THE NEW LORENTZ'S TRANSFORMATIONS

The new "Lorentz's Transformations" are the new relational transformations:
Direct transformations $A \rightarrow B$ for C:

$$dt_{CB} = \frac{1}{1 - \frac{v_{BA}v_{CA}}{c^2}} \left(dt_{CA} - \frac{v_{BA}}{c^2} dx_{CA} \right)$$

$$dx_{CB} = \frac{1}{1 - \frac{v_{BA}v_{CA}}{c^2}} \left(dx_{CA} - v_{BA}dt_{CA} \right)$$

$$dy_{CB} = \frac{\sqrt{1 - \frac{v^2_{BA}}{c^2}}}{1 - \frac{v_{BA}v_{CA}}{c^2}} dy_{CA}$$

$$dz_{CB} = \frac{\sqrt{1 - \frac{v^2_{BA}}{c^2}}}{1 - \frac{v_{BA}v_{CA}}{c^2}} dz_{CA}$$

Relational local metric associated:

$$g_{CA} = \begin{pmatrix} -k_{CA} & & & \\ & k_{CA} & & \\ & & k_{CA} & \\ & & & k_{CA} \end{pmatrix}$$

where k_{CA}:

$$k_{CA} = \frac{1}{1 - \frac{v^2_{CA}}{c^2}}$$