Addendum to SAG Charter Requests of the APAC

Both the PhysPAG and the COPAG are submitting SAG Charters for approval from the APAC at their April 2018 meeting. There has been some push-back that the charters are too similar and that we might want to think about merging the efforts.

The three PAG leaderships had a telecon to discuss the nature of the proposed SAGs in late January. The outcome of that discussion was that both communities had independently ended up here wanting to do these studies, motivated by different things, and we're loathed to cut one off in favor of the other. Moreover, the charters lay out a different set of foci for the COPAG SAG compared to the PhysPAG SAG and as such we felt that they different enough to proceed.

The COPAG SAG is focused on how to maintain access across the E&M spectrum to ensure that we have the capabilities necessary for continuing progress in COR and other areas over the next 10-20 years. The focus here is on multi-wavelength science, adaptability to new discoveries, and how many astrophysical phenomena - such as those studied in the COR areas of star & planet formation and galaxy formation & evolution - require observations spanning the E&M spectrum to be understood. We must be careful not to advocate for specific missions, but to follow on from what Paul Hertz discussed with the COPAG EC at our annual luncheon at the AAS meeting, he would value an assessment of several options or strategies of combinations of missions and mission classes that he could carry forward in his war chest as he tries to tackle the recommendations of the 2020 Decadal in 2021.

The PhysPAG SAG is about opening up new windows by identifying the kinds of science that can be done through combined E&M, GW and particle observations. This is a very specific type of science focusing on compact objects, supernovae and perhaps dark matter. There is some overlap between the SAGs in that NASA will provide the E&M observatories for such multi-messenger astronomy, but the core scientific motivation is very different. For this reason, we believe the PAGs should coordinate, but that they should also remain separate.

When one looks at these two approaches, it is easy to see where there could appear to be too many parallels, but the approaches are fundamentally different. The COPAG SAG seeks to assess the impact of mission loss to the COR program and to lay out possible combinations of mission types that could be used to fill the holes. The PhysPAG SAG seeks to assess how missions currently under study can be brought to bear to tackle science problems and to lay out what those problems might be. The COPAG SAG seeks to start with a clean slate and identify what loss there will be and identify a set of solutions to mitigate the impact – the PhysPAG SAG starts with the suite of missions currently under study (and planned ground-based assets) to determine how in concert they will be able to tackle science questions. The PhysPAG SAG makes no effort to study how the loss of existing facilities will impact the capabilities of the community. Similarly the COPAG SAG makes no effort to reach across the full range of passbands to assess the kinds of science that would benefit from such work – it is instead focused on the current bands covered by existing facilities.