

# AuxTel

What the frogs  
can do

**Quick AuxTEL update:  
(As far as I know)**

**Mount being commissioned**

**Spectrograph shall be shipped  
this summer**

**No Project funding nor plans  
for commissioning**



**Room for Frogs: plan and participate to AuxTEL commissioning**

**DESC/PCWG way: ANALYSIS LEAD**

# AuxTEL: an ecosystem in which to interact

## **StarDICE and CBP proof of concept:**

See M.Betoule talk

## **Caden and survey uniformity:**

LSS ...rcal very solid (DESC note)

## **Modtran/Library comparison**

Not a big difference but in O2

Quantify the difference

3 DESC notes

## **Slitless spectra extraction and atmosphere parameter**

### **Measurements:**

See J.Neveu talk

IN2P3/Project PhD

## **Holograms characterization**

Technology maturing

Proof of Concept afoot

From last CALIBRATION-PCWG workshop

# AuxTel bonding effect I: detector characterization

**SWAG/PCWG/Project working together**

**Data taking/sharing is happening:**

Full LSST-operation code still in dev

Changing the detector still in discussion

**Working plan:**

Project sets the timeline

PTC/CTE measurements being measured

SWAG 4<sup>th</sup> dan

**Room for Frogs: learn to look at the data with DM  
And commissioning dataset**



**TEAMWORK**

It gets shit done.

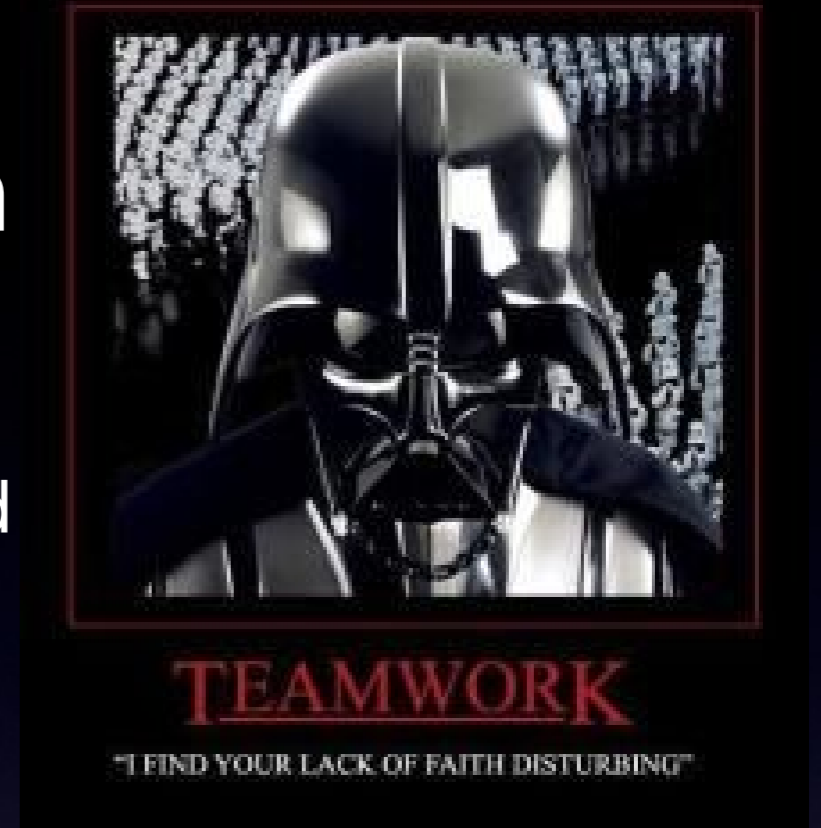
motifake.com



# AuxTel bonding effect II: Spectrograph characterization

## **Forward modeling approach**

General agreement on the extraction method  
DESC/Project interface sharing for code dev.  
First datasets have been taken



## **Many on-sky tests/characterization:**

Will need to plan those tests  
And the data-taking  
But later down the road

**Room for Frogs: propose a commissioning dataset  
AND observe it**

# AuxTel bonding effect III: Atmosphere analysis

## **Ancillary data & \*Tran assessment:**

MERRA2/GPS on fine grain scale  
SNfactory measurements vs prediction

## **From spectra to Atmospheric transmission:**

GEMINI/CTIO data analysis in progress  
A large group of fine people

## **Additional site instrumentation:**

DIMM: turbulence monitoring

**Room for frogs: commissioning dataset for demonstration**



## TEAMWORK

Teamwork is the ability to work as a group toward a common vision, even if said vision becomes extremely blurry.

www.Quotes.com - IMGQuotes.com



# AuxTel bonding effect IV: Photometric calibration

## **FGCM approach very robust:**

Currently dominating features  
are in Gaia



## TEAMWORK

DON'T KNOW WHAT'S GOING ON?  
KEEP CALM. NOBODY ELSE KNOWS WHAT THEY'RE DOING EITHER.

## **CBP Proof of concept:**

Plan towards Proof of Concept with StarDICE

## **AuxTel observation strategy:**

Project responsibility  
Sensible approach with DESC

**Room for frogs: commissioning dataset**

# Emergence of a specific Task: Closing the Photometric loop

Putting all the pieces together for  
the first time:

Atmosphere

Flux standards

Instrument  
characterisation

Spectroscopic and  
photometric data  
observations



Demonstrating accuracy  
&  
precision  
of the photometric data  
calibration



# The pieces:

## CBP instrument characterization:

Merlin  
LPNHE + ?

Deliverable:  
demonstration of  
instrument Flat Fielding

## AuxTel obs:

DM  
LAL + ?

Deliverable: Running  
operations

## AuxTel data processing:

Merlin  
LAL + ?

Deliverable:  
photometric and  
spectroscopic data



## Atmosphere:

J.Neveu / Y. Copin  
Stardice

### Deliverable:

- Data collection
- Atmospheric model
- Validation on data

## Putting it all together:

E.Ryckoff  
Stardice +

### Deliverable:

- *Forward Modeling*
- Validation on data

# Putting it together

**DESC/Project interaction person:**

Seb "Ze Frog"



**Meeting in person:**

Next workshop 10-13<sup>th</sup> of July



An AuxTEL commissioning dataset proposition

To calibrate/characterize the spectrograph

To demonstrate mean atmospheric measurement ability

To probe new atmospheric variability

An AuxTEL commissioning participation

Who goes for how long ?

Desire to participate to Real Life commissioning ?