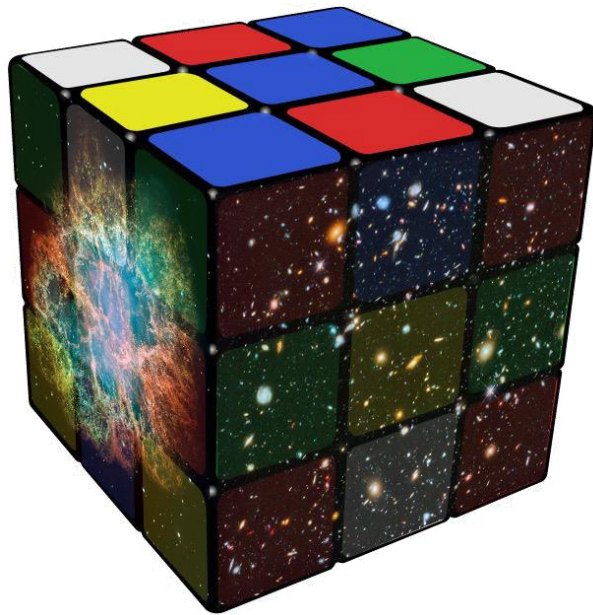




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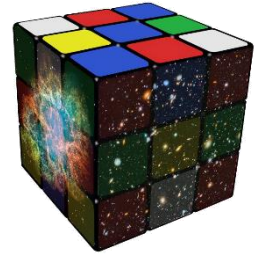
CUBES

Cassegrain U-Band Efficient Spectrograph

**Stefano Cristiani
(INAF)**

CUBES Phase B KOM meeting

News



- 2021 Oct 20: presentation at the LSP (Chris+PaoloDM) - **Done**
- Oct 26-27: 15 min science presentation at STC - **Done**
- approval of the project at ESO - **Done**
- approval of the GTO from Council (December meeting) – **Done**

the Council approved the management proposal on the CUBES program:

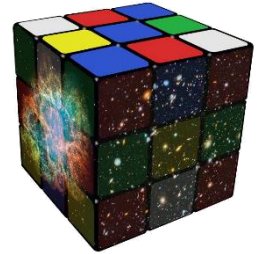
- 1. authorizes the ESO DG to sign the agreement for the construction of CUBES;*
- 2. authorizes the GTO program based on 70 nights for instrument development and 20 nights for compensation of extra-contribution by the Consortium.*

ExpAstro papers are flowing in

NEXT STEPS

- signature of the construction agreement and MoU
- KO (**Jan 24**)

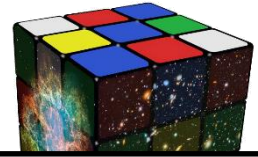
CUBES Consortium



Consortium partners:

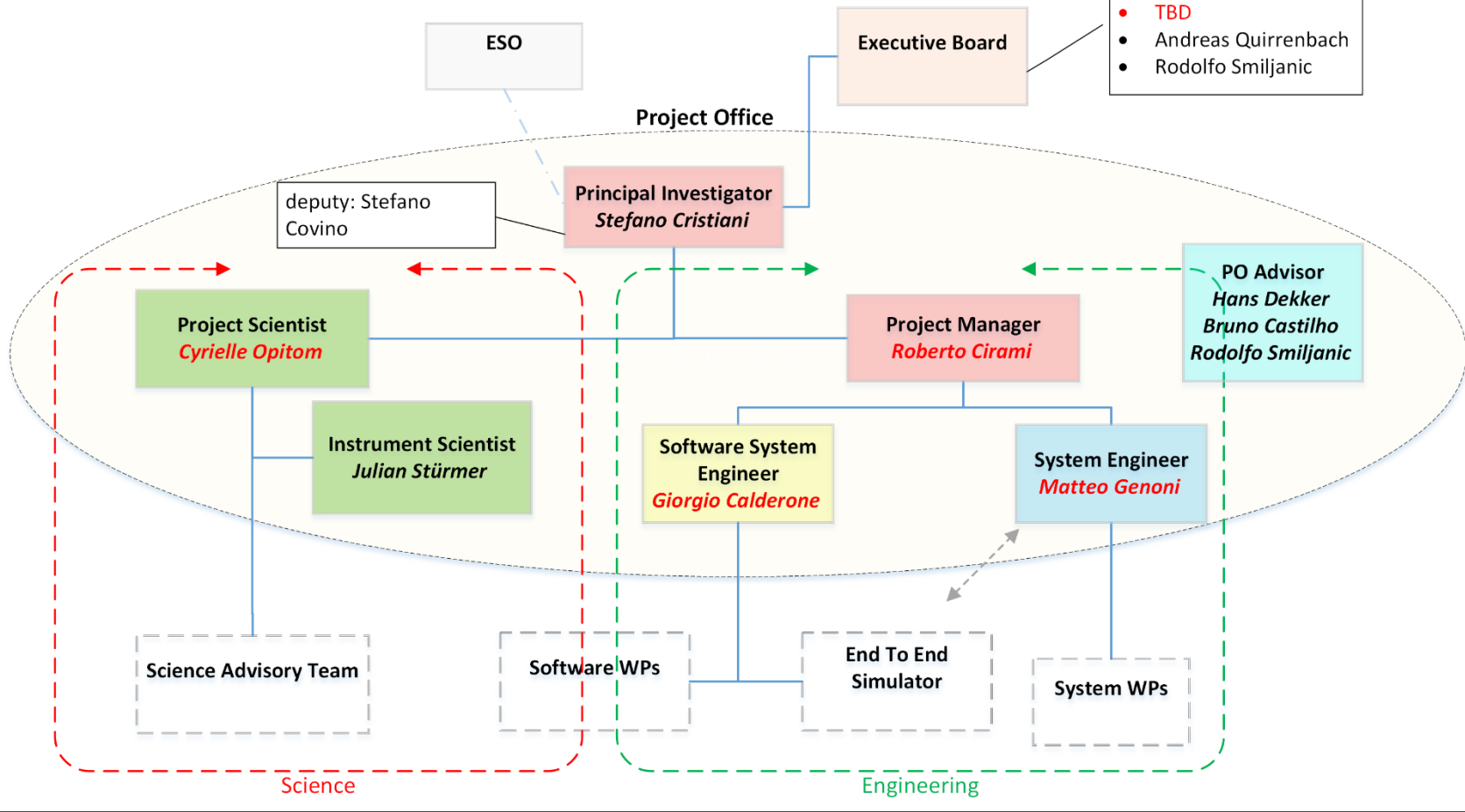
1. **INAF** - *Istituto Nazionale di Astrofisica*, [Italy](#), (consortium leader)
2. **STFC-UKATC** - *UK Astronomy Technology Centre*, ([primary UK partner](#)) and **Durham** *University Centre for Advanced Instrumentation* ([secondary UK partner](#)), United Kingdom
3. **LSW** - *Landessternwarte, Zentrum für Astronomie der Universität Heidelberg*, [Germany](#)
4. **NCAC** - *Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences*, [Poland](#)
5. **IAG-USP** - *Instituto de Astronomia, Geofísica e Ciências Atmosféricas* ([primary Brazil partner](#)) and **LNA** - *Laboratório Nacional de Astrofísica* ([secondary Brazil partner](#)), Brazil

Organizational chart

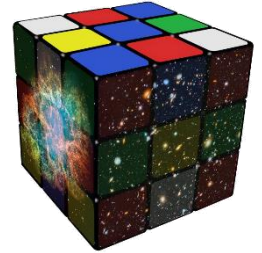


CUBES governance/management «Phase B»

- Beatriz Barbuy
- **TBD**
- Andreas Quirrenbach
- Rodolfo Smiljanic



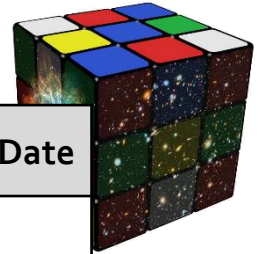
MoU and Consortium Agreement



Initial contribution scheme – linked to the Agreement

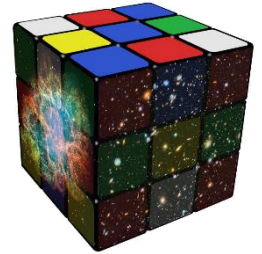
Art. 4.1.2 - The Consortium members' own contribution is estimated at the date of signing the present Agreement to amount to 1,800,000 EUR

Project Schedule



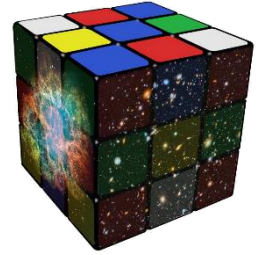
Key Milestones	Contractual Completion Date
KM.0 – Entry into force of the Consortium Agreement	T0
KM.1 – Kick-off Meeting	T0 + 1 month mid/end February 2022
KM.2 – Delivery of Prototype (grating)	T0 + 10 months
KM.3 – Preliminary Design Review (PDR)	T0 + 11 months mid/end-November 2022
KM.4 – Long Lead Items Review	T0 + 17 months June 2023
KM.5 – Final Design Review (FDR)	T0 + 25 months Jan 2024
KM.P – Procured equipment delivered at the Consortium's premises and accepted by the Consortium	T0 + 40 months Apr 2025
KM.6 – Intermediate Milestone (Assembly Readiness Review)	T0 + 45 months Sep 2025
KM.7 – Test Readiness Review (TRR)	T0 + 57 months Sep 2026
KM.8 – Provisional Acceptance Europe (PAE)	T0 + 63 months Mar 2027
KM.9 – Intend to Accept and PTO of the Instrument	T0 + 65 months May 2027
KM.10 – Provisional Acceptance Chile (PAC)	T0 + 77 months May 2028

Phase B - Science



- Track the compliance of instrument expected performance for a selected (5-6) subset of science cases
- Discuss GTO, sketch out strategy, identify broad themes, and tools needed

Phase B – Science Team



➤ MoU ART. 7: The Science Team

§ 7.1 *The preparation of the GTO Program is under the sole responsibility of the Consortium. To ensure an efficient and success-oriented GTO program, the Parties agree to set up a Science Team.*

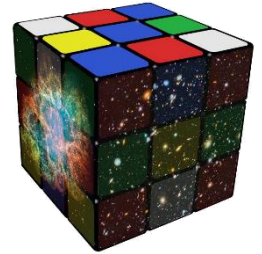
§ 7.2 *The Science Team is led by the PS and it includes expert astronomers that have been nominated by, and are considered to be representative of, the member Parties of the Consortium. It is organized in working groups, each one addressing specific science cases.*

§ 7.3 *The composition of the Science Team is defined by the Executive Board, and the affiliations of its members should reflect the relative share of each Party, with representatives of each participating institute.*

§ 7.4 *Whereby the Project Scientist deems it necessary, the ST can include scientists from outside the consortium.*

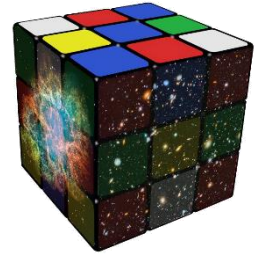
§ 7.5 *The Executive Board approves the composition of the Science Team following the proposal from the Project Scientist.*

F2F meeting



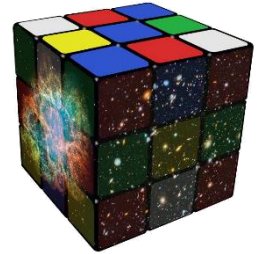
- highest priority
- As soon as allowed by the pandemic (March or end of April -May? In coincidence with an intermediate review, N.B. Easter is Apr 17)
F2F meeting in Trieste (TBC)

Concluding Remarks

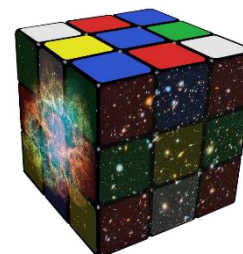


- highest priority
- As soon as allowed by the pandemic F2F meeting, including Science [in Trieste?] when? [Apr – Jun?]
- Solve the problems with To (sign quickly the MoU/CAgr!)
- What does ESO expect from us in terms of Sci Cases?
- How do we get from ESO necessary data: e.g. O_3 absorption (seasonal dependence)

Concluding Remarks



- Questions to answer
- Do we need an AFC system? New generation instrument. Systematics free. Advantages for DR and DAS.
- Fiber link – we design it. Are we going to build it? (IMHO yes, but we have to convince ESO, how?) Beware of length or we loose efficiency.
- Are the gratings feasible? (Prototyping with IoF underway)
- Accurate definition of the required cash-flow (ESO instalments tend a bit too late in the PPlan)



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