

Re: Ocean Stream Speed – To Inger.

Source: <http://sci.tech–archive.net/Archive/sci.archaeology/2006–06/msg00313.html>

- *From:* Erik Hammerstad <egeha.is.all.you.need@xxxxxxxx>
 - *Date:* Mon, 26 Jun 2006 19:39:22 +0200
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Dylan Sung wrote:

Hello Inger,

You mentioned that knots/hour in your thread about "Ocean stream speed". I've told you that technically, what you've written is an acceleration.

Now, after the boat has entered the stream, does the boat continue to speed up, until it reaches it's destination, or does it reach a steady sailing speed?

Remember, I gave a few definitions earlier.

Speed is the change of distance with respect to time.
Acceleration is the change of speed with respect to time

Let's put velocity to one side, for the moment.

Now, if a boat is travelling from the north towards the south at a constant speed, and then hits the gulf stream, which for our purposes is travelling west to east

(BOAT)

. |N
. |
. |
. |
. |S
. \|
. V

----->
W (Gulf Stream) E

The boat over time will do this

(BOAT)

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- .B North (N)
- .B |
- .B South (S)
- .B
- .B meets gulf stream here
- . B
- . B
- . B
- . B
- . B -----> drag of the gulf stream current west to east
- . B
- . B
- . B
- . B boat seems to move in a south easterly direction

Assuming that the boat speed and current speed is constant the only thing which changes is the direction of the boat which goes south easterly.

No, in addition the southward speed is reduced as the boat leaves the southward current ;-) This would also be a short period of deceleration but resulting in a markedly lower speed over ground assuming the boat is to continue sailing southwards, with a further reduction to overcome the eastward drift you show above. The speed relative to water is of course changed only minimally since the heading with respect to the wind is not changed very much.

<snip the correct description of the impulsive nature of the speed change>

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