

Conclusions (and discussion?)

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Just look at bare numbers...



- We are a large collaboration in LiteBIRD: about 80 participants out of 375 ($> 20\%$):
 - We are the largest national community after Japan.
 - Slightly less than 60 people registered for this workshop (somewhat less present here today).
 - And we are continuing to ask for new members. So far so good, but we should internally review our commitments and effective FTE vs. what we promised, for the sake of credibility.

A positive outlook



- The material we have seen shows that we permeate all of LiteBIRD's activities, often with leadership roles
 - "Science"/Theory constraints: all post PTEP papers see Italian participation, all except two related groups see at least one IT convener
 - We have contributed the backbone of the current simulation activity and we are very active in the development of the prototype analysis pipeline. We have top-level responsibility in the foreground JSG and in the Data Management Group
 - In the hardware task sharing we have high level responsibility over the MHFT PMUs and the SCU, and sub-system calibration. We have key responsibilities in the MHFT Project Office (Including the MHFT instrument scientist)
 - Several of us are IGB members, and we might get the IGB chair. We chair the European Steering Committee.
 - **All of this is the result of the long road Nicola describe yesterday (from 2017 for LiteBIRD, from 2016 for COSMOS) and the support of ASI (mostly) and INFN.**

However...



- Some criticalities I have noticed, during this workshop, that may be arguments for discussion:
 - What comes *after* the post PTEP papers? Will they evolve in something else? There are no Science Working Group in LiteBIRD (an intended omission). The situation of the paper database is liquid (to be gentle) to chaotic (less gentle). The IPB assumes responsibilities that should not belong to a publication board (to me, a flaw, in the interim governance)
 - As we heard, yesterday, the simulation/analysis activity suffers from the lack of an SGS model (no final report from the lengthy SGS task force activity...). No formal engagement, no clear command and control chain to validate the decision.
 - We have no *primary* responsibility in anything, i.e. we do not talk to JAXA. The MHFT PO (lead by CNES) is acting as a governance structure, which means that CNES takes decisions. The collaboration has no direct role in talking to the MHFT PO. Formally, responsibility on the European task sharing is still on the European SC, but this can hardly be enforced (de facto)
 - The LiteBIRD governance needs to evolve, in view of phase B. But the discussions are lagging behind, basically frozen at six months ago.

The LiteBIRD-CMBS4 business



- As Paolo's and Carlo's talk have shown clearly, LiteBIRD is at the end of a long, winding road ahead, and building up the synergy with suborbital experiments (in particular S4) is a critical issue.
- The required accuracy level for LiteBIRD calibration and analysis is extremely high and will require a huge amount of work to be successful.
- Seeing LiteBIRD (and the road that leads to it) as a standalone object is not the optimal way. I do not want to reinforce the idea of the "powerful duo" since other people have already done so, but there is a strong motivation to see future activities for LiteBIRD thinking of its relationship relationship with S4.
- This obviously goes through community-level involvement into suborbital experiments. S4, and even what comes before S4. We should decide at what level we want to see LiteBIRD as part of a diversified involvement.

Last but not least: next appointments



- Consider going to the hands-on meeting in Tokyo, June 26 to July 7. The new, DMG overseen, working group on map-making, power spectrum and likelihood will likely meet there.
- We will be hosting the next LiteBIRD face-to-face meeting in Elba, from September 28 to October 1, 2023 (after the one in ASI in January 2018)
- At some point, probably in October, we will be organized a workshop for the end of the COSMOS project. This is broader than LiteBIRD, of course, but it is related
- Shall we have another LiteBIRD-Italia meeting? When? Does the end of the year look reasonable (perhaps in clash with the MHFT phase-A2 exit review)