

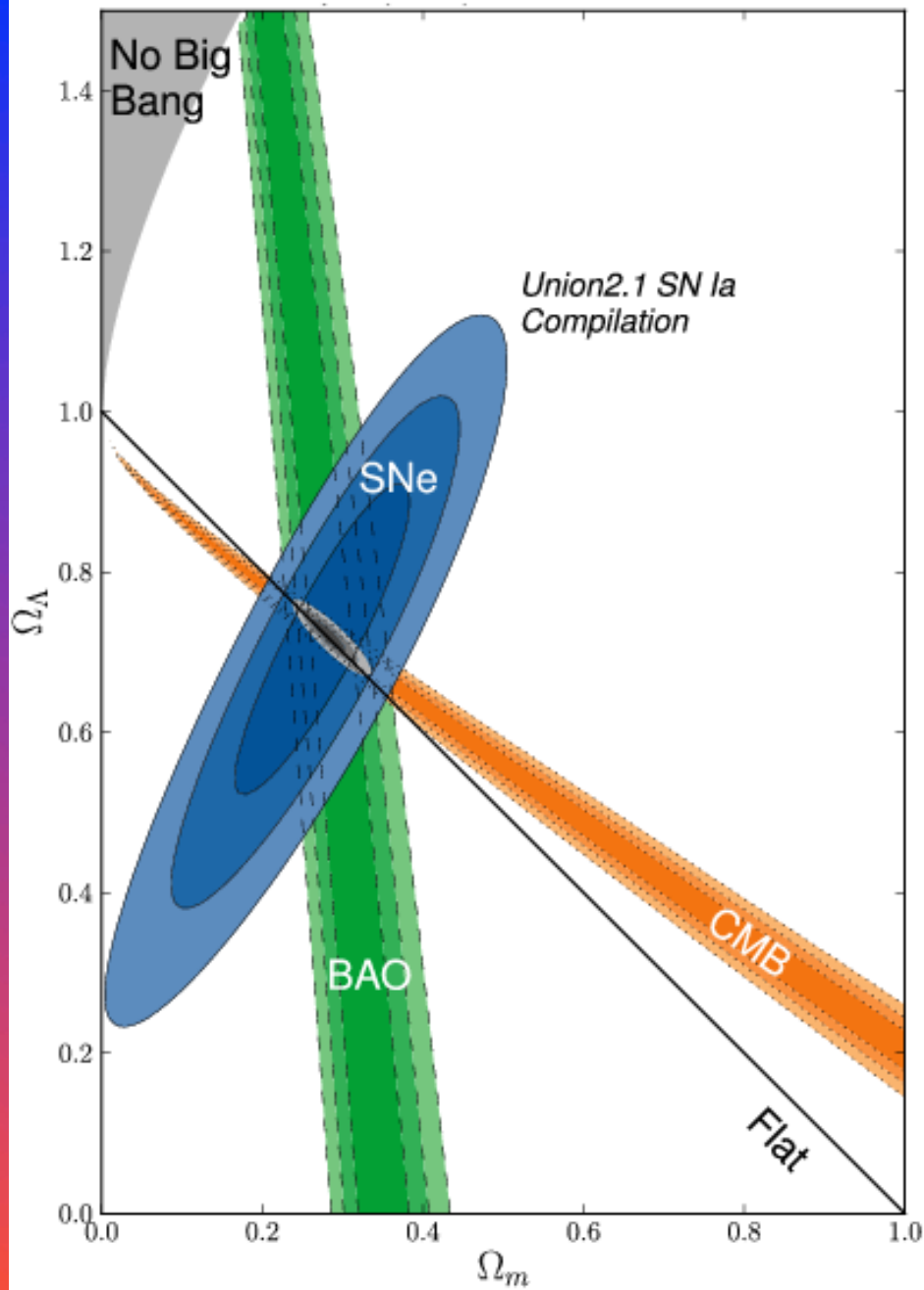


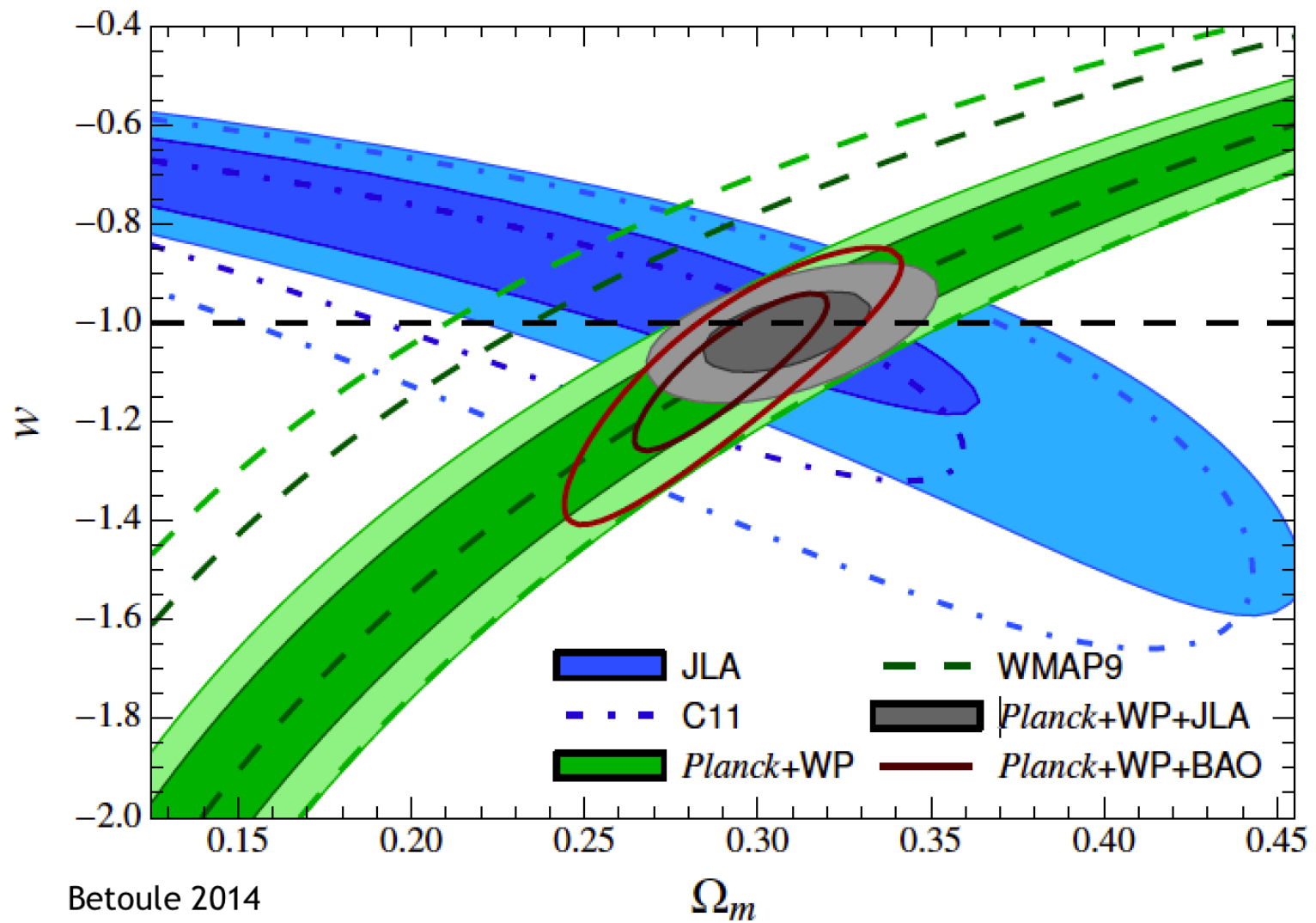
EUCLID 2015

Combinaison de sondes

Alain Blanchard, IRAP

Supernova Cosmology Project





Motivation:

- Dégénérescences...



Motivation:

- ❑ Dégénérescences...

Danger :

- ❑ systématiques...

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- ❑ Dégénérescences...

Danger :

- ❑ systématiques...

Multiplier les sondes...

Grand surveys: ~100% du ciel

- ❑ Rôle des corrélations entre sondes
 - ❑ Négatif...
 - ❑ **Positif**: les corrélations peuvent permettre d'enlever des bruits statistiques et systématiques

46^{ème} ÉCOLE DE GIF

08-12 septembre 2014

Laboratoire APC Paris



Inscriptions jusqu'au

31 juillet 2014

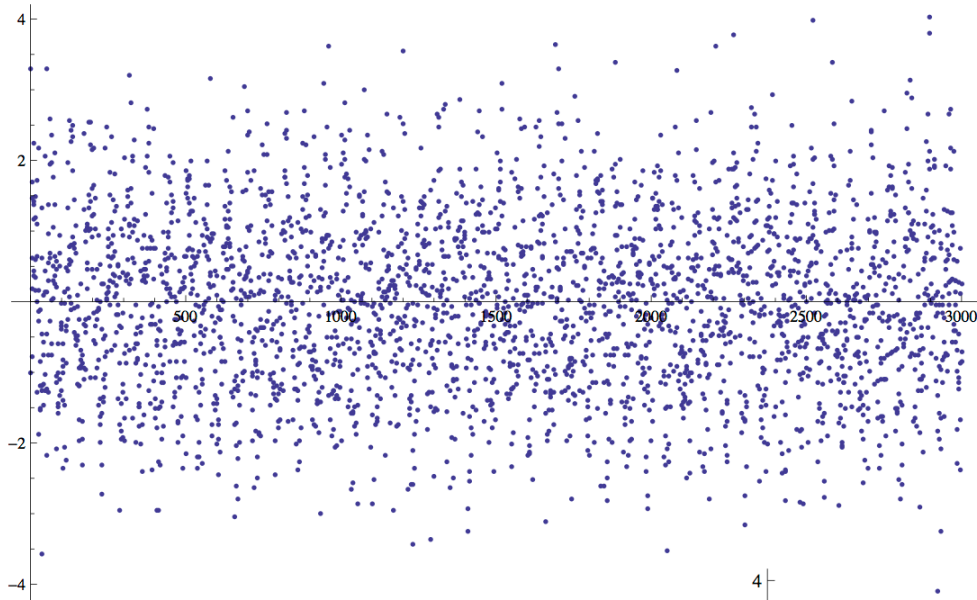
<http://gif2014.in2p3.fr>

LA COSMOLOGIE
APRÈS PLANCK

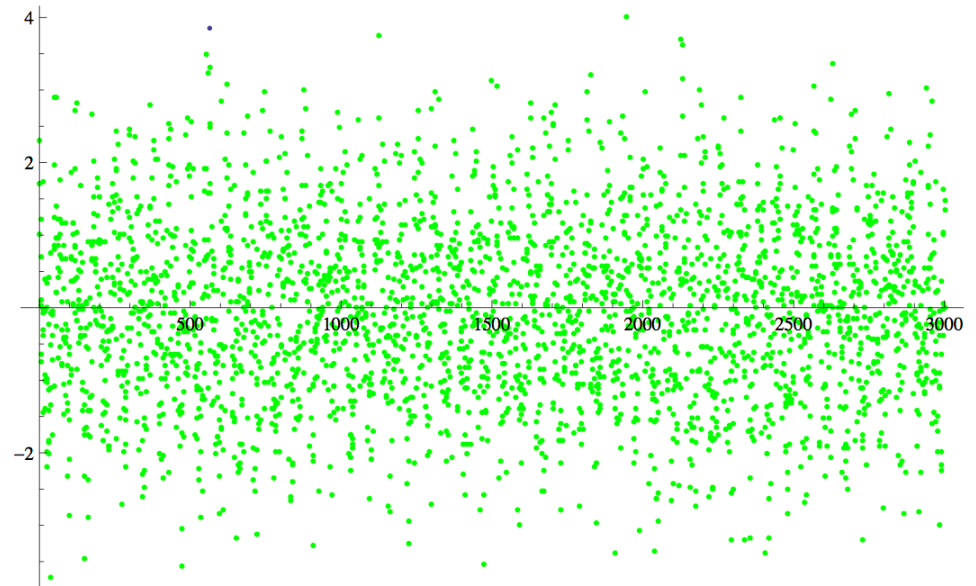
Corrélations de sondes cosmologiques

(Eric Aubourg)

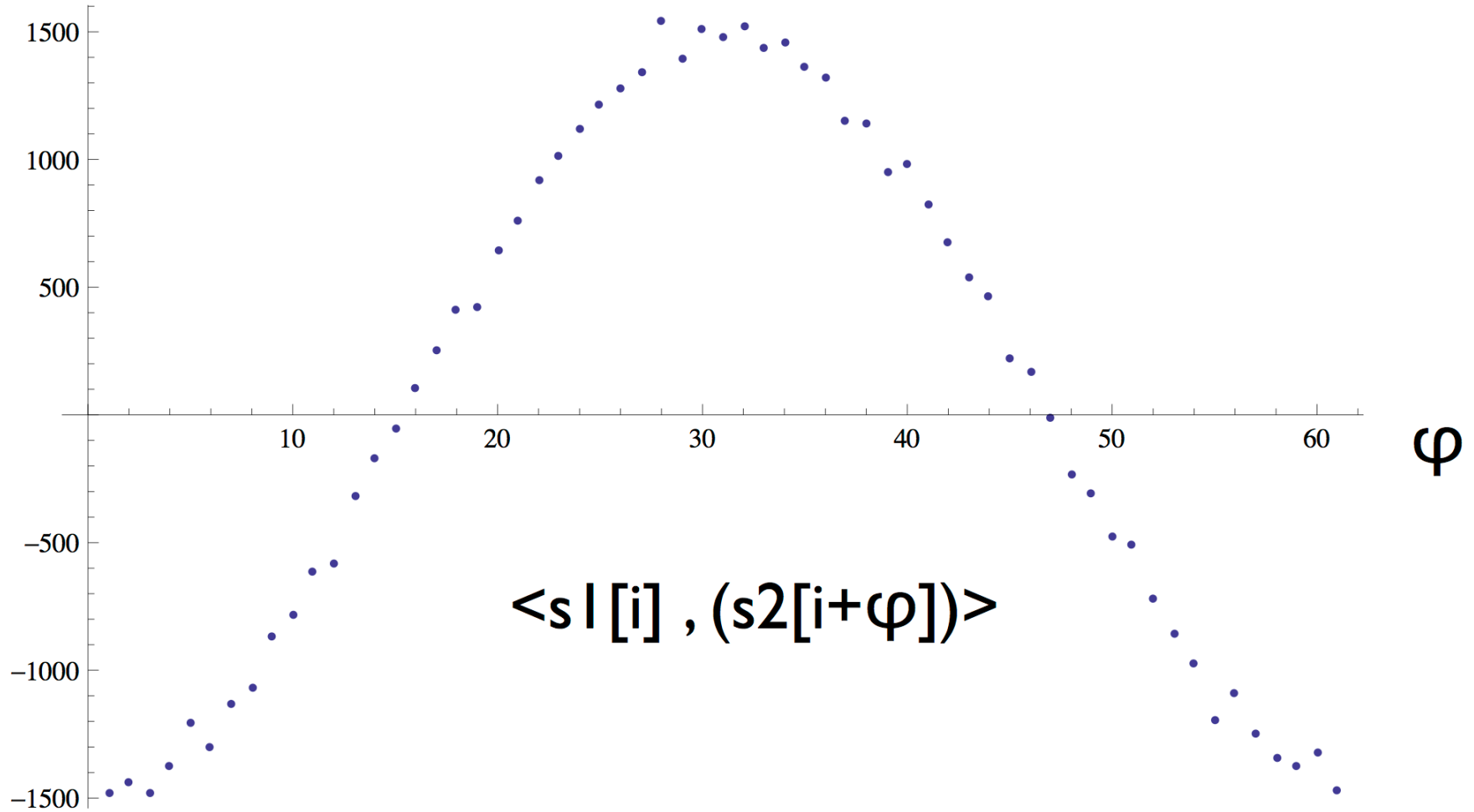
Corrélations

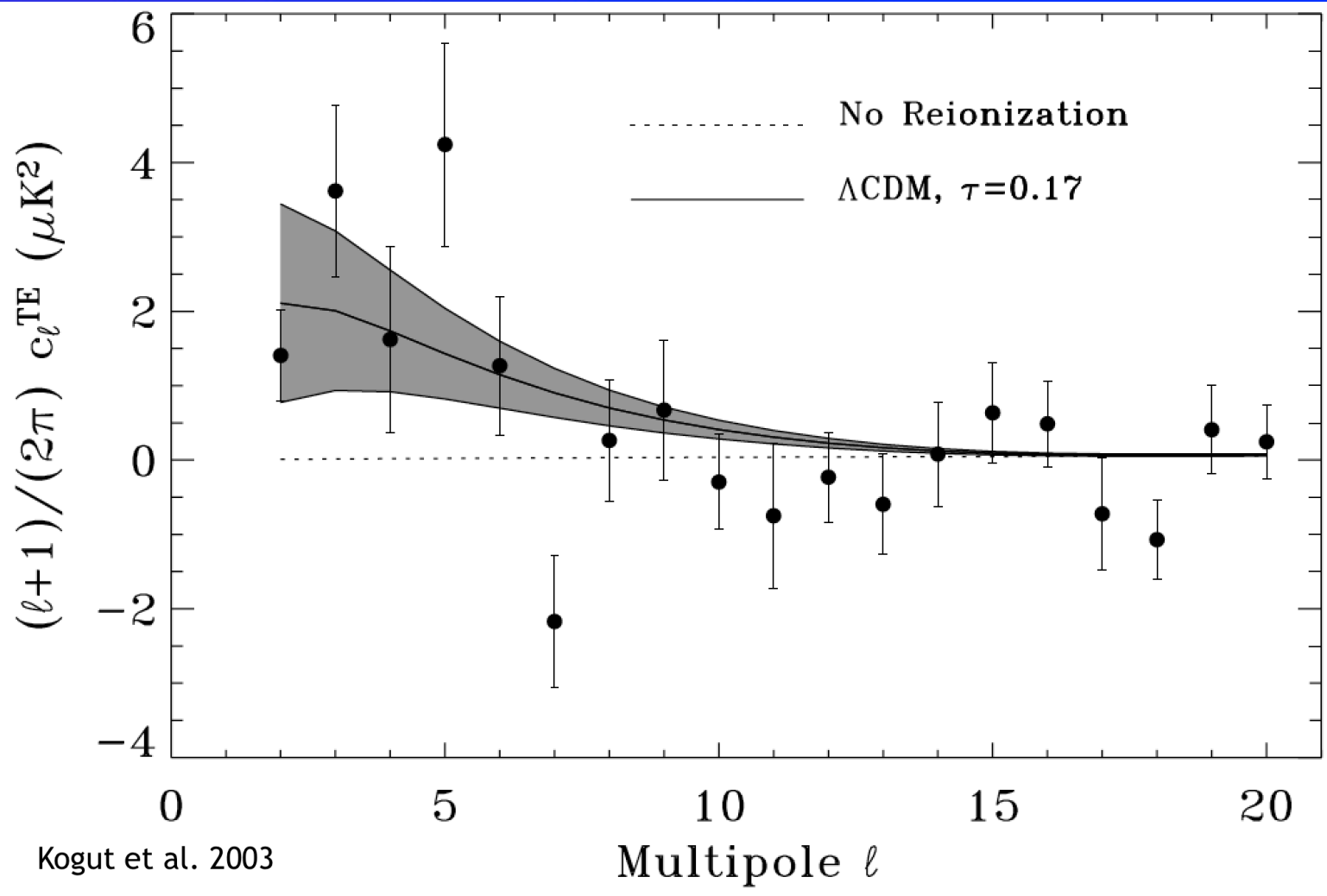


2 signaux (sin)
 $S/N = 1$
déphasés



Corrélations





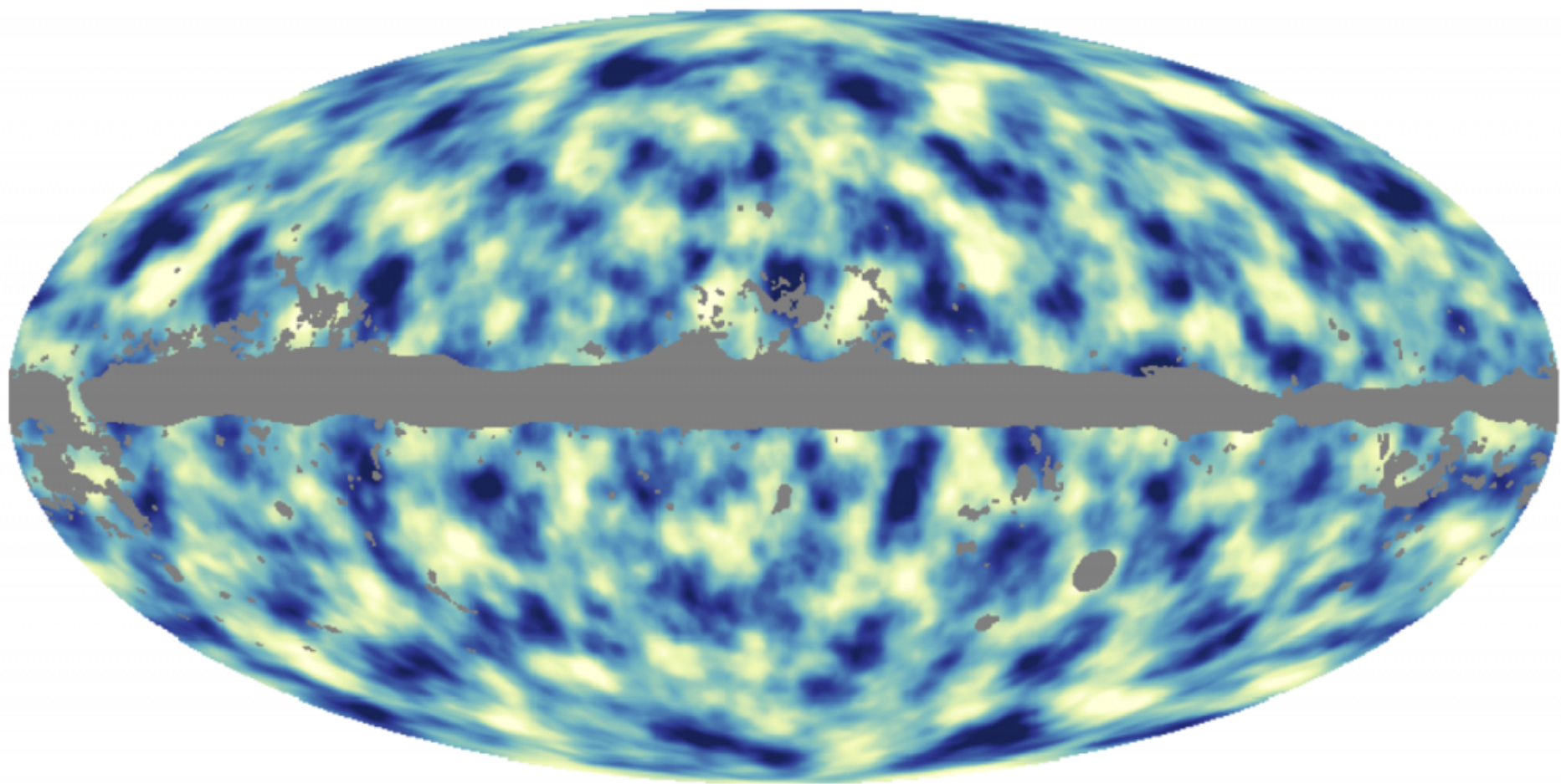
Kogut et al. 2003

Important pour les tests de physique fondamentale...

- m_ν
- f_{NL}
- DE au-delà de $w(z)$
- c_s
- GM...

Pour Euclid

- ❑ Identifier les sondes internes (1,2,3...), externes...
- ❑ Identifier les combinaisons les plus pertinentes LCDM/extensions
- ❑ Identifier ce qui peut être spécifique à certains modèles (SWG theory)



Pour Euclid

- ❑ Avoir une structuration de la communauté adaptée
- ❑ Mobiliser la communauté sur ces enjeux (identifier des axes?)
- ❑ Évaluer les ressources nécessaires

Biblio

<http://euclid.roe.ac.uk/projects/swg-th-wp8/wiki>

**The Whole is Greater than the Sum of the Parts:
Optimizing the Joint Science Return from LSST, Euclid and
WFIRST**

February 20, 2015

B. Jain,¹ D. Spergel,² R. Bean, A. Connolly, I. Dell'antonio, J. Frieman, E. Gawiser, N. Gehrels, L. Gladney, K. Heitmann, G. Helou, C. Hirata, S. Ho, Ž. Ivezić, M. Jarvis, S. Kahn, J. Kalirai, A. Kim, R. Lupton, R. Mandelbaum, P. Marshall, J. A. Newman, S. Perlmutter, M. Postman, J. Rhodes, M. A. Strauss, J. A. Tyson, L. Walkowicz, W. M. Wood-Vasey

arXiv:1501.0789

In the new year the activities of the **Inter Science Working Group** task force for forecasting will begin.

This will be split into *two* activities. The first is a short-term code comparison project for existing codes to be validated, but more importantly we will also *start to build a longer term Euclid likelihood pipeline*, that will be modular, extensible and validated. If you would like to join the team please **sign up** here:

<http://goo.gl/forms/czUSfWYP3W>

We will have a **2 day remote kick off meeting** in February (a 2 day telecon and hack session), to bring everyone up to speed, and to define groups within the IST to begin the coding. Please fill the doodle for this meeting here:

<http://doodle.com/poll/t3b6xi8zypkvf78s>

The IST, and code development will be done in a collaborative and transparent way using public online collaboration tools. The **redmine page** of the project is here: <http://euclid.roe.ac.uk/projects/isu>

Public GitHub Repository to build the code and to track effort: <https://github.com/tdk111/EuclidIST>

Euclid IST Slack Channel to communicate in the team. Before the meeting please use this slack channel to ask questions and post comments: <https://euclidist.slack.com/>

A **draft document** that aims to explain the concept and management of the IST is available on the git repository and can be found here. https://github.com/tdk111/EuclidIST/blob/master/docs/management/forecast_spec.pdf