

# Status of Use Cases

**CCF general meeting, Barcelona, Oct. 4nd, 2017**  
**Franca Cassol (CPPM Marseille)**

# Introduction (e.g. WP levels of Ucs)

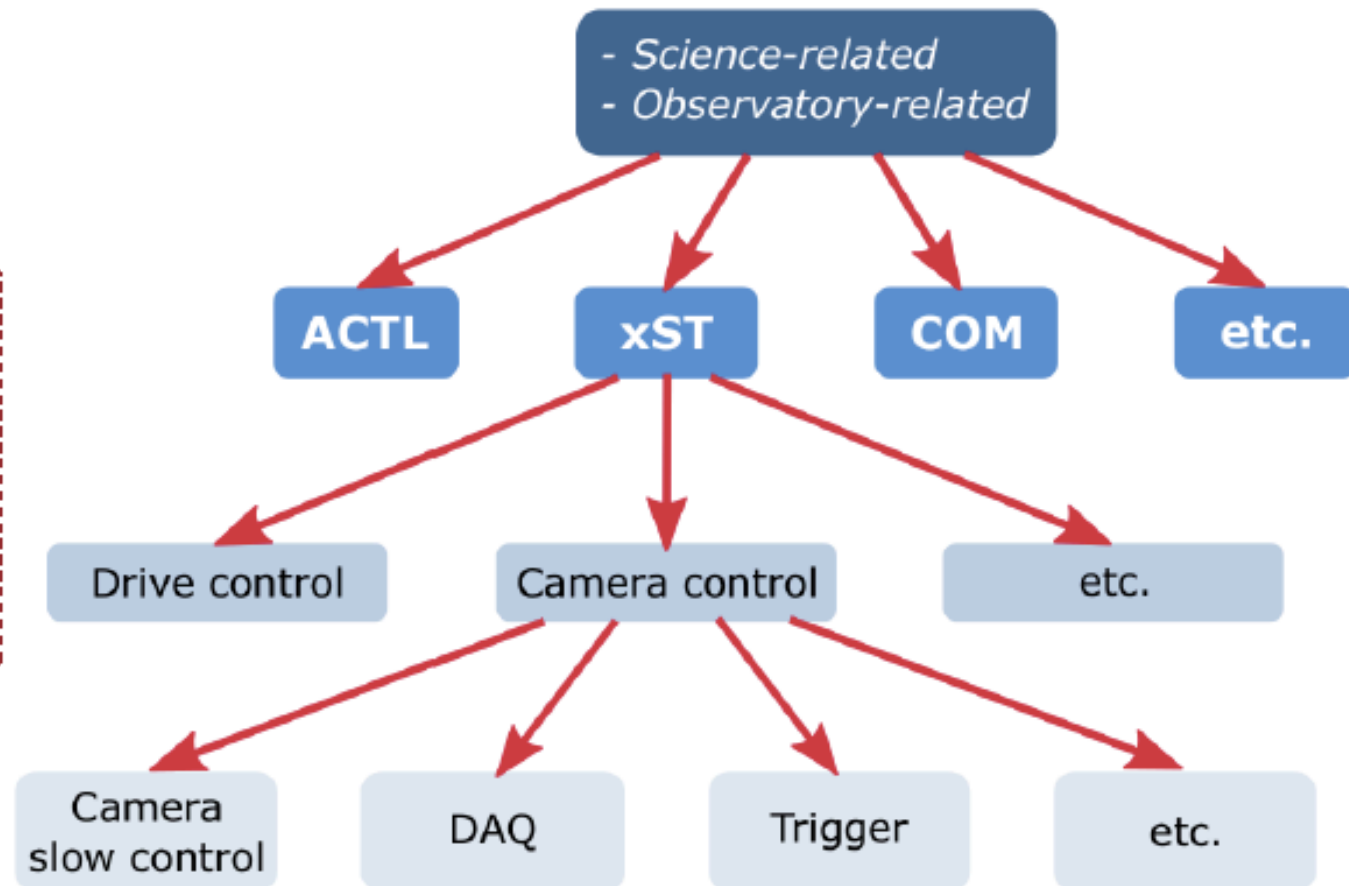
J. Goullon

**Top Level**

**Product level**

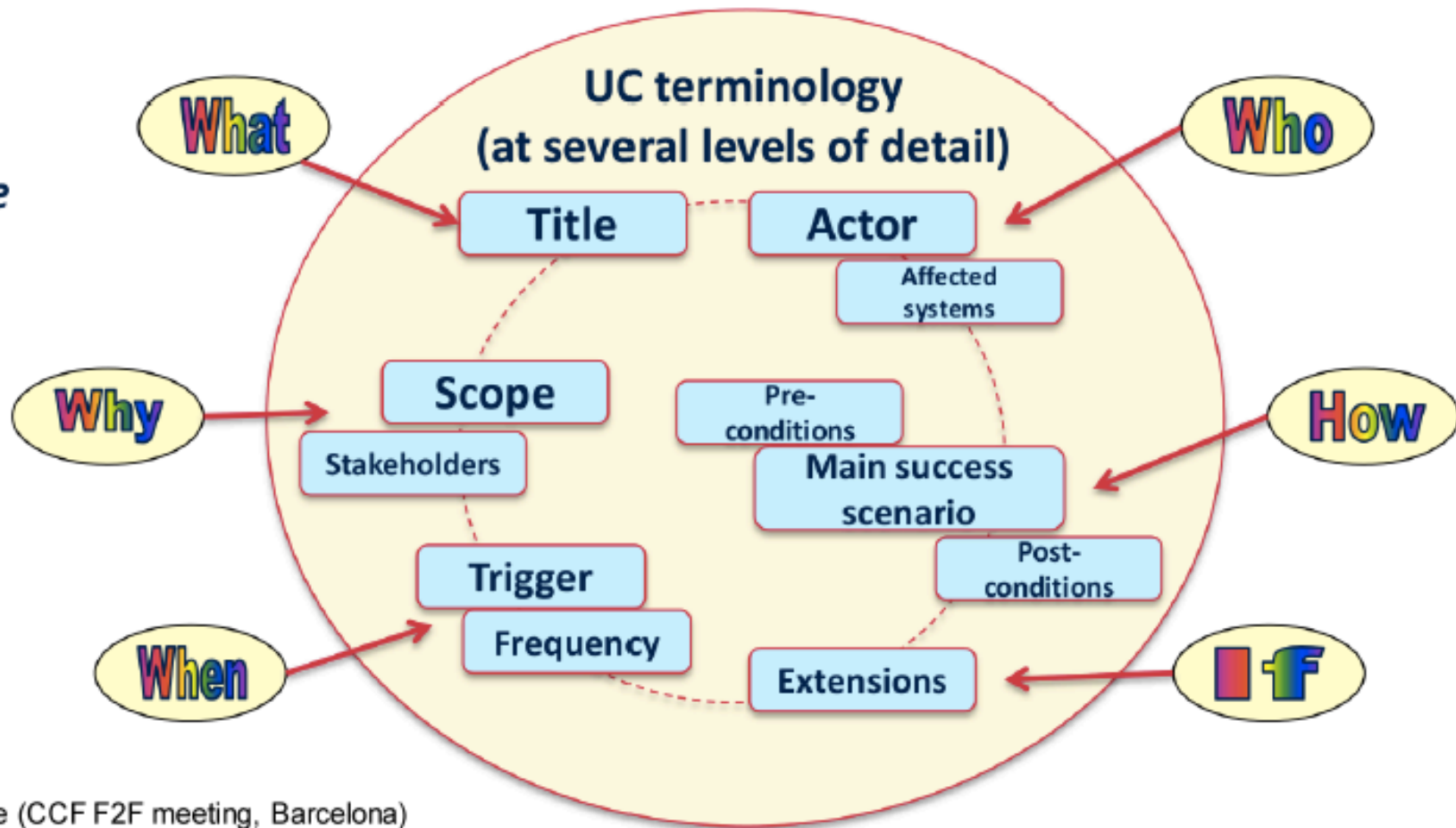
**Sub-product level**

**Component level**



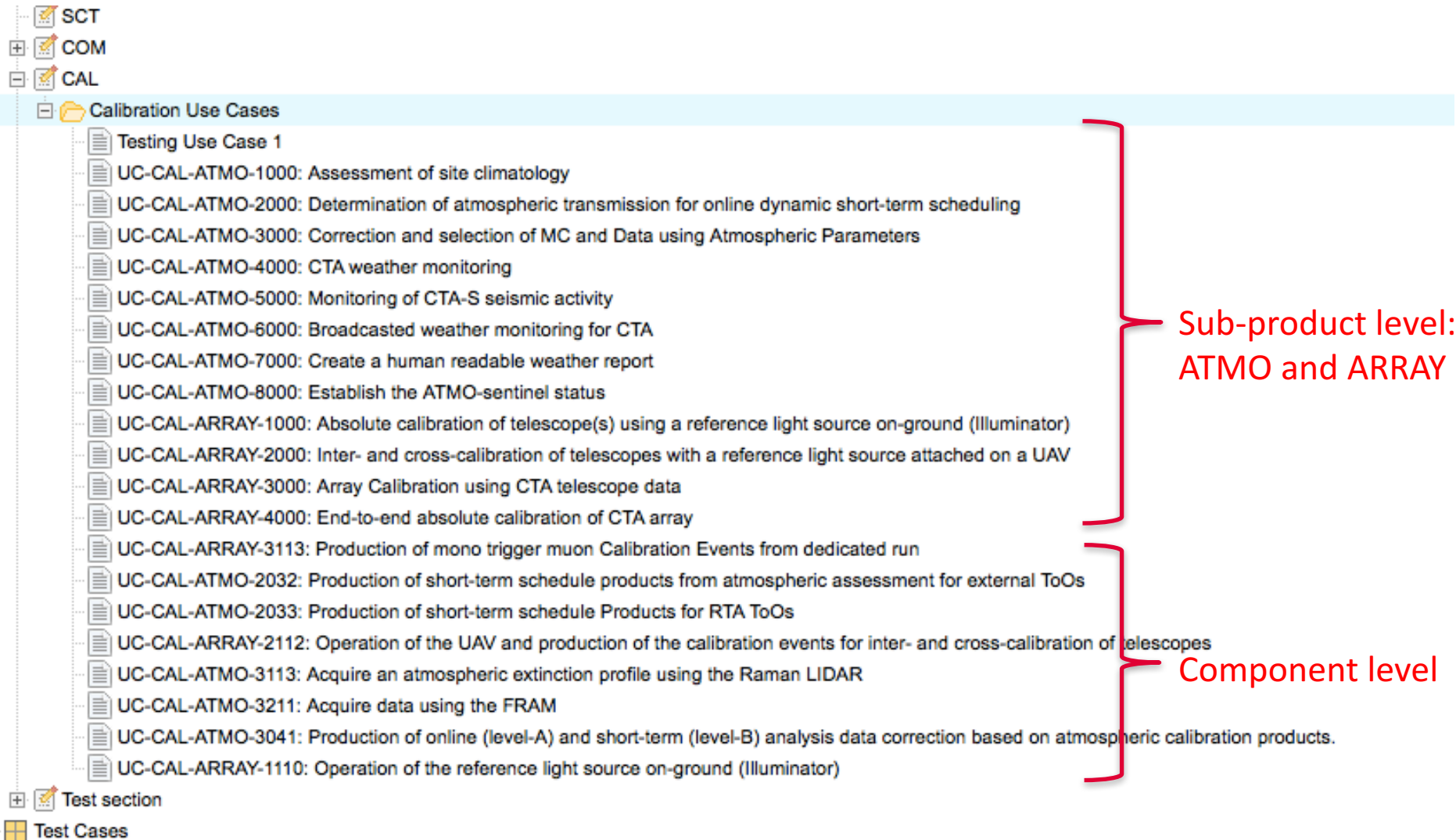
# Introduction

*Human questions  
(few, more or less  
detailed)*



M.C. Maccarone (CCF F2F meeting, Barcelona)

# Use Cases in Jama **NOW**



The screenshot displays the Jama software interface with a project structure on the left and a list of use cases on the right. The 'Calibration Use Cases' folder is expanded, showing a list of use cases categorized into two levels: Sub-product level and Component level.

**Sub-product level: ATMO and ARRAY**

- Testing Use Case 1
- UC-CAL-ATMO-1000: Assessment of site climatology
- UC-CAL-ATMO-2000: Determination of atmospheric transmission for online dynamic short-term scheduling
- UC-CAL-ATMO-3000: Correction and selection of MC and Data using Atmospheric Parameters
- UC-CAL-ATMO-4000: CTA weather monitoring
- UC-CAL-ATMO-5000: Monitoring of CTA-S seismic activity
- UC-CAL-ATMO-6000: Broadcasted weather monitoring for CTA
- UC-CAL-ATMO-7000: Create a human readable weather report
- UC-CAL-ATMO-8000: Establish the ATMO-sentinel status
- UC-CAL-ARRAY-1000: Absolute calibration of telescope(s) using a reference light source on-ground (Illuminator)
- UC-CAL-ARRAY-2000: Inter- and cross-calibration of telescopes with a reference light source attached on a UAV
- UC-CAL-ARRAY-3000: Array Calibration using CTA telescope data
- UC-CAL-ARRAY-4000: End-to-end absolute calibration of CTA array

**Component level**

- UC-CAL-ARRAY-3113: Production of mono trigger muon Calibration Events from dedicated run
- UC-CAL-ATMO-2032: Production of short-term schedule products from atmospheric assessment for external ToOs
- UC-CAL-ATMO-2033: Production of short-term schedule Products for RTA ToOs
- UC-CAL-ARRAY-2112: Operation of the UAV and production of the calibration events for inter- and cross-calibration of telescopes
- UC-CAL-ATMO-3113: Acquire an atmospheric extinction profile using the Raman LIDAR
- UC-CAL-ATMO-3211: Acquire data using the FRAM
- UC-CAL-ATMO-3041: Production of online (level-A) and short-term (level-B) analysis data correction based on atmospheric calibration products.
- UC-CAL-ARRAY-1110: Operation of the reference light source on-ground (Illuminator)

The interface also shows a 'Test section' and 'Test Cases' at the bottom left.

## Product level

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- Describe CAL as a black box: main tasks
  - UC-CAL-0001: Calibration of CTA data
  - UC-CAL-0002: Monitoring of site environment conditions
  - UC-CAL-0003: Optimize the quality of observations and CTA duty cycle.

Abandoned because replaced by CTAO use cases

## Sub-product level

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- Camera calibration: **Missing** (mainly for lack of man power)
- Array calibration (UC-CAL-ARRAY-X000): **In Jama**
- Atmosphere calibration (UC-CAL-ARRAY-X000): **In Jama**
- Pointing calibration: **Missing** (mainly for lack of man power)

# Component level

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- Third level: UC-CAL-subWP-Xxyz -> CCF sub-WP device/method (Z) as a black box.
- Describe the functionalities (N) of the different device/method (Y), classified into.
  - XY1N -> **Operation** (e.g. N control, etc. UCs)
  - XY2N -> **Production of Calibration Events** (e.g. N ways of producing the calibration events)
  - XY3N -> **Production of Calibration Products** (e.g. N different Products)
  - XY4N -> **Integration of Calibration Products**

Only few UC with priority or connected to UC-CTAO in Jama

# CAL UCs (component level) (priority)

(Array Calibration, UC-CAL-ARRAY-XYZ0)



- **UC-CAL-ARRAY-3000:** “Array Calibration using CTA telescope data”
  - UC-CAL-ARRAY-3113: Production of mono trigger muon Calibration from dedicated run (**UC-CTAO-090**)
- **UC-CAL-ARRAY-4000:** “End-to-end absolute calibration of CTA array”
  - UC-CAL-ARRAY-4031: Perform a test observation of a reference gamma-ray source.

Slide from Raquel (Oct 2016)



# CAL UCs (component level) (priority)

## (Atmosphere Calibration, UC-CAL-ATMO-X000)



- **UC-CAL-ATMO-2000:** “Atmospheric monitoring for online dynamic short-term scheduling”
  - UC-CAL-ATMO-2032: Production of short-term schedule products for external ToOs (**UC-CTAO-140**)
  - UC-CAL-ATMO-2033: Production of short-term schedule Products for RTA ToOs (**UC-CTAO-150**)
- **UC-CAL-ATMO-3000:** “Correction and selection of MC and Data using Atmospheric Parameters”
  - UC-CAL-ATMO-3041: Production of on-line data correction based on atmospheric calibration products (**UC-CTAO-160**)
  - UC-CAL-ATMO-3100: Acquire calibration data using the Raman LIDAR (**UC-CTAO-160**)
  - UC-CAL-ATMO-3113: Take a LIDAR shot to zenith and analyze the atmospheric transmission (**UC-CTAO-070**)
  - UC-CAL-ATMO-3200: Acquire calibration data using the FRAM (**UC-CTAO-160**)
  - UC-CAL-ATMO-3231: Determine periods of similar atmospheric conditions (**UC-CTAO-270**)

Slide from Raquel (Oct 2016)

## Next steps

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Try to go further :

- Still **not clear how to proceed for the missing Product Level UCs** (camera calibration and pointing calibration): probably **better to wait** to see what the Architecture group suggests
- **Let terminate the Component level** of the ATMO and ARRAY UCs
  1. Complete the definition of the UCs list (Markus and F.)
  2. Write all new and already defined/started UCs

**Assigned people will be solicited, thanks to contribute!**