

Following the suggestion of the editor we have modified the title such that it explicitly mentions “observation operator” and the “carbon cycle”, “earth system” is mentioned first, because most of the examples go beyond the carbon cycle. It now reads:

**Flying the satellite into your model: on the role of observation operators in constraining models of the earth system and the carbon cycle**

We have further added one cross-reference to another contribution to this special issue and corrected the format of two references.