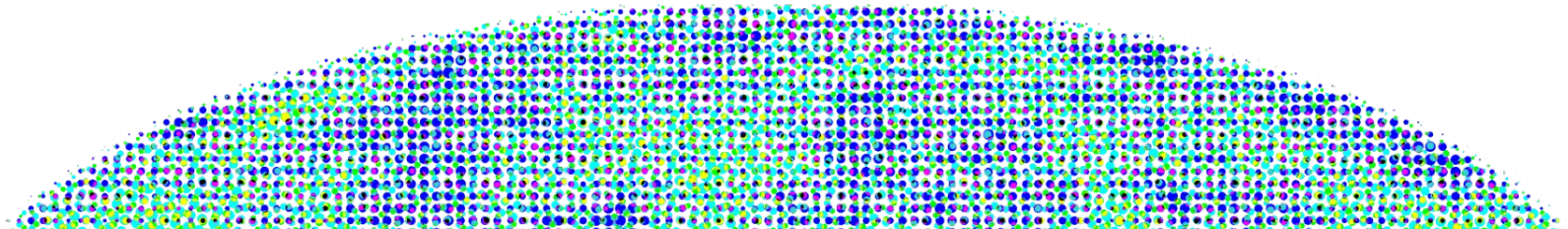


Welcome to Plenary Session: *Overview of Chile-only instrument and r-forecasting*

Session Overview

John Carlstrom (he/him)



Outline



- Goal of Session
- Update from AoA Study for Alt 3 from July revision
- Overview of Session agenda
- Overview of plan for tomorrow's parallel sessions

The goal of this plenary session

- The goal of this plenary session is to provide the collaboration with an overview of the path for developing the instrumentation configuration for the Chile-only configuration and to set the stage for the tomorrow's breakout sessions.
- The talks should provide sufficient background to motivate the options to be considered and they should also help identify the topics that should be addressed in the breakout sessions.
- The speakers have been asked to allocated 25% of their time for questions, but detailed questions and discussions will have to be deferred until tomorrow.

[Google doc](#) for session notes / questions / comments / action items

Update of AoA Study for Alt 3 from July revision

- We have revisited the Analysis of Alternative (AoA) configurations using “maximal-mapping-speed” SAT designs (more on those designs from John Ruhl).
- For the AoA Chile-only Alternative (Alt 3) this provides a starting point – rough number of SATs and LATs – for developing a new “optimize” Chile-only configuration.

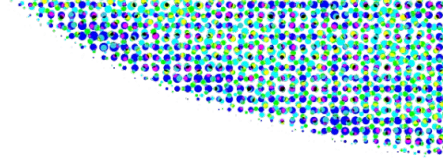
Sanity Check Using Max-Speed SATs

Initial results from Colin Bischoff using Parametric Likelihood forecasts and Medium Complexity foreground model

Chile only Configuration	Old Baseline SAT Optics w/HWP		New Max Speed SATs w/HWP	
	$\sigma(r)$ at 10 years	years to $\sigma(r) = 5e-4$	$\sigma(r)$ at 10 years	years to $\sigma(r) = 5e-4$
9 SAT, 2+1 LAT	8.38e-4	22.3 yrs	5.79e-4	12.8
9 SAT, 2+2 LAT	7.51e-4	18.5 yrs	5.03e-4	10.1
9 SAT, 2+3 LAT	7.06e-4	16.7 yrs	4.63e-4	8.9

- These results suggests that the raw sensitivity of 9 Max-Speed SATs is in the ball park but requires additional LAT delensing. Note that only 45 degree solar avoidance for the SATs was used.
- This study does not address concerns about systematics or other risks.

Agenda for this Plenary



Session presentations:

- | | | |
|--|-----------------|--------|
| ● SAT & LAT Designs and Considerations | John Ruhl | 15 min |
| ● Efficacy of rotating 1/2 wave plates in Chile | Adrian Lee | 10 min |
| ● Efficacy of Variable-delay Polarization Modulator in Chile | Yunyang Li | 10 min |
| ● Temperature and Polarization Anisotropy of the Atmosphere | Anna Coerver | 15 min |
| ● Foregrounds models | Susan Clark | 10 min |
| ● Sky area selection and scan strategy | Sara Simon | 10 min |
| ● Delensing and map based validation | Raphael Flauger | 10 min |
| ● Forecasting and map based validation | Colin Bischoff | 15 min |

Use Plenary Session notes to records questions / comments / action items

Tomorrow's Chile Configuration Breakout Sessions

The goal of the breakout sessions is to quickly bring people up to speed (hopefully kicked off by today's Plenary session) and then identify and discuss action items and studies to pursue. It is important to give skeptics the opportunity to ask their questions, the advocates time to respond, and for all to discuss. This will help us plan how to move things forward.

- **Breakout 1: How to improve & validate r-forecasts**

Conveners: Jacques Delabrouille & Clem Pryke

[Google folder](#) for session materials

[Google doc](#) for session notes / questions / comments / action items

- **Breakout 2: Chile SAT Design and Considerations**

Conveners: John Kovac & Jeff McMahon

[Google folder](#) for session materials

[Google doc](#) for session notes / questions / comments / action items

Questions?
