CHAPTER 4

On the Influence of Interseasonal Sea Surface Temperature on Surface Water pCO_2 at 49.0°N/16.5°W and 56.5°N/52.6°W in the North Atlantic Ocean

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4.1 INTRODUCTION

Carbon dioxide (CO_2) dominance in the atmosphere (mainly from anthropogenic sources) over other greenhouse gases has resulted in increasing pCO_2 in the surface ocean leading to measurably decreased pH (ocean acidification) (Canadell et al., 2007; Hopkins et al., 2010; Keeling and Whorf, 2005; Levine et al., 2008; Sabine and Feely, 2007). The world oceans are major natural sinks of atmospheric CO_2. However, the North

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