

## **Is the Southern Ocean ultimately limited by light or iron?**

Michael R. Hiscock<sup>1</sup>, Andrew R. Jacobson<sup>1</sup>, Colm Sweeney<sup>1</sup>, Patrick Schultz<sup>2</sup>, Jorge L. Sarmiento<sup>1</sup>, Michael J. Behrenfeld<sup>3</sup>

<sup>1</sup>Atmospheric and Oceanic Sciences Program, Princeton University, PO Box CN710, Princeton, NJ, 08544, USA. <sup>2</sup>Department of Geosciences, Princeton University, Guyot Hall, Princeton, NJ 08544, USA, <sup>3</sup>Department of Botany and Plant Pathology, Oregon State University, Cordley Hall, Corvallis, OR 97331, USA.

Whether the Southern Ocean is ultimately limited by light or iron remains an open question in Southern Ocean ecology. With a combination of *in situ* iron-enrichment measurements, climatology, and novel satellite-derived carbon observations we use a simple model to diagnose the degree of light and iron limitation in the various zones of the Southern Ocean.