## **Classical Relativity – Relative velocity :** Galileo (1564-1641) and Newton (1642-1643)



How is a phenomenon observed in different reference frames.

Classical relativity for two inertial reference frames (frames that are not accelerated)

Position:

Velocity:

Acceleration:

 $\vec{a_{PA}} = \vec{a_{PB}}$ 

 $\vec{r_{PA}} = \vec{r_{PB}} + \vec{r_{BA}}$ 

 $\vec{v_{PA}} = \vec{v_{PB}} + \vec{v_{BA}}$ 

Still good for speeds below 1% of speed of light!