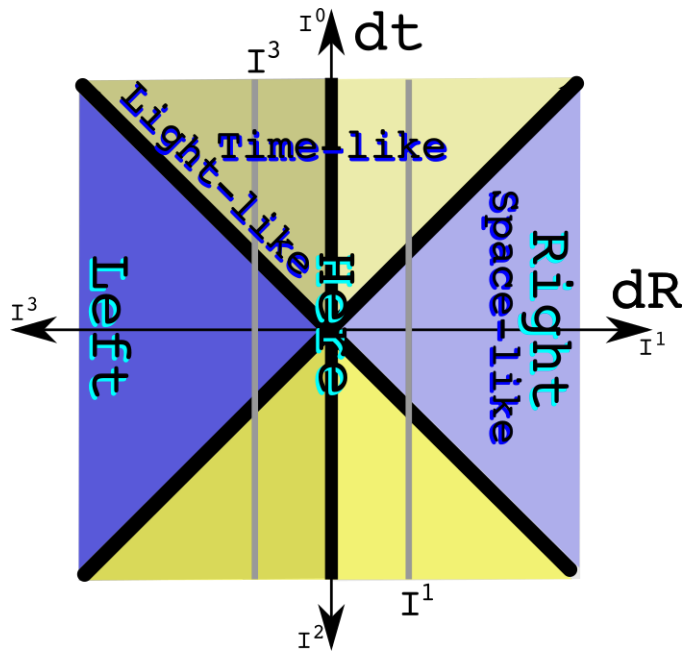
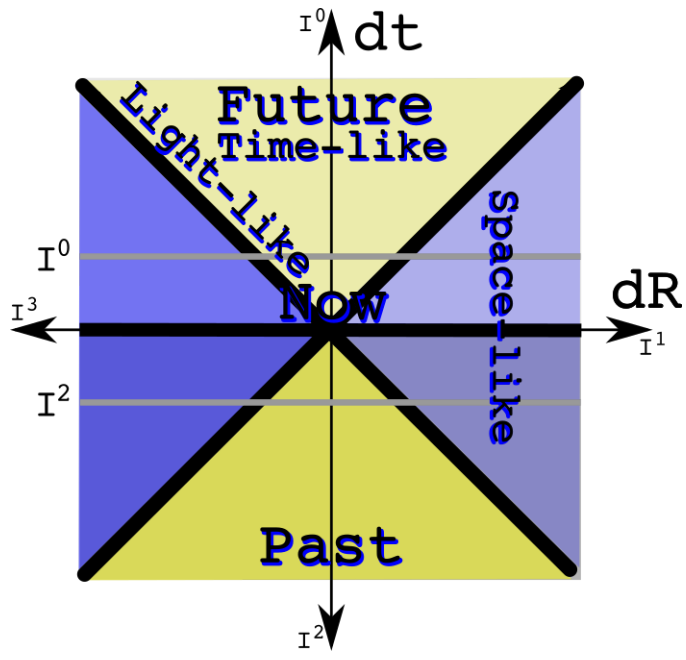
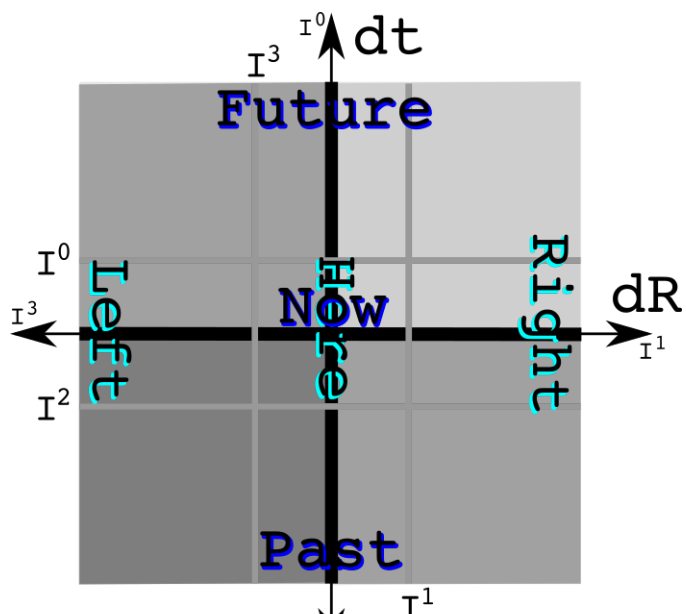
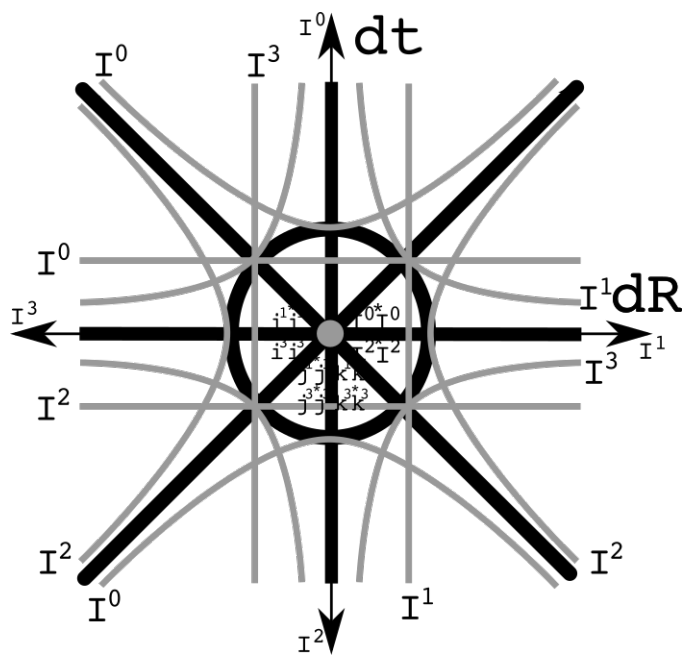


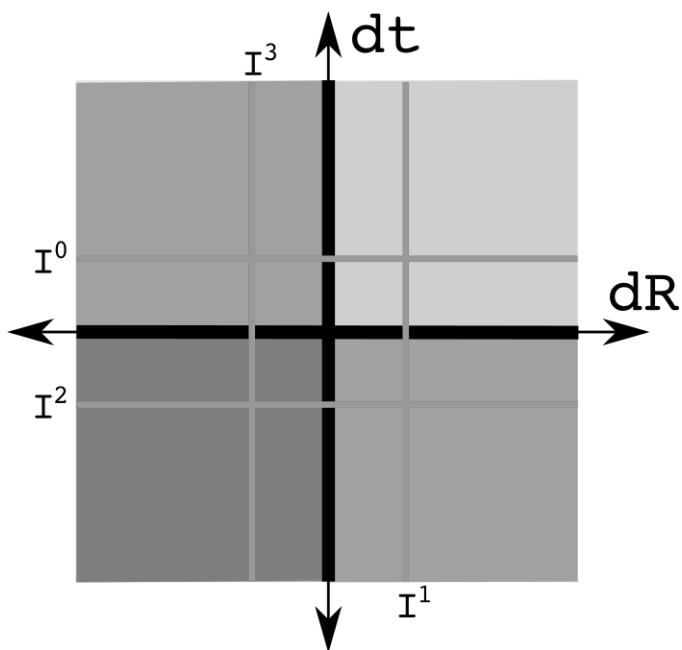
Electro-weak
 $dt^2 + (dx^2 + dy^2 + dz^2)$

Space-Time Equivalence Classes

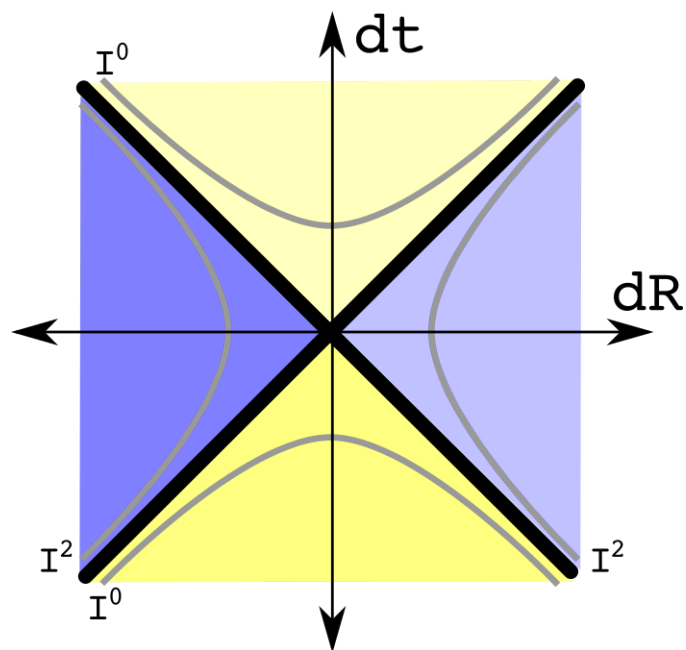


Overlapping Equivalence Classes

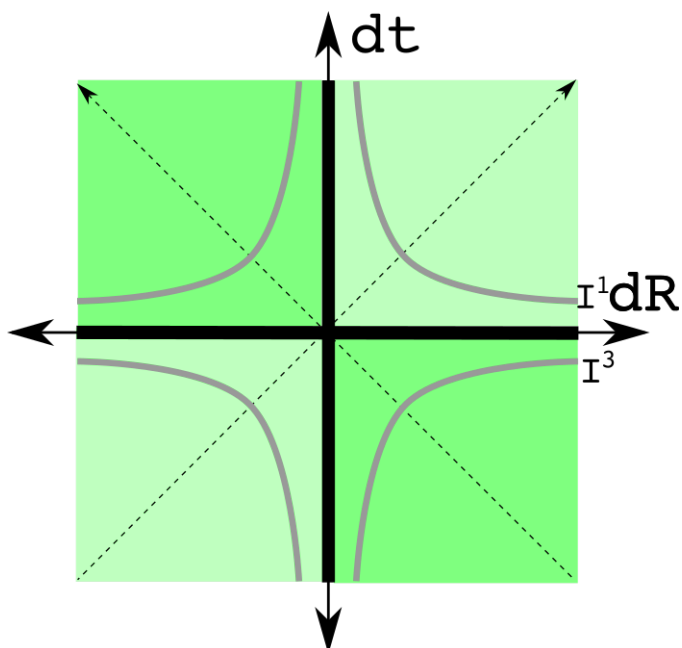




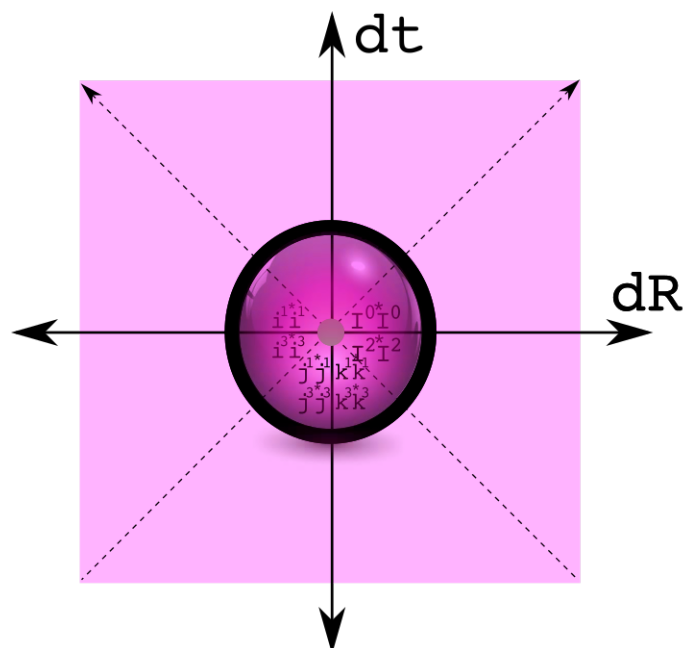
Newtonian



Special Rel



Gravity



EM + Weak

Space-time Geometries