Paper ID: 17 - Addressing reviewer comments

We hope that our clarifications and changes solve any doubts the reviewer had, as well as, improve the paper.

4. List and clearly justify the weaknesses of the paper (2-4 sentences or bullets).

- Not provided are requirements and capabilities of the on-orbit systems vs obtained results. Why do we need to run DL models onboard and what are the requirements?

There are already companies like Spiral blue or Palantir that offer this type of service onboard. Being able to run efficient models onboard can save the need of downloading data and also responding faster to specific events.

- How does it feasible to constantly run DL (in inference phase) onboard with energy constraints?

There are satellites that can handle, despite the constraints onboard, a certain level of computation. In this paper, we are exploring the possibility of uploading competitive light models. We do not focus on such strategies. That said, as far we can tell, we only run models under certain conditions, trying to save as much energy as possible.

5. Write any additional comments regarding the paper that may be useful for revision but should not be considered in the paper decision (e.g., typos, suggestions).

- The paper is >4 pages.

The paper now has 4 pages.

- Abstract is very shallow without details.

We've modified and added at the end of the Abstract the following sentence:
"We extend its use to semantic segmentation of building footprints. While this is not a reduction technique as such, results demonstrate that these type of models can be easily transmitted and reconstructed on board without compromising the model performance. In particular, the network reaches a competitive performance, while requiring only hundreds of kilobytes."

- Title has "accurate" but it's not clear what it means.

In the context of our paper, 'accurate' means having a high level of precision or correctness in predicting the desired outcome. The title reflects our goal of demonstrating that our light models are able to make predictions that are not far from a baseline model, and therefore can be considered accurate in their predictions.

We propose a new title, in order to better state the purpose of our paper:
"Building Light Models with Competitive Performance for Remote Sensing"