

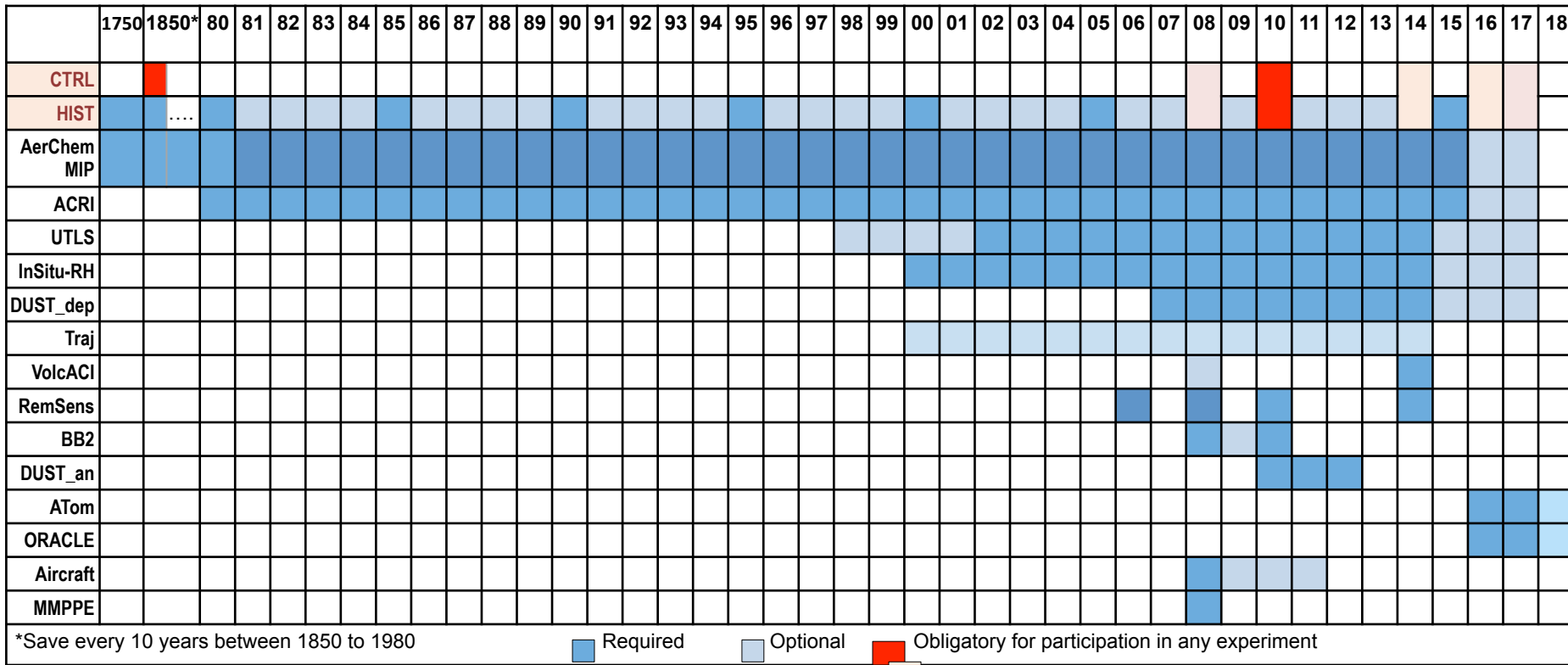
Experiments intro

Michael Schulz,
Norwegian Meteorological Institute
17th AeroCom workshop
College Park, 15-19 October 2018



Coordination of AeroCom model studies/analysis:

Currently proposed AeroCom model studies at-a-glance



*Save every 10 years between 1850 to 1980

Dark Blue Required Light Blue Optional Red Obligatory for participation in any experiment



CTRL – controlled experiment (Michael) - HIST – historic (Gunnar), ACRI, UTLS (Mian), AerChemMIP (Michael), VolcACI – volcanic ACI (Florent), RemSens (Nick) BB2 – BB phase 2 (Maria/Mariya), InSitu-RH – in site hygroscopicity experiment (Betsy/Paul Z), DUST_an – anthropogenic dust (Paul G), DUST_dep – dust deposition (Hongbin), ATom (Huisheng), ORACLE (Sarah D), Aircraft (Duncan), MMPPE – perturbation (Lindsay), TRAJ – trajectory (David Patridge)

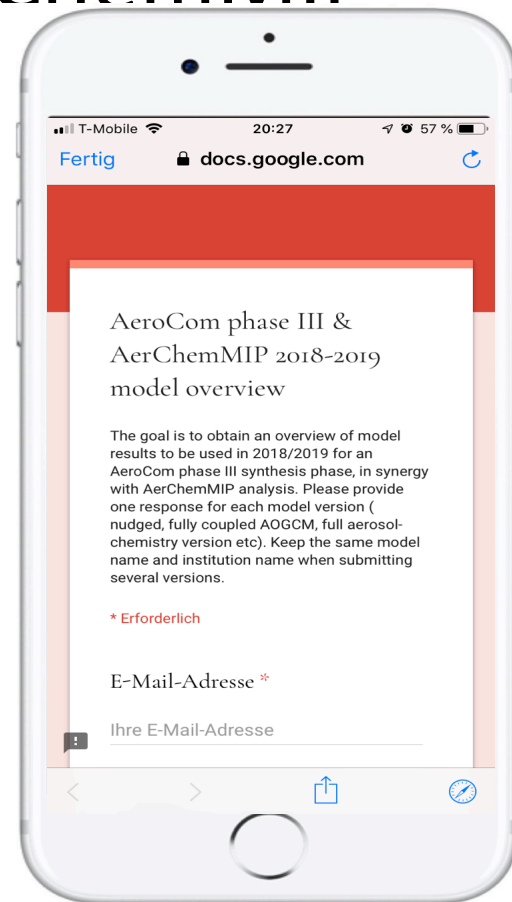
Questionnaire send out *yesterday* on model contributions to AeroCom/AerChemMIP

AeroCom phase III & AerChemMIP
2018-2019 model overview

4 sections to answer:

- ◆ Model characterisation
- ◆ AeroCom control, historical and DECK
- ◆ AeroCom phase III experiments
- ◆ ERF, forcing and feedback experiments

**Please respond today for your model,
latest wednesday afternoon,
edit later for perfection**



Models for which a response has been recorded- THANKS

MONDAY 21:17 EASTERN SUMMER TIME

GISS

MIROC-SPRINTARS

OsloCTM3

MAC

ECHAM-HAM

ECHAM6-SALSA

GFDL-AM4

UKESM

CAM5.3-Oslo

NorESM2

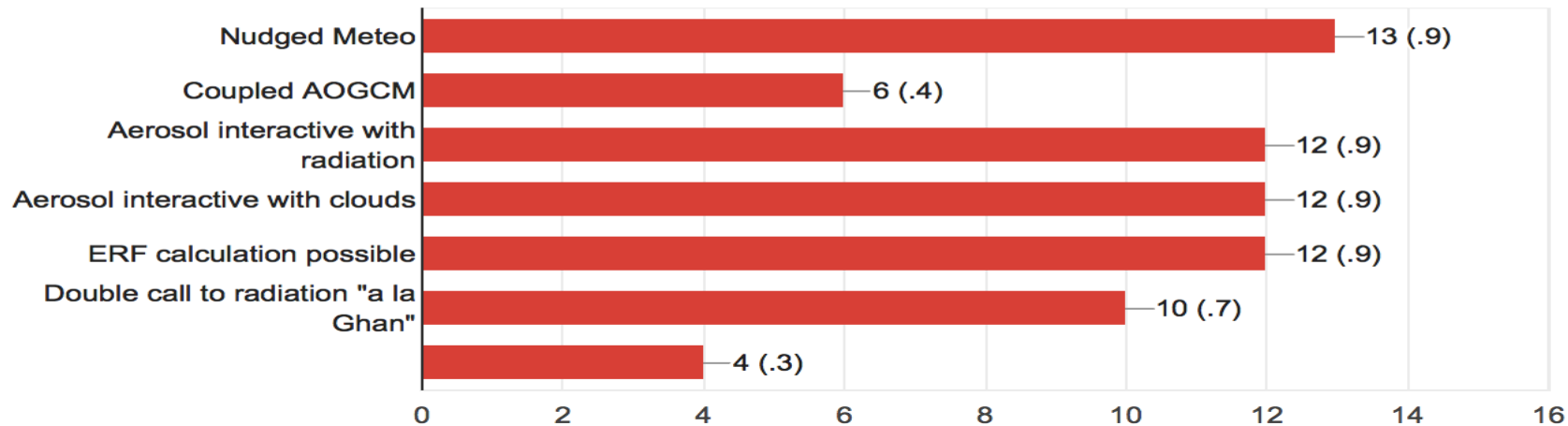
EC-Earth3-AerChem

GEOS-Chem-APM



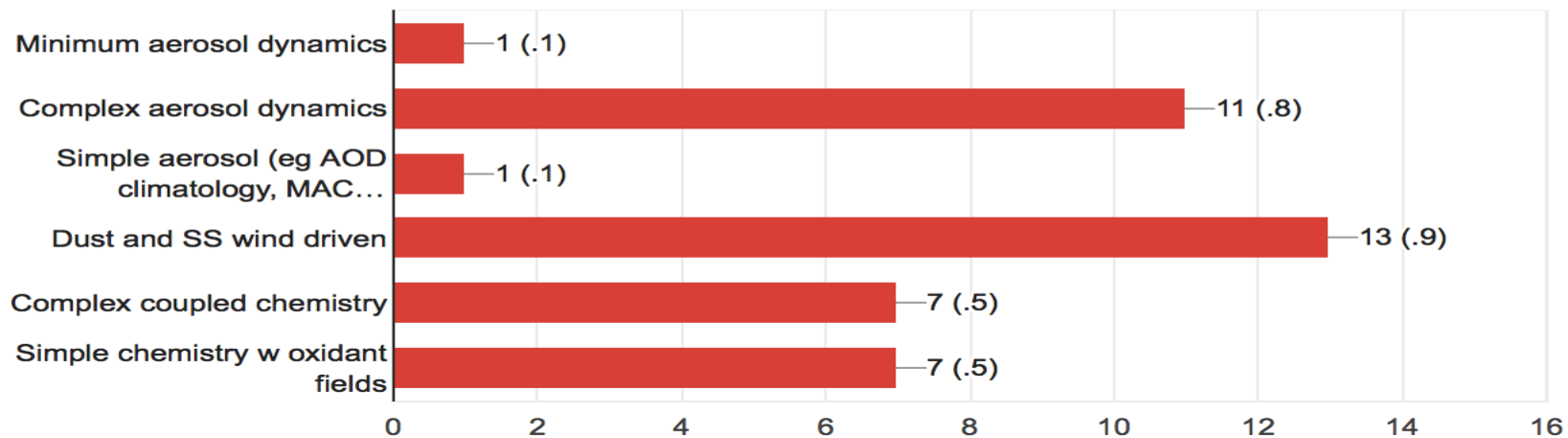
Complexity of meteorology and radiation

14 responses



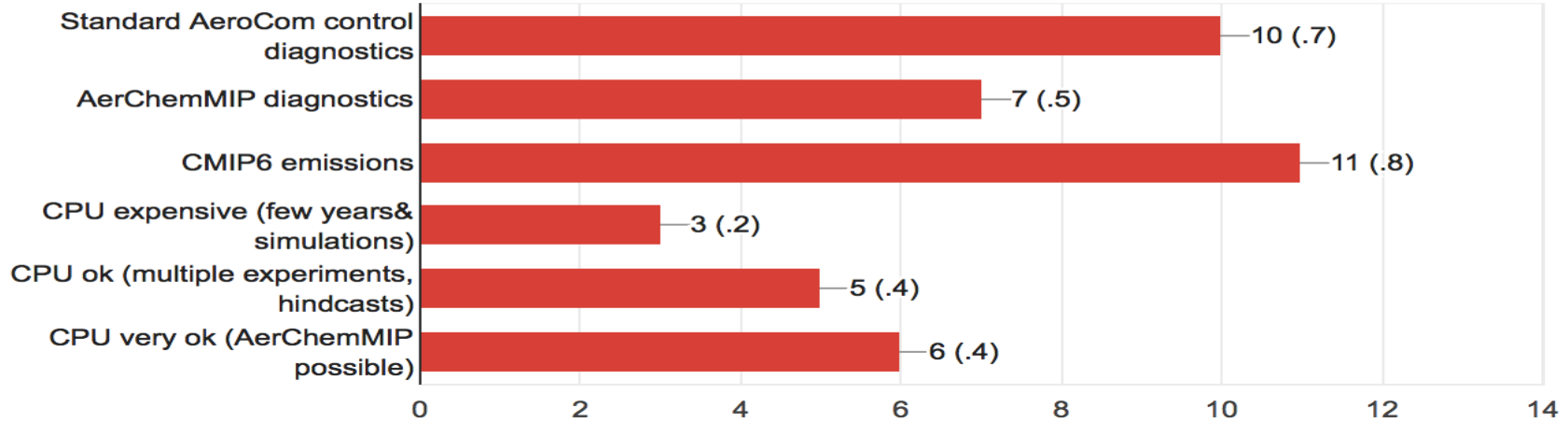
Complexity of aerosol

14 responses



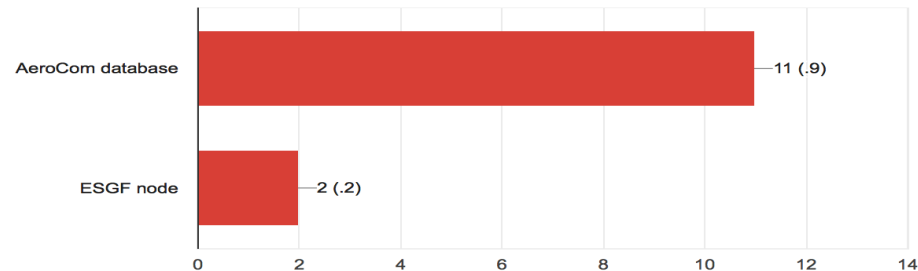
Complexity of setup

14 responses

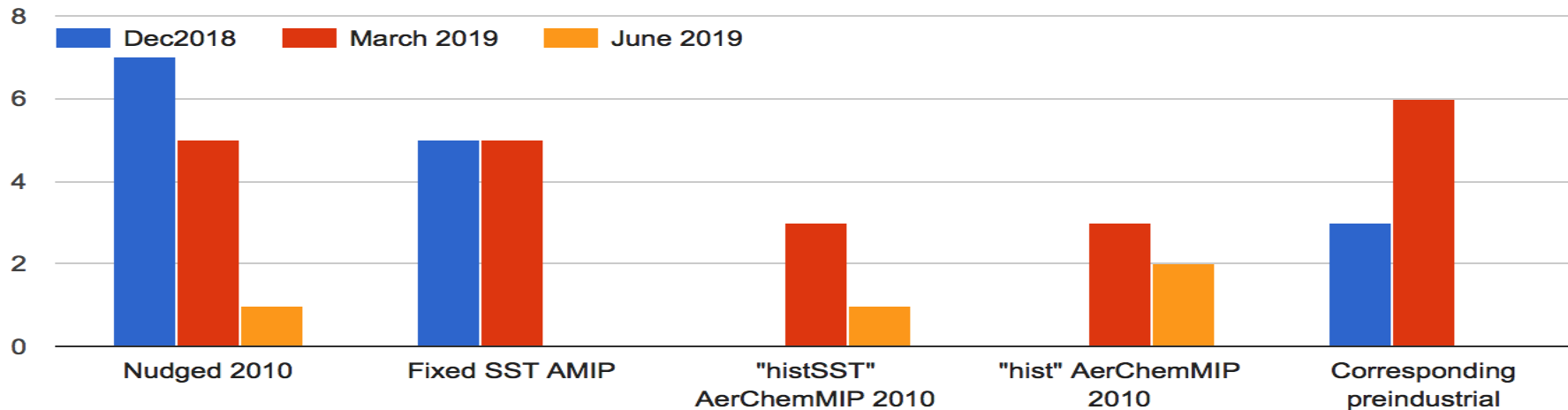


Where do you submit the AeroCom control simulation output?

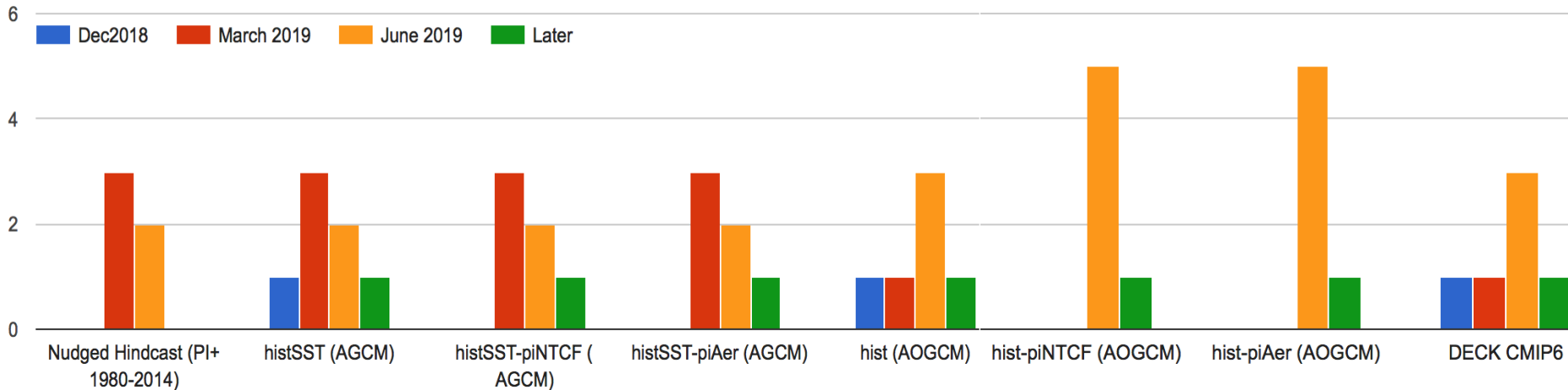
12 responses



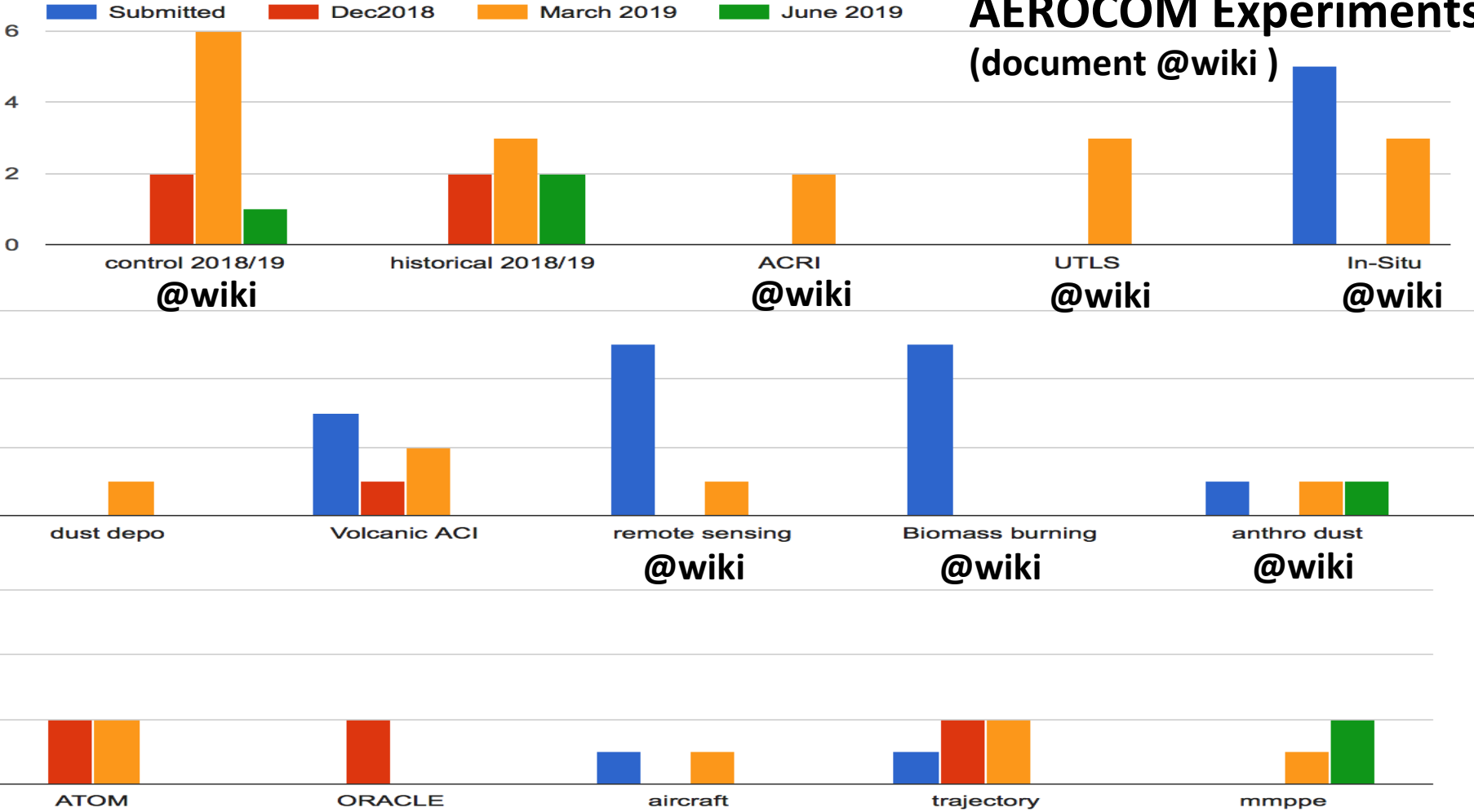
What is your AeroCom control simulation 2018/19 – When is it available



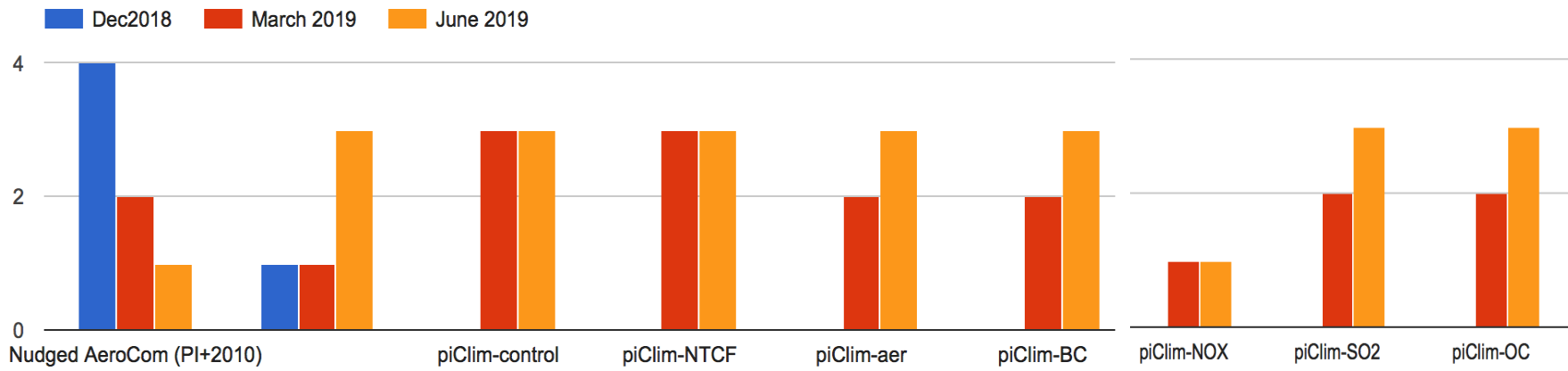
Which historical and DECK simulations -- when available?



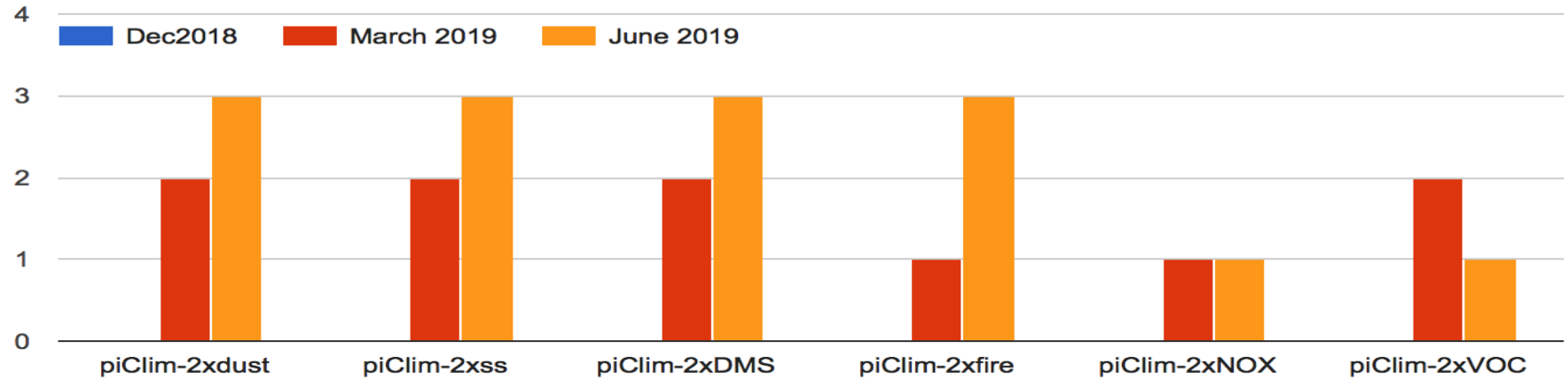
AEROCOM Experiments (document @wiki)



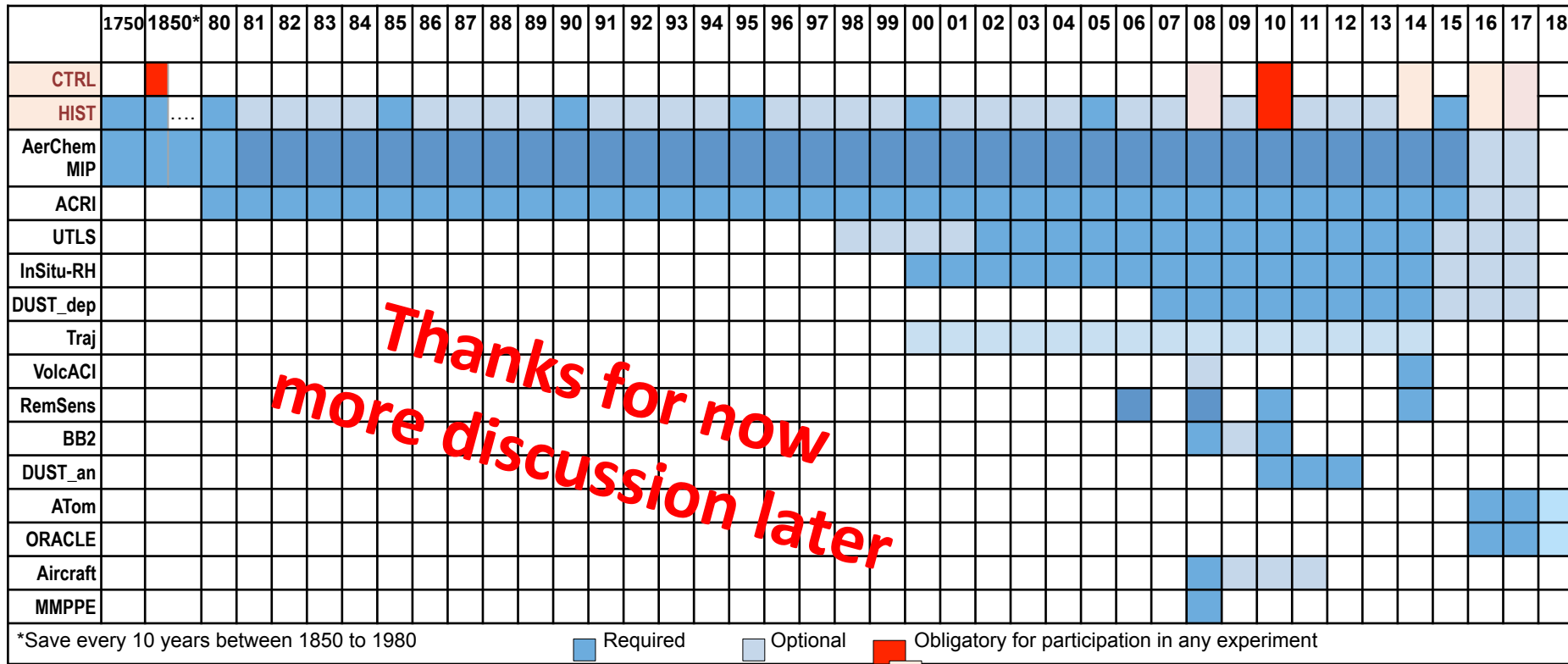
ERF and forcing simulations -- when available



Feedback simulations -- when available



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Thanks for now
more discussion later

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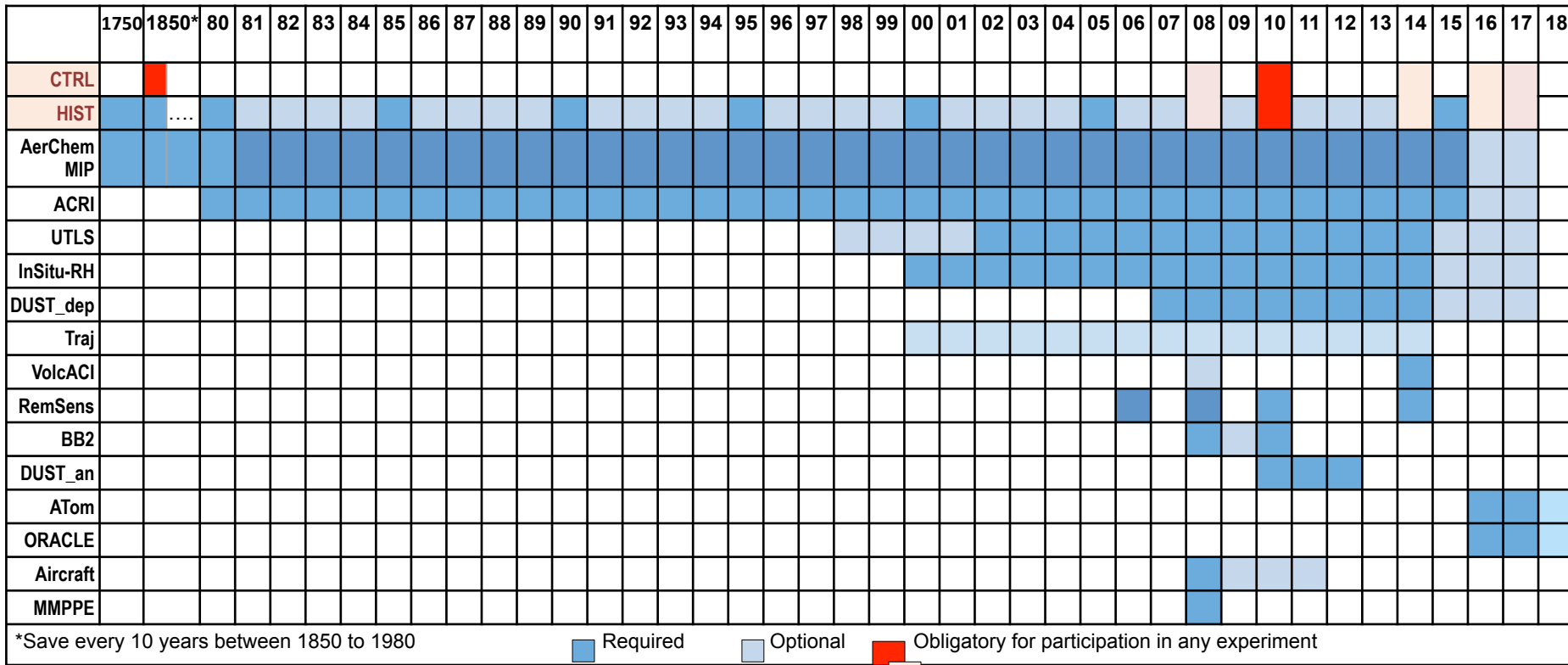
NatAerMIP in CRESCENDO

University of Leeds, Ken Carslaw

1. Natural aerosols control the “baseline” pre-industrial aerosol state
 - Evaluate the [state of natural aerosols](#) as some indication of the PI state
 2. Natural aerosols will change in a future climate
 - Evaluate [variability and trends](#) as a measure of “sensitivity” and maybe for emergent constraints of ESM-coupled models
- Produce a community **natural aerosol evaluation dataset** → metrics in ESMValTool
 - Understand **implications for anthropogenic ERF** through natural aerosol bias-adjusted models
 - Possibly a **reference PI aerosol climatology**



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Model Documentation

- expand ad-hoc questionnaire?
- have a standardized model documentation? => tool?
- references from researchgate? web of science?
- code repository?
- Which duties for modellers participating in any AeroCom experiment?
- User requests on model info – who answers?
- Model documentation coordinator ? volunteer?



AeroCom experiment coordination

- How to coordinate plans ? wiki incomplete, emails hard to follow, diagnostics not coordinated well, schedule variable
 - Living documentation – github.io ? instead of wiki ?
 - Questionary to all experiment organisers
 - Experiment coordinator(s)? a few volunteer(s)?
representing Aircraft, Components, Forcing, AerChemMIP link,
 - Diagnostic coordination via database, w associated requested file list checker?
 - 3 monthly all experiment telecons ? volunteer?
 - Requirements for new experiments ?
- Which experiments are important ?
 - Control , plus ??
 - Any great ideas ?
 - Shall we insist/work out overlap in diagnostics

