September, 3, 2006

PHY 215 Derivation: D2
Due: September 12 (with other homework)

In class I used the example of a swimmer who compares swimming across a stream and up and down the stream. For the particular situation in which the river is flowing with velocity v, from Right to Left (like in the slides), show that the round trip time to go across and back (ABA) is:

$$T_\perp = \frac{2L}{u} \frac{1}{\sqrt{1 - v^2/u^2}}$$

Draw a picture to guide yourself.