











Universidade de São Paulo Instituto de Astronomia, Geofísica e Ciências Atmosféricas



CUBES

Cassegrain U-Band Efficient Spectrograph

CUBES Phase B KOM meeting

WP: PA/QA

CUBES Phase B Consortium kick-off meeting

24/01/2022

PA/QA Team



• <u>PA/QA Management</u>:

Vincenzo De Caprio – INAF OACN

• <u>Deputy</u>:

Domenico D'Auria – INAF OACN

• 1 FTE (to work in Reliability Analysis and Safety (RAMS)):

TBH – INAF OACN

CUBES Phase B Consortium kick-off meeting

24/01/2022 2

PA/QA



The Product Assurance, in the CUBES project, deals with the following disciplines:

- 1. Quality Assurance.
- 2. Reliability, Availability, Maintainability, Safety (RAMS).
- 3. Procurement.

The following slides report the main point of the CUBES PA Plan. The PA Plan (in preparation) outlines the followed approach (according the ESO procedures). For more information, please refer to the PA plan.

CUBES Phase B Consortium kick-off meeting

24/01/2022

3

Deliverables for PDR

- CUBES Reliability Analysis
- FMECA document
- HAZARD List and Analysis
- CUBES Hazardous Material
- CIDL (Configuration Item Data List)

and

- When needed: Non-Conformance Report Request for Waiver
- If required: CUBES PA Plan updated version

Being these documents technical deliverables, they will be made basing on the **current state** of each WP and they will be **implemented regularly**, promoting the **interaction** between designing and PA Team. Information and data will be dynamically updated in order to create a loop that will help designers in the criticality about dependability and safety.

CUBES Phase B Consortium kick-off meeting

24/01/2022 4



Ongoing Activity



PA/QA plan, issue 1, will be ready for Kick-off meeting with ESO



INAF (IT) UKATC & Durham (UK) LSW (D) IAG-USP and LNA (BR) NCAC (PL)

The document will be delivered internally at the Consortium, in the first week of the next february.

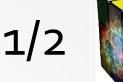
Document Title:	CUBES Product and Quality Assurance Plan
Document Number:	ESO-385186
Document Version:	1
Document Type:	Plan (PLA)
Released On:	Please insert manually
Document Classification:	INAF Internal

CUBES Phase B Consortium kick-off meeting

V. De Caprio; D. D'Auria – INAF OACN

5

Main activities in the next period to be done





Collection of the BoM (all WPs)

We need to have an extensive list, raw materials, components, and instructions required to construct, manufacture, or repair (our products).

The template for the BoM is TBD and will be delivered from the PA/QA Team to the WPs in accordance with SE.

(The Functional Analysis will be performed by the PA Team starting from the available documentation. At completed work, the WPs will be involved in a check and, eventually, in an update of this analysis.)

CUBES Phase B Consortium kick-off meeting

24/01/2022 6

Main activities in the next period to be done

2/2



Start the Reliability Analysis

Reliability Analysis (following ESO guidelines) will be performed from the PA/QA Team (and checked/discussed with all the WP Managers), in order to identify and evaluate the risks related to safety and reliability aspects in support to the design, integration, test and operations phases.

CUBES Phase B Consortium kick-off meeting

24/01/2022

7

Reviews and audits



- Reviews and audits shall be scheduled by the PA management or the WP managers (or "local" PA managers,) with the aim to check quality of the system.
- Main changes will be discussed during dedicated and recorded meetings, while minor changes will be communicated during periodical meetings set by SE.

CUBES Phase B Consortium kick-off meeting

24/01/2022 8



--- Thanks for the attention ---

CUBES Phase B Consortium kick-off meeting

24/01/2022 9











Universidade de São Paulo Instituto de Astronomia, Geofísica e Ciências Atmosféricas







Science & Technology Facilities Council UK Astronomy Technology Centre

CUBES Phase B Consortium kick-off meeting

24/01/2022 10