

Written evidence submitted by Professor Nicolas Thomas, Space and Research and Planetary Sciences, Physics Institute, Universität Bern (AST0046)

Dear Mr. Clark, dear Members of the Select Committee,

Once again, many thanks for giving me the opportunity to discuss with the Select Committee.

Following the evidence provided orally on Wednesday 8th May, I thought I would like to add a couple of points that we did not have time to go into in depth.

1. Mr. Cremonese was asked about long-term perspectives for post-docs and he responded that the time limits for post-doctoral contracts in Italy were being removed. This whole issue is extremely complex. In my case I have educated more than 20 PhD students. Given that the number of professorial positions is quite static over time, statistically only 1 of these students can expect to have full professorial position and perhaps only 4-5 can expect to have a stable position in academia. I do not believe that this is particularly unusual in the astronomy/planetary sciences sector. Consequently, a large fraction of graduates need to be looking at careers outside academia. Within our National Center for Competence in Research (NCCR), PlanetS, we encourage “externships” which allows PhD students and early post-docs to take 3 months in industry on a project of joint interest paid for by the NCCR. The uptake of this opportunity is not large but is significant and we have had students coming to us after saying that this had shown them that academia was not really what they wanted! Stringing post-docs along with no prospect of a more stable position is not, in my view, a good approach unless one turns to the US system where scientists can pay for their own salaries through soft money positions. Having seen colleagues and friends operating in this system, I would concur with Dr. Dempsey that it is quite brutal. As Prof. Kramer noted, one must be honest with graduating students about their prospects and clarify the career path both at national level and towards the individual.
2. The subject of diversity and gender balance in STEM subjects is very important as was highlighted in the session. I wanted to remark that at our recent general assembly of the NCCR PlanetS, we invited Paul Walton of the University of York to give a presentation about gender related issues, bias, and in particular attaining gender balance. He has a lot of expertise in the field, is an excellent speaker, and I am sure could be consulted. I would note one thing that nobody discussed in the session and that shocked me from Prof. Walton’s presentation. Namely that harassment and bullying is a larger issue in academia than is widely assumed. I personally find it very strange that one has to write down codes of conduct to force people to be civil to each other but it seems to be the case. Do please note that this is probably not a gender issue – I am aware myself of at least one case where the bully was female.
3. The discussions about contributions to large (and expensive) infrastructures clearly showed that the committee is concerned about financial cost to the public purse – and rightly so. The scientific community has a duty to justify such expenditure as was clearly brought out by Dr. Dempsey. The challenge that we face is that the preliminary exploration of our planetary system and the universe beyond has reached a point where the “low-hanging fruit” have been picked. It is now challenging to find “niches” which allow a strong scientific step forward at a low cost. The Swiss scientists in astronomy strongly support the development of the larger infrastructures (such as the Extremely Large Telescope and the European Space Agency’s programmes) as a means of keeping themselves at the forefront of astronomy and planetary science. They show this support through roadmaps for astronomy and for space science that are updated on typically 4 year

timescales. These roadmaps are challenging to organize and to write – nobody wants to see their science excluded from such documents for fear that it will be used to state their science is not important – but inclusiveness is needed and allows well informed decision making if/when funds are insufficient to meet the requests.

4. Finally, as a delegate to the European Space Agency's Science Programme Committee for several years, and through my interactions with my colleagues from the UK over many more years, I have had the pleasure of interacting with civil servants from the UK Space Agency. They have always struck me as being very professional and strongly supportive of science. They have also supported UK interests in a completely appropriate way.

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