Reply on RC2
Martin O. Archer et al.

Author comment on "GC Insights: Space sector careers resources in the UK need a greater diversity of roles" by Martin O. Archer et al., Geosci. Commun. Discuss., https://doi.org/10.5194/gc-2022-1-AC3, 2022

We thank the reviewer for their time in providing their report on our manuscript.

The paper is relevant, interesting and well built. I think that addressing the comments by R1 will improve the quality of the paper, therefore I will not address issues that have already been raised. My review will for this reason only consist of a few minor comments.

We thank the reviewer for their positive comments on the paper.

It is worth noting that the space sector is developing quickly in the UK (see efforts for building spaceports in Scotland and Cornwall) which will drive economic development and create more roles. The economic development can only be fully realised if there is workforce who is trained and willing to undertake those roles (most of which, as the authors note are not currently accurately represented). In this view (appreciating that there is a word limit that must be respected) I suggest the paper would benefit of including a consideration on the fact that a rich representation of space careers will contribute to addressing the UK skills gap. I would also suggest to ask professionals working on the development of new space facilities what they think of the career range proposed and if they have suggestions on other future career paths in the UK that the authors may not have already considered or included.

We thank the reviewer for these suggestions. We believe that points on the current development of the space sector in the UK, and thus the need for careers resources in this area for the target age group, could be added to the paper while still respecting the word limit. As to contact with professionals, we noted already in the paper that we discussed space sector roles with many industrial contacts in the development of the list presented, which included e.g. Spaceport Cornwall.

Another point that validates the need for good space career resources, is that often the existing ones consist of simply signposting to other organisations, instead of actually describing space careers in an age appropriate way for school pupils below A-level (see eg this resource from UKSA https://ukspace.org/wp-
content/uploads/2019/06/Careers-in-Space_UKSA.pdf). A clearer explanation of what for the authors constitutes a "space careers resource" would help the reader appreciate this more.

In our research, careers resources are those which aim to raise awareness and describe a range of roles across the space sector, a definition we will add to the paper. We found several cases like the reviewer raises, including that specific example, which simply point to the resources analysed in this paper, which we can raise.

Though not freely available, S Kanani's book "How to be an Astronaut and Other Space Jobs" is a resource that has the target audience identified by this study (young people that are not yet about to decide their future career); it would be interesting to assess it according to the same criteria the authors used with the caveat that it is a book to be purchased, or made available by school libraries/local libraries. Given the current paucity of space career resources with diverse role models, Kanani's book would be appropriate to mention in this paper.

We thank the reviewer for this suggestion. While relevant to the broader topics touched upon by the paper, since as the reviewer notes this is a book to be purchased and not a freely available and dedicated space careers resource in the traditional sense, we feel it should not be included. Issues surrounding role models within the space sector is a far larger topic than can be contained within the word limit, therefore, we feel these aspects would better be discussed in the future work motivated by this paper rather than within this short paper itself.

My last comment concerns one of the careers that would constitute a more representative "career pack". The authors pick "Communications" as one of their 36 categories, but as someone with a background in the space sector, I am not entirely sure of what the word aims to describe - is it telecommunications engineering (eg ground segment to satellite communications, but this is maybe covered by the Ground Software role?) or a marketing oriented role? I suggest amending the name would clarify this ambiguity to a reader that hasn't seen the full set of career cards and provide an accurate representation of the language used in the sector.

We apologise for the confusion. This role was meant to cover the various internal and external communications roles, such as writing statements and press releases, working with the media, or liaising between different departments. We will change it to Communications Executive, which hopefully will make the distinction between telecommunications as the reviewer raises. We will also include all the roles in the figure as a word cloud, coloured by our classifications, which should also help readers discern further meaning of the intended roles without having to see the full (in development) resource.