# OBELICS start-up

Surveying WP3 participants and their own engagements.

*Giovanni Lamanna, LAPP-IN2P3-CNRS*

# Executive summary

This document follows the action points addressed to the WP3-OBELICS partners and which were announced during the ASTERICS kick-off meeting. All inputs received until July 15, 2015 from partners as well as next or still open action points are here reported. The content of this document was presented during the first OBELICS Vidyo meeting (https://indico.astron.nl/conferenceDisplay.py?confId=19).

# Action point 1: OBELICS list of participants.

The following tables (one per ESFRI or other project) show the sharing of EC funded personnel (person months) per partner according to the official ASTERICS proposal. It is expected that each partner will commit to dedicate a number of person months that has to be not less than those declared as funded in the tables. The expected sharing of resources per each OBELICS task is also detailed, however they can be rearranged in due course, while committing to the promised deliverables.

| | **CTA** | **CTA** | **CTA** | **CTA** | **CTA** |
|---|---|---|---|---|---|
| | LAPP-CNRS | INAF-RM | CEA | IFAE | UCM |
| Task (PM) | | | | | |
| Man. | 44 | | | | |
| D-GEX | | | | 24 | 24 |
| D-INT | 48 | 36 | | | |
| D-ANA | 36 | 36 | 36 | | |
| PM per partner | 128 | 72 | 36 | 24 | 24 |
| PM per project | | | | | **240** |

| | **SKA** | **SKA** | **SKA** |
|---|---|---|---|
| | ASTRON | UCAM | JIVE |
| Task (PM) | | | |
| Man. | | | |
| D-GEX | 24 | 24 | |
| D-INT | 48 | 48 | |
| D-ANA | 24 | 36 | 24 |
| PM per partner | 96 | 108 | 24 |
| PM per project | | | **228** |

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| | KM3Net | KM3Net | KM3Net |
|---|---|---|---|
| | FAU | INFN | CPPM-CNRS |
| Task (PM) | | | |
| Man. | | | |
| D-GEX | | | 24 |
| D-INT | 36 | | |
| D-ANA | | 36 | |
| PM per partner | 36 | 36 | |
| PM per project | | | **96** |

| | EUCLID | EUCLID |
|---|---|---|
| | INAF-TS | IAP-CNRS |
| Task (PM) | | |
| Man. | | |
| D-GEX | 12 | |
| D-INT | 24 | |
| D-ANA | | 36 |
| PM per partner | 36 | 36 |
| PM per project | | **72** |

| | LSST | LSST |
|---|---|---|
| | UCAM | LAPP-CNRS |
| Task (PM) | | |
| Man. | | |
| D-GEX | | |
| D-INT | | 24 |
| D-ANA | 24 | |
| PM per partner | 24 | 24 |
| PM per project | | **48** |

| | EGO |
|---|---|
| | APC-CNRS |
| Task (PM) | |
| Man. | |
| D-GEX | |
| D-INT | |
| D-ANA | 24 |
| PM per partner | 24 |
| PM per project | **24** |

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The list of participants is presented in the table above. The recruitment on the ASTERICS budget is still pending (to be recruited: TBR) in most of the institutes. For almost all partners the people who will be carrying out the technical work will be identified in due course once the technical direction is set and planned.

| Project | Institute | Name | Family Name | % FTE | EC funded | Task | Task-leader | role |
|---|---|---|---|---|---|---|---|---|
| **CTA** | LAPP-CNRS | Giovanni | Lamanna | 0.2 | | 3.1 | | CTA contact |
| **CTA** | LAPP-CNRS | Gilles | Maurin | 0.2 | | | | LAPP contact |
| **CTA** | LAPP-CNRS | Pierre | Aubert | 0.8 | 0.8 | | | |
| **CTA** | LAPP-CNRS | X | Y | 1 | TBR | | 3.1 | |
| **LSST** | LAPP-CNRS | X | Y | 1 | TBR | | | |
| **CTA** | INAF-RM | L. Angelo | Antonelli | 0.3 | | 3.2 | 3.2 | INAF contact |
| **CTA** | INAF-RM | Denis | Bastieri | 0.1 | | 3.2 | | |
| **CTA** | INAF-RM | Matteo | Perri | 0.3 | | 3.2 | | |
| **CTA** | INAF-RM | Stefano | Gallozzi | 0.1 | | 3.2 | | |
| **CTA** | INAF-RM | Saverio | Lombardi | 0.1 | | 3.2 | | |
| **CTA** | INAF-RM | X | Y | 1 | TBR | 3.2 | | |
| **CTA** | INAF-RM | X | Y | 1 | TBR | 3.3 | | |
| **CTA** | CEA | Karl | Kosack | 0.1 | | | | |
| **CTA** | CEA | Thierry | Stolarczyk | 0.1 | | | | |
| **CTA** | CEA | Fabio | Acero | ?? | | | | |
| **CTA** | CEA | X | Y | 1 | TBR | | | |
| **CTA** | IFAE | Javier | Rico | 0.3 | | | | |
| **CTA** | IFAE | Tharek | Hassan | 0.7 | | | | |
| **CTA** | UCM | Jose Luis | Contreras | 0.2 | | | | |
| **CTA** | UCM | Marcos | Lopez | 0.2 | | | | |
| **CTA** | UCM | X | Y | 1 | TBR | | | |
| **SKA** | ASTRON | Marco | de Vos | 0.2 | | | | |
| **SKA** | ASTRON | X | Y | 1 | TBR | | | |
| **SKA** | ASTRON | X | Y | 1 | TBR | | | |
| **SKA** | UCAM | Paul | Alexander | | | | | SKA contact |
| **SKA** | UCAM | Bojan | Nikolic | | | 3.4 | 3.4 | UCAM contact |
| **SKA** | UCAM | Gerry | Gilmore | | | | | |
| **SKA** | UCAM | Richard | McMahon | | | | | |
| **SKA** | UCAM | X | Y | 1 | TBR | | | |
| **SKA** | UCAM | X | Y | 1 | TBR | | | |
| **LSST** | UCAM | X | Y | 1 | TBR | | | |
| **SKA** | JIVE | Arpad | Szomoru | 0.1 | | | | JIVE contact |
| **SKA** | JIVE | Des | Small | 0.5 | 0.5 | 3.4 | | |
| **SKA** | JIVE | X | Y | 1 | TBR | | | |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **EUCLID** | INAF-TS | Fabio | Pasian | | | | | |
| **EUCLID** | INAF-TS | Giuliano | Taffoni | 0.3 | | 3.4.2 | 3.4.2 | |
| **EUCLID** | INAF-TS | X | Y | 1 | TBR | 3.4.2 | | |
| **EUCLID** | INAF-TS | Marco | Molinaro | 0.2 | | 3.3.3 (VO) | | WP4 interface |
| **SKA** | INAF-TS | Cristina | Knapic | 0.1 | | 3.4.2 (A&A) | | |
| **EUCLID** | IAP-CNRS | Yannick | Mellier | 0.2 | | 3.4 | | EUCLID contact |
| **EUCLID** | IAP-CNRS | Henry Joy | McCracken | 0.1 | | 3.4 | | |
| **EUCLID** | IAP-CNRS | Karim | Benabed | 0.1 | | 3.4 | | |
| **EUCLID** | IAP-CNRS | Patrick | Hudelot | 0.2 | | 3.4 | | |
| **EUCLID** | IAP-CNRS | X | Y | 1 | TBR | | | |
| **KM3Net** | FAU | Tamas | Gal | 0.3 | | | | |
| **KM3Net** | FAU | Kay | Graf | 0.1 | | | | |
| **KM3Net** | FAU | Thomas | Heid | 0.1 | | | | |
| **KM3Net** | FAU | Clancy | James | 0.2 | | | | |
| **KM3Net** | FAU | X | Y | 1 | TBR | | | |
| **KM3Net** | INFN | Cristiano | Bozza | | | | | |
| **KM3Net** | INFN | X | Y | 1 | TBR | | | |
| **KM3Net** | CPPM-CNRS | Paschal | Coyle | | | | | |
| **KM3Net** | CPPM-CNRS | Jurgen | Brunner | | | | | |
| **KM3Net** | CPPM-CNRS | Liam | Quinn | 1 | 1 | | | |
| **EGO** | APC-CNRS | Eric | Chassande-Mottin | | | | | |
| **EGO** | APC-CNRS | Eric | Lebigot | | | | | |
| **EGO** | APC-CNRS | X | Y | 1 | TBR | | | |
| **ESO** | E-ELT | Michael | Sterzik | | | | | |

# Action point 2: Engagement in tasks coordination

According to the ASTERICS offical proposal the follwing task leadeships assignement is foreseen:

Task 3.1 MAUD (MAnagement, User engagement and data Dissemination): **LAPP**.

- ✓ Giovanni Lamanna confirms his own personal engagement at < 20% waiting for the recruitment of a Project Management to lead the OBELICS project. A vacancy was opened.
- ✓ The Task coordinators need to be defined to participate in leading the future cooperative actions, e.g. workshops, training and meetings. Pending.
- ✓ Michael F. Sterzik (ESO) with limited participation: ESO is not an "ASTERICS" project partner. Opportunity for active exchanges within the ESA/ESO workshops on data

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management.

Task 3.2 D-GEX (Data Generation and information eXtraction): **UCM+INAF**.

- ✓ Jose Luis Contreras (UCM) confirms the engagement however the names of the leader (UCM) and the deputy leader (INAF) have to be agreed together between UCM and INAF.
- ✓ Lucio Angelo Antonelli (INAF-RM) confirms the INAF-OAR engagement in co-coordinating Task 3.2 - D-GEX (led by Angelo Antonelli).
- ✓ Pierre Aubert (LAPP) ASTERICS funded computer scientist will participate to task 3.2.4 (benchmarking low-power computer platforms such as GPUs and software for parallel programming) and in combination with sub-task 3.4.1.
- ✓ Javier Rico (IFAE) and Tarek Hassan (IFAE ASTERICS funded) confirm to participate to task 3.2.
- ✓ Cristiano Bozza (INFN) will participate to task 3.2.4 and in combination with sub-task 3.4.1, but recruitments are pending.

Task 3.3 D-INT (Data systems INTegration): **ASTRON+LAPP**.

- ✓ Marco de Vos (ASTRON) inputs are still pending.
- ✓ Giovanni Lamanna (LAPP) will co-lead the D-INT task but a dedicated person needs to be recruited. A vacancy was opened.
- ✓ This task foresees important fraction of participation from more partners. Further discussions are needed.
- ✓ Marco Molinaro (INAF-TS) will participate to sub-task 3.3.3 for VO-integration (in collaboration with WP4) and data interoperability.
- ✓ LAPP proposes e-infrastructures providers collaboration for tasks 3.3.3.
- ✓ LAPP opened vacancies for activities in 3.3.1, 3.3.2 and 3.3.3. Recruitment is pending and needed before engaging in sub-task coordination.
- ✓ Cristiano Bozza (INFN) will participate to task 3.3.
- ✓ Lucio Angelo Antonelli (INAF-RM) confirms that INAF-OAR will participate to Task 3.3 - D-ANA.

Task 3.4 D-ANA (Data ANAlysis/interpretation): **INAF+UCAM**.

- ✓ Bojan Nikolic & Paul Alexander (UCAM) confirm the wish to lead this task. UCAM has begun engagement with JIVE partner on planning task.
- ✓ Bojan Nikolic (UCAM) will lead Task 3.4.

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- ✓ UCAM has not yet advertised any positions related to OBELICS. It should be possible to fill some of the position with staff already employed.
- ✓ Arpad Szomoru (JIVE) confirms JIVE collaboration with UCAM in Task 3.4 based on their previous collaboration in Hilado (RadioNet3), which aimed at reducing the amount of re-calculation needed in pipelines when changing data reduction parameters. JIVE and UCAM will meet to decide on their science aims, which will be translated into an actual work plan after summer. The aim here is to improve the re-processing of large interferometric data sets, towards an actual user-ready implementation.
- ✓ Des Small (JIVE) is recruited on ASTERICS budget.
- ✓ Fabio Pasian (INAF-TS) confirms INAF engagement in coordinating Sub-task 3.4.2.
- ✓ Giuliano Taffoni (INAF-TS) proposed to lead sub-task 3.4.2. An ASTERICS recruitment at INAF-TS is expected and soon opened to be assigned to 3.4.2.
- ✓ Cristina Knapic (INAF-TS) will participate to sub-task 3.4.2 about A&A solutions. Discussion with Bojan is now pending.
- ✓ Pierre Aubert and Gilles Maurin (LAPP) will participate in 3.4.1
- ✓ Giovanni Lamanna (LAPP) is investigating to promote CTA survey on A&A solutions also within sub-task 3.4.2.
- ✓ Cristiano Bozza (INFN) will participate to task 3.4.1 but recruitments are pending.
- ✓ Yannick Mellier (IAP) confirms that IAP will participate and provide the resources in all tasks IAP is involved in (D-ANA Task 3.4) and will deliver all relevant deliverables according to the current OBELICS workplan and schedule.
- ✓ Lucio Angelo Antonelli (INAF-RM) confirms that INAF-OAR will participate to Task 3.4 D-INT

# Action point 3: Further tasks/activities.

Nothing to add. It will be evaluated in due course.

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# Action point 4: Deliverables.

Task coordinators and sub-task leaders as well as other WP members engagements to produce the expected deliverables as listed in the proposal (and also shown in the table below).

**Deliverables**

| Nr | Description | Task | Month |
|---|---|---|---|
| D3.1 | Detailed WP3 Project plan | 3.1 | 4 |
| D3.2, 3.6, 3.10 | Annual user engagement forum, workshops and training events | 3.1 | 12, 24, 36 |
| D3.3 | Analysis Report on Standards and Libraries | 3.2 | 12 |
| D3.4, 3.17 | Release of Software Libraries | 3.4 | 12, 48 |
| D3.5 | Analysis Report on Resource Requirements | 3.3 | 18 |
| D3.7, 3.15 | Processing Platform Technology Benchmark Report | 3.2 | 24, 48 |
| D3.8, 3.16 | Database Technology Benchmark Report | 3.3 | 24, 48 |
| D3.9 | Statistical Solvers Technology Benchmark Report | 3.4 | 24 |
| D3.11 | Analysis Report on Frameworks and Architectures | 3.2 | 36 |
| D3.12 | Repository of Services | 3.3 | 36 |
| D3.13 | Repository of WMS Services | 3.4 | 36 |
| D3.14 | Final Integral WP3 Report | 3.1 | 48 |

Spontaneous declaration to commit for deliverables:
KM3net institutes (3.4, 3.17)
IFAE (3.1, 3.3, 3.17)
LAPP (3.11, 3.12, 3.1, 3.2, 3.6, 3.10, 3.4, 3.17.3.7, 3.15)
UCM (3.3)
INAF-TS (3.1, 3.17, 3.3, 3.12, 3.14)
IAP (Task 3.4 Deliverables)
INAF-OAR (3.2, 3.3, 3.4, 3.17, 3.5, 3.7, 3.15, 3.8, 3.16, 3.9)

Task leaderships need to be defined first and then commit to lead deliverables production. A large participation of all partners to the deliverables is expected.

# Action point 5: Recruitments.

**LAPP** tentative hiring plan:

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1) First priority : Project manager 44 months.
2) Computer scientist skilled in GPU computation starting in October 2015.
3) Physicist in data management (vacancy opened).

**INFN** tentative hiring plan:

1) 2-year position for a physicist skilled in numerical computation and distributed computations. Knowledge of GPU can be present or acquired through training by staff personnel that is already skilled in GPU computation for particle track reconstruction. This position is tailored on 3.4 D-ANA, first item, and should start no later than Oct 2015.
2) 1-year position for a physicist skilled in KM3NeT analysis, to work on 3.2 and 3.3. This position should start in Jan 2016.
3) 1-year position for a physicist skilled in distributed computing for workflow handling and GPU computing (3.2 and 3.4), to start in Jan 2016.
4) 1-year position for a technologist skilled in data management and low-power computing platforms (3.2, second item and 3.3), to start in Oct 2015.

**CPPM** tentative hiring plan:

Done: 1 PhD student starting in October 2015.

**FAU** tentative hiring plan:

directly approached some suitable PostDoc candidates

**JIVE** tentative hiring plan:

Done: 1 software engineer (Physics PhD).

**IFAE** tentative hiring plan:

Done: 1 Physics.

**IAP** tentative hiring plan:

Plan to recruit the engineer for OBELICS by November 1st. The vacancy will be open by August, and the selection/interviews in August, September and October.

**UCAM** tentative hiring plan:

Not yet advertised any positions related to OBELICS. It should be possible to fill some of the position with staff already employed. Information not yet available.

**UCM** tentative hiring plan:

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Planning to open a vacancy. Information not yet available.

**INAF-TS** tentative hiring plan:

Planning to open a vacancy. Information not yet available.

**INAF-RM** tentative hiring plan:

Planning to open a vacancy. Information not yet available.

**APC** tentative hiring plan:

INPUTS MISSING

**CEA** tentative hiring plan:

INPUTS MISSING

**ASTRON** tentative hiring plan:

INPUTS MISSING

# Action point 6: ESFRI projects data challenges.

Project contact persons need to be defined and they are asked to provide a short (two-three pages maximum) document (and any relevant reference) describing:

i) Time-line of the project (for both construction and operation phases).
ii) Wavelength/messenger, size, and any qualifying major figure of merit.
iii) Data rate, data volume and data reduction approach if any before archiving data; data volume to be permanently archived per year.
iv) Data access (open, private) envisaged solutions.
v) Data analysis methods: major challenges.
vi) Computing challenges (number of cores, flops), archive challenges (storage elements and DB systems/architectures) and workload management system envisaged or explored.
vii) Description of the established/envisaged/under-consideration computing model.
viii) Main open issues and major needed services.
ix) Any cooperative actions with European e-infrastructures (EGI, EUDAT, EU-T0, PRACE, IVOA, RDA, XLDB, etc. ) and international organization (CERN, ESA, ESO, ..).
x) Any other H2020 funded project that is felt as complementary and could/would aim at cooperating with OBELICS.

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xi) Any example of cooperation with industry for the data challenges of your ESFRI project already in progress or envisaged.

Requested addressed to :

**KM3NET - C. Bozza -> Inputs received**

**EUCLID – Y. Mellier -> Inputs received**

**LSST – (interim) P. Alexander + G. Lamanna -> Inputs from public information for the time being; more are pending.**

**(E-ELT - M. Sterzik) -> Inputs received**

**CTA – A. Antonelli -> Feedback pending (G.Lamanna will back-up)**

**SKA – M. de Vos -> Feedback pending**

**EGO – E. Chassande-Mottin -> Feedback pending**

# Action point 7: Work-plan (first deliverable).

Not enough progress to detail the technical activities. D3.1 will be based on the schedule presented in the proposal. Some more details on workshops and dissemination actions will be presented. Possible help until end of July o be investigated.

# Action point 8: Meetings.

Doodle to be open between last week of November and end of February.

# Action point 9: Tools fro project support.

Tools are centrally proposed and provided by ASTRON. Exception for REDMINE proposed by CCIN2P3 possibly linked with a federated login (eduGAIN currently under investigation/tests), so all participants can access the collection of tools with only one login. REDMINE should have:

- Calendar overview
- Issue tracker system
- Project Forum
- Project Wiki

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- Software repository

Dedicated OBELICS WEB page with data dissemination services to be organized.

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