

Minutes of the Fourth Management Committee Meeting of COST Action **CA15220: "Quantum Technologies in Space "**

ESA-ESTEC in Noordwijk, The Netherlands
20/11/2018

1. Welcome to participants

The participants were welcomed by Prof. Angelo Bassi, Chair of the Cost Action, who chaired the meeting.

2. Verification of the presence of two-thirds of the Participating COST Countries or, if applicable, a quorum

Countries having signed the MoU: Austria, Bosnia & Herzegovina, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom. Total: 26

Parties present at the meeting: Austria, Czech Republic, France, Germany, Hungary, Italy, Malta, Switzerland, Turkey, United Kingdom + ESA.

Total: 10

The quorum is not reached

3. Adoption of agenda

The agenda (Annex I) was adopted

4. Approval of minutes and matters arising of last meeting

The minutes of the 3rd MC meeting (14th September 2017, Lisbon) were sent to the MC on 28th September 2017. No objection was raised, therefore they are approved.

Between the 3rd and 4th MC meeting, the following evotes were set up:

- 19/12/2017: Update of Work Plan for Grant Period 2
- 24/01/2018: Reimbursement rules for the Erlangen, Bratislava and Vienna
- 20/03/2018: Meeting in Oberkochen & STSMs - Update of Work Plan for GP2
- 29/03/2018: Budget increase for the forthcoming meeting in Vienna
- 22/04/2018: New meeting + reimbursement rules for GP2
- 23/05/2018: Call for STSMs for GP3
- 10/09/2018: Participation of Bosnia and Herzegovina to the MC of QTSpace
- 21/09/2018: Participation of QTSpace to the Φ-week at ESA-ESRIN
- 27/09/2018: ESTEC meeting on QT in Space + MC meeting
- 15/10/2018: Proposal for a COST workshop at ZARM / DLR-RY Bremen, Germany
- 04/11/2018: Proposal for a COST training school at INSPYRE - Frascati, Italy

(Annex II)

In addition: Regular updates and 7 Newsletter (22/11/2017, 01/02/2018, 23/02/2018, 26/03/2018, 12/06/2018, 25/09/2018, 31/10/2018)



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5. Update from the Action Chair

- a) **Status of Action: start and end dates of Action, participating COST countries, participating NNC/IPC institutions and Specific Organisations.**
- b) **Short Term Scientific Missions (STSM): review of completed reports and new applications**

Start of the Action: 20/10/2016

End of Action: 19/10/2020

Participating COST countries: Austria, Bosnia & Herzegovina , Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom. Total: 26

Since the 3rd MC meeting, Bosnia & Herzegovina joined the Action.

Participating NNC/IPC institutions: None

Specific Organisations: ESA – European Space Agency

STSMs. The eVote was sent for approval on 23/05/2018. Four collections dates were defined:

- 30th June 2018
- 31st August 2018
- 31st October 2018
- 31st December 2018

After the last collection date, if money is still available, applications for STSMs will be dealt with, based on a “first come, first served” basis, till the end of GP3 (30th April 2019).

The budget allocated to STSMs was 4.800 Eur, with a cost per STSM up to 800 Eur. The estimated number of STSMs is 6. So far only one application was received, which however was not implemented because of visa problems with the applicant.

The Chair once again posed the problem that the STSMs tool is not working. In particular, ECIs are not profiting from this possibility, in spite of the fact that the call has been repeatedly advertised, through emails and the website.

6. Update from the Grant Holder: Action budget status and new Action Manager

Budget as approved by the MC

Meetings	108.988,00 Eur
Istanbul: 10.000 Eur	
Bern: 33.010 Eur	
ESTEC: 45.986 Eur	
Budapest: 19.992 Eur	
Training School	0,00 Eur
STSMs	4.800,00 Eur
ICT Conference Grant	3.000,00 Eur
Dissemination	0,00 Eur
OERSA (Bank charges)	603,30 Eur
Subtotal	117.391,30 Eur
FSAC (overheads) 15% of subtotal	17.608,70 Eur
TOTAL	135.000,00 Eur



Current budget status

Meetings	73.378,54 Eur
Bern: 13.878,54 Eur	
ESRIN: 4.000,00 Eur (estimate)	
ESTEC: 28.500,00 Eur (estimate)	
Bremen: 15.000,00 Eur (estimate)	
Rome: 12.000,00 Eur (to be apporved)	
Training School	15.000,00 Eur
STSMs	4.800,00 Eur
ITC Conference Grant	3.000,00 Eur
Dissemination	0,00 Eur
OERSA (Bank charges)	603,30 Eur
Subtotal	96.781,84 Eur
(FSAC not included)	

7. Update from the COST Association

None

8. Monitoring of the Action

The Action is progressing well, but the situation is not optimal

PLUS

- A large community has been reached. Coordination activities work
- Meetings: Plenty of activities
- Collaboration with ESA (ESTEC and ESRIN)
- Collaboration with the QT Flagship
- Ongoing discussions with the EC (DG GROW and DG CONNECT)

MINUS

- STSMs: not working

9. Implementation of COST policies on:

- a) Promotion of gender balance and Early Career Investigators (ECI)
- b) Inclusiveness and Excellence

As for Gender Balance and ECIs, the situation is the following:

Action members (member = who registered on the Action website)

Total: 184 (Lisbon: 126, Malta: 48)

Male: 166 (Lisbon: 115, Malta: 45)

Female: 18 (Lisbon: 11, Malta: 3)

ECIs: 81 (Lisbon: 56, Malta: 10)

(in brackets: situation at the previous MC meeting)

Core Group (Chair, Deputy Chair, WG leaders and Deputy Leaders, Manager)

Total: 11

Male: 10

Female: 1

ECIs: 3

STSMs: 7 (ECIs, male, 1 in GP1 & 6 in GP2)



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Regarding Gender Balance, the situation is in line with expectations. Promotion of gender balance will continue. The Action Chair thanks the Gender Balance Coordinator Catalina for the constant effort she puts in promoting the Action as well as Gender Balance.

Regarding ECIs, the situation is very good, with a substantial increase of participation of younger students to our Activities.

As for Inclusiveness, the situation is as follows:

Action participating countries

Total: 26

ITCs: 11

Action Members

Total: 184 (Lisbon: 126, Malta: 48)

ITCs: 26 (Lisbon: 24, Malta: 15)

(in brackets: situation at the previous MC meeting)

Core Group

Total: 11

ITCs: 3

Events: GP1 (100% in ITCs), GP2 (33% in ITCs), GP3 (0% in ITCs, so far)

As per MoU: at least 30% in ITCs. This year it has been difficult to organize events in ITCs, because several of them were attached to facilities (such ESA premises), which are located in non-ITC countries.

As for Excellence, the situation is the following:

Major scientific actors: contacted/involved. These include:

- Scientific community (constantly growing)
- Industrial community (growing)
- ESA (ESTEC and ESRIN)
- QT Flagship
- EC (DG GROW and DG CONNECT)

Strategic Report on “Quantum Technologies in Space”

<http://www.qtspace.eu/?q=strategicrep>

Participation to the writing of the “Supporting Quantum Technologies beyond H2020”

<https://qt.eu/news/working-paper-v1-1/>

Companies in contact with: Airbus Defense & Space, OHB, Airbus, SES, Thales Alenia Space, Optica, Single Quantum, PhotonSpot, E2V, British Telecom, Deutsche Telekom, ONERA, Lusospace, IDQ, Tekever, Embvraer, Muquans, iXBlue, e2V

10. Follow-up of MoU objectives: progress report of working groups

The Action Chair reminded the MC about the Objectives of the Action, as per MoU.

The review of the WG's activities has been presented. Discussion followed.

11. Scientific planning

- a) **Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)**
- b) **Action Budget Planning**
- c) **Long-term planning (including anticipated locations and dates of future activities)**
- d) **Dissemination planning (Publications and outreach activities)**

The Action Chair presented an overview of the GP goals, tasks and deliverables of each WG, as per MoU. The GP is only half way through, and the achievements of the goals is at a good stage.



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The GP2 budget needed revision

- Meetings were cheaper than expected
- Much less STSMs than expected

The situation is fully under control. GP2 ends in April 2018, there is plenty of time for planning.

As for future activities:

- Training School @ INSPYRE (Frascati, 1-5 April 2019)
- Workshop "Large-Mass Quantum Interferometry in Microgravity" (ZARM, 15-17 April 2019)
- Workshop on "Quantum Information and Measurement V" (Rome, 4-6 April 2019) → possibly in collaboration with the COST Action NQO. To be approved
- Activity in connection with AtomQT – To be defined

A revised budget plan will be prepared and sent to the MC for approval.

As for dissemination:

- Website QTSpace fully working and constantly updated (main activity)
 - Public area: for the wider community
 - Reserved area: for registered members (registration is moderated)
 - Collect information for statistics and reports
- Newsletters: 8 sent out so far
- Publications: needs to be updated → email to Action members
- Video "QTSpace: Learn from Laika the dog and Schrodinger's cat". Check on the QTSpace website

12. Requests to join the Action from:

- a) COST countries
- b) Institutions in Near Neighbouring Countries, International Partner Countries, and/or Specific Organisations: EU agencies, European RTD Organisation, International Organisations

No new request to be approved.

13. Preparation for the Progress Report

The Action Chair informs the MC that the Progress Report has to be prepared soon. It illustrates which type of information is required and how to gather it. The Core Group will assist the Chair in preparing the Report.

14. AOB

None

15. Location and date of next meeting

Yes to be decided.

16. Summary of MC decisions

No decision was taken, as there was no majority at the meeting

17. Closing

The Action Chair acknowledges support and assistance from:

- The COST Association (Dr. Fatima Bouchama and Ms. Cassia Azevedo)
- The MC
- The CG
- ESA (Bruno Leone)



The Action Chair reminds the MC members to sign the attendance list.

ANNEXES

Annex I. Agenda of the MC meeting.

Annex II. List of evotes

Annex III. Presentation by the Action Chair.



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COST Action CA15220
Action Title: Quantum Technologies in Space

Draft Agenda
Management Committee Meeting
Noordwijk, Netherlands
20 November 2018

1. Welcome to participants
2. Verification of the presence of two-thirds of the Participating COST Countries or, if applicable, a quorum
3. Adoption of agenda
4. Approval of minutes and matters arising of last meeting
5. Update from the Action Chair
 - a) Status of Action: start and end dates of Action, participating COST countries, participating NNC/IPC institutions and Specific Organisations.
 - b) Short Term Scientific Missions (STSM): review of completed reports and new applications
6. Update from the Grant Holder: Action budget status
7. Update from the COST Association, if a representative is present
8. Monitoring of the Action
9. Implementation of COST policies on:
 - a) Promotion of gender balance and Early Career Investigators (ECI)
 - b) Inclusiveness and Excellence (see below list of Inclusiveness Target Countries)
10. Follow-up of MoU objectives: progress report of working groups
11. Scientific planning
 - a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)
 - b) Action Budget Planning
 - c) Long-term planning (including anticipated locations and dates of future activities)
 - d) Dissemination planning (Publications and outreach activities)
12. Requests to join the Action from:
 - a) COST countries
 - b) Institutions in Near Neighbouring Countries, International Partner Countries, and/or Specific Organisations: EU agencies, European RTD Organisation, International Organisations
13. Preparation of the Progress Report
14. AOB
15. Location and date of next meeting
16. Summary of MC decisions
17. Closing



Da: Angelo Bassi bassi@ts.infn.it 
Oggetto: COST Action CA15220: Call for STSMs for GP3 (eVote)
Data: 23 maggio 2018 16:51

AB

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr
Cc: Mr Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Call for STSMs for GP3 (eVote)

Dear Friends and Colleagues,

attached is the new call for STSMs for GP3. As you can read from the text, I propose one single call with four collection dates:

30th June 2018
31st August 2018
31st October 2018
31st December 2018

After the last collection date, if there is still available money, applications for STSMs will be dealt with based on a "first come, first served" basis, till the end of GP3 (30th April 2019).

All other aspects are left unchanged with respect to the previous calls.

Deadline for voting: Wednesday 30 May 2018 (five working days).

No reply means that you approve.

Thank you and kind regards,
Angelo



STSM-
COST-...call.pdf

Da: Angelo Bassi bassi@ts.infn.it
Oggetto: COST Action CA15220: Result of eVote of 23rd May 2018 - Call for STSMs for GP3
Data: 31 maggio 2018 16:37

AB

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it , Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr

Cc: Mr Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 23rd May 2018 - Call for STSMs for GP3

Dear Friends and Colleagues,

as I received no objections regarding the latests eVote of 23rd May 2018, it is unanimously approved.

Thank you and kind regards,
Angelo

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Da: Angelo Bassi bassi@ts.infn.it 
Oggetto: COST Action CA15220: Participation of Bosnia and Herzegovina to the MC of QTSpace
Data: 10 settembre 2018 10:30
A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr
Cc: Gary Hall g.hall@qub.ac.uk



To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Participation of Bosnia and Herzegovina to the MC of QTSpace

Dear Friends and Colleagues,

welcome back from the summer holidays. Soon I will send out the newsletter with the forthcoming activities.

Meanwhile, I am writing because Bosnia and Herzegovina, through its CNC, would like to join our Action and nominate Dr. Miralem Mehic from the University of Sarajevo as MC member. Attached you can find his CV. According to COST rules, the Action's MC has to approve the request. Therefore I am writing to ask for approval for:

1. The Request of Bosnia and Herzegovina to join the Action.
2. The nomination of Dr. Mehic to the MC.

Deadline for voting: Monday 17th September 2018 (five working days).

No reply means that you approve.

Thank you and kind regards,
Angelo



CV_Miralem_Mehic_full.pdf

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Da: Angelo Bassi bassi@ts.infn.it
Oggetto: COST Action CA15220: Result of eVote of 10th September 2018 - Participation of Bosnia and Herzegovina to the MC of QTSpace



Data: 18 settembre 2018 10:53

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslavs Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromír Fiurásek fiurásek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr

Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 10th September 2018 - Participation of Bosnia and Herzegovina to the MC of QTSpace

Dear Friends and Colleagues,

as I received no objections regarding the latests eVote of 10th September 2018, it is unanimously approved.

Thank you and kind regards,
Angelo

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Strada Costiera 11
34151 Miramare-Trieste
ITALY

[Email: bassi@ts.infn.it](mailto:bassi@ts.infn.it)

Web: www.qmts.it

Da: Angelo Bassi abassi@units.it
Oggetto: COST Action CA15220: Participation of QTSpace to the Φ-week at ESA-ESRIN in Frascati (Italy)
Data: 21 settembre 2018 14:17



A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr

Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Participation of QTSpace to the Φ-week at ESA-ESRIN in Frascati (Italy)

Dear Friends and Colleagues,

The European Space Agency (ESA) is organising a Φ-week event focusing on EO Open Science and FutureEO - to review the latest developments in Open Science trends and kick-start innovative activities of the recently created Φ-department looking at FutureEO, and its associated Φ-lab aiming to identify, support and scale bold EO ideas. The event will be hosted in ESA-ESRIN in Frascati (Italy) from 12-16 November 2018. The link to the website is: <http://phiweek.esa.int>

On Thursday 15 November there will be a mini workshop organized in collaboration with QTSpace, on quantum computing for EO, and how that can help with applications related to data exploitation (AI, quantum machine learning, ...). The session will last about 4 hours and speakers will give an overview of the field in an interactive atmosphere.

Since the planned CG meeting in Istanbul did not take place, I am writing to ask for MC approval to use that money (10,000 Eur) for this workshop. The reimbursement rules are the standard COST rules (for a 1-day meeting and max two nights accommodation), expect for travel expenses, for which I propose a maximum of 500 Eur (exceptions are possible upon prior approval by the MC Chair).

You are welcome to attend the event by registering on the dedicated website (see link above). If you wish to apply for COST money, please contact Mauro (m.paternostro@qub.ac.uk).

Deadline for voting: Friday 28th September 2018 (five working days).

No reply means that you approve.

Thank you and kind regards,
Angelo

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34151 Miramare-Trieste
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[Email: abassi@units.it](mailto:abassi@units.it)
Web: www.qmts.it

Da: Angelo Bassi bassi@ts.infn.it
Oggetto: COST Action CA15220: ESTEC meeting on QT in Space + MC meeting (eVote)
Data: 27 settembre 2018 19:31
A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Dioso diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groebelacher s.groebelacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr
Cc: Gary Hall g.hall@qub.ac.uk



To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: ESTEC meeting on QT in Space + MC meeting (eVote)

Dear Friends and Colleagues,

as you know, on 20-21 November 2018, ESTEC will host the "3rd quantum technology - implementation workshop", organized in collaboration with us. It is one of the major events in this field, and you are welcome to attend. On the QTSpace website you will find relevant information.

The schedule will be similar to that of last year, meaning:

Day 1: from 09:00 to 18:00

Day 2: from 09:00 to 16:00

On day 1, from 18:15 to 19:30 we will have our annual MC meeting.

Changes in the schedule are still possible.

QTSpace will cover the costs of participation to both events (2 days, max 3 nights) according to the standard COST rules, except for travel expenses, for which I propose a maximum of 500 Eur (exceptions are possible upon prior approval by the MC Chair). I ask for your evote for this.

Registration to the workshop is mandatory, and the deadline is approaching. Check the QTSpace website for the relevant links.

If you wish to apply for COST money, please contact Mauro (m.paternostro@qub.ac.uk).

The program of the workshop will be announced soon.

The agenda of the MC meeting will be sent to you in due time.

Deadline for voting: Friday 4th October 2018 (five working days).

No reply means that you approve.

Thank you and kind regards,

Angelo

Da: Angelo Bassi bassi@ts.infn.it
Oggetto: COST Action CA15220: Result of eVote of 21st September 2018 - Participation of QTSpace to the Φ-week at ESA-ESRIN in Frascati (Italy)



Data: 1 ottobre 2018 18:34

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina MANISCALCO smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslavs Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromír Fiurásek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villoresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr

Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 21st September 2018 - Participation of QTSpace to the Φ-week at ESA-ESRIN in Frascati (Italy)

Dear Friends and Colleagues,

as I received no objections regarding the eVote of 21st September 2018, it is unanimously approved.

Thank you and kind regards,

Angelo

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Web: www.qmts.it

Da: Angelo Bassi bassi@ts.infn.it
Oggetto: COST Action CA15220: Result of eVote of 27th September 2018 - ESTEC meeting on QT in Space + MC meeting
Data: 5 ottobre 2018 09:50



A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr

Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 27th September 2018 - ESTEC meeting on QT in Space + MC meeting (eVote)

Dear Friends and Colleagues,

as I received no objections for the eVote of 27th September 2018, it is unanimously approved.

Thank you and kind regards,
Angelo

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Web: www.qmts.it

Da: Angelo Bassi bassi@ts.infn.it 
Oggetto: COST Action CA15220: Proposal for a COST workshop at ZARM / DLR-RY Bremen (eVote)
Data: 15 ottobre 2018 17:40
A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groebelacher s.groebelacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromír Fiurásek fiurásek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr
Cc: Gary Hall g.hall@qub.ac.uk

AB

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Proposal for a COST workshop at ZARM / DLR-RY Bremen (eVote)

Dear Friends and Colleagues,

Hendrik Ulbricht (WG3 Leader) and Lisa Wörner submitted the following request for a 3-day meeting, to be held at ZARM in April 2019. In the attached document you find the relevant information. I very much support this initiative and I ask for you eVote.

Budget wise, since the tentative meeting in Budapest originally planned (19.992,00 Eur) will not take place, we can use that money to cover the expenses of this initiative. The breakdown of costs is:

Number of expected total participants: 25

Number of participants to be reimbursed by COST: 25

Accommodation: 80 Eur/night (max 4 nights)

Travel: 300 Eur (exceptions are possible upon prior approval by the MC Chair)

Meals: as per COST rules (20x2 per day, depending on arrival and departures times)

TOTAL Requested amount: 18,500 Eur

Conference room will be provided by ZARM, as well as coffee breaks.

I ask for your eVote also with respect to the budget breakdown.

I remind you of the ESTEC event and the associated MC meeting. Please remember to register (as indicated in my previous emails).

Deadline for voting: Monday 22nd October (five working days).

No reply means that you approve.

Thank you and kind regards,
Angelo



Da: Angelo Bassi bassi@ts.infn.it
Oggetto: COST Action CA15220: Result of eVote of 15th October 2018 - Proposal for a COST workshop at ZARM / DLR-RY
Bremen



Data: 23 ottobre 2018 13:14

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslavs Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromír Fiurásek fiurásek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr

Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 15th October 2018 - Proposal for a COST workshop at ZARM / DLR-RY Bremen

Dear Friends and Colleagues,

as I received no objections for the eVote of 15th October 2018, it is unanimously approved.

Thank you and kind regards,
Angelo

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AB

Da: Angelo Bassi bassi@ts.infn.it

Oggetto: COST Action CA15220: Proposal for a COST training school at INSPYRE - Frascati, Italy (eVote)

Data: 4 novembre 2018 12:11

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it , Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr, Miralem Mehic miralem@mehic.info

Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Proposal for a COST training school at INSPYRE - Frascati, Italy (eVote)

Dear Friends and Colleagues,

Catalina Curceanu (MC representative from Italy and STSM manager & COST Mission and Policies Supervisor) asked for a contribution for a two-day school on QT in space, within the INSPYRE series. Since training schools are an important part of our duties as per MoU, I am very happy to support it.

The 2019 Edition of INSPYRE - INternational School on modern PhYsics and Research, "Challenges in Modern Physics and Quantum Technologies", is dedicated to the hottest topics, real challenges for a new generation of scientists, of Modern Physics and to the powerful Quantum Technologies envisaging a quantum supremacy technological era. The School is open to about 90 students in their last two years of high school coming from many countries. English is the official language of the school. See the link

<http://edu.lnf.infn.it/inspyre2018/>

for the previous edition.

Budget-wise, we have enough resources to allocate 15,000 Eur to the school.

The proposed budget breakdown is the following:

A. Speakers (foreseen 6 speakers)

Hotel: 80 Eur/night, max 3 nights

Meals: 2 x 20 Eur/day, max 3 days

Travel: Max 400 Eur (exceptions are possible upon prior approval by the MC Chair)

B. Students (a selection among all participants)

Lump sum: 300 Eur per student

I kindly ask for your approval, both of the initiative as well as of the budget breakdown.

Deadline for voting: Friday 9th November (five working days).

No reply means that you approve.

Thank you and kind regards,

Angelo

Da: Angelo Bassi abassi@units.it 
Oggetto: COST Action CA15220: Agenda of the 4th MC meeting
Data: 8 novembre 2018 11:46



A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr, Miralem Mehic miralem@mehic.info
Cc: Fatima Bouchama fatima.bouchama@cost.eu, Cassia Azevedo Cassia.Azevedo@cost.eu, Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Science and Administrative Officer

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Agenda of the 4th MC meeting

Dear Friends and Colleagues,

as you already know, on 20th November 2018 we will have our 4th MC meeting, at the ESTEC premises in Noordwijk (NL), starting at 18:00. The previous meetings were in Brussels (kick off), Malta and Lisbon.

I attach the agenda of the meeting.

If you haven't done it yet, please register to the event by following the instructions contained on the QTSpace website (see also previous emails by Mauro and me).

Looking forward to meeting you at ESTEC.

Kind regards,

Angelo



COST Action CA15220
Action Title: Quantum Technologies in Space

Draft Agenda
Management Committee Meeting

1. Welcome to participants
2. Verification of the presence of two-thirds of the Participating COST Countries or, if applicable, a quorum
3. Adoption of agenda
4. Approval of minutes and matters arising of last meeting
5. Update from the Action Chair
 - a) Status of Action: start and end dates of Action, participating COST countries, participating NNC / IPC institutions and Specific Organisations.
 - b) Short Term Scientific Missions (STSM): review of completed reports and new applications
6. Update from the Grant Holder: Action budget status
7. Update from the COST Association, if a representative is present
8. Monitoring of the Action
9. Implementation of COST policies on:
 - a) Promotion of gender balance and Early Career Investigators (ECI)
 - b) Inclusiveness and Excellence (see below list of Inclusiveness Target Countries)
10. Follow-up of MoU objectives: progress report of working groups
11. Scientific planning
 - a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)
 - b) Action Budget Planning
 - c) Long-term planning (including anticipated locations and dates of future activities)
 - d) Dissemination planning (Publications and outreach activities)
12. Requests to join the Action from:
 - a) COST countries
 - b) Institutions in Near Neighbouring Countries, International Partner Countries, and/or Specific Organisations: EU agencies, European RTD Organisation, International Organisations
13. Preparation of the Progress Report
14. AOB
15. Location and date of next meeting
16. Summary of MC decisions
17. Closing

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Da: Angelo Bassi bassi@ts.infn.it
Oggetto: COST Action CA15220: Result of eVote of 4th November 2018 - Proposal for a COST training school at INSPYRE - Frascati, Italy
Data: 11 novembre 2018 11:16
A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslavs Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromír Fiurásek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr, Miralem Mehic miralem@mehic.info
Cc: Gary Hall g.hall@qub.ac.uk



To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 4th November 2018 - Proposal for a COST training school at INSPYRE - Frascati, Italy

Dear Friends and Colleagues,

as I received no objections to the eVote of 4th November 2018, it is unanimously approved.

Thank you and kind regards,
Angelo

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34151 Miramare-Trieste
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[Email: bassi@ts.infn.it](mailto:bassi@ts.infn.it)
Web: www.qmts.it

Da: Angelo Bassi abassi@units.it 
Oggetto: COST Action CA15220: Minutes of the ESTEC MC meeting
Data: 7 gennaio 2019 11:04



A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifs.hr, Miralem Mehic miralem@mehic.info
Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members, Substitute Members and Observers of the COST Action CA15220 "Quantum Technologies in Space"

Subject: Minutes of the ESTEC MC meeting

Dear Friends and Colleagues,

attached are the minutes of the ESTEC MC meeting of last November. Shortly they will be uploaded on the QTSpace website (in the reserved area), together with the listed attachments, which I do not include to this email to keep it light.

I wish to thank Bruno Leone for the excellent organization of the event and ESA for the very kind hospitality.

Kind regards,
Angelo



MCM4_Minutes_
CA15220.pdf

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34151 Miramare-Trieste
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[Email: abassi@units.it](mailto:abassi@units.it)
Web: www.qmts.it

Da: Angelo Bassi abassi@units.it
Oggetto: COST Action CA15220: New WG2 meeting in Olomuc (eVote)
Data: 24 febbraio 2019 18:29
A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it , Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groebelacher s.groebelacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromír Fiurásek fiurásek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, Serkan Ateş serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifsr.hr, Miralem Mehic miralem@mehic.info
Cc: Gary Hall g.hall@qub.ac.uk



To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: New WG2 meeting in Olomuc (eVote)

Dear Friends and Colleagues,

I hope this email finds you all well. The current grant period (GP3) will come to an end in about two months; we have a new proposal for a WG meeting (we still have some leftover money, as reported at the last MC meeting). I am writing to ask for your approval:

Title: Next steps towards a quantum physics platform in space

Place: Olomouc - Czech Republic (precise location to be defined soon)

Dates: April 11-12, 2019

In 2017, the topic of testing quantum physics in space with a focus on the boundaries of and the relationship between quantum and classical physics, in particular investigating the aspects known as quantum decoherence, was selected as a topic of interest in the context of the European Space Agency's (ESA) call for New Science Ideas. As a result, a detailed feasibility study was performed in 2018 at ESA's Concurrent Design Facility. While the study confirmed the feasibility of the mission concept, it also identified two critical issues that will need to be addressed in future mission proposals. At the meeting in Olomouc, the goal will be to discuss addressing these critical issues, to foster the formation of a consortium to push the future implementation of a space mission to test the foundations of physics. Particular effort will be put on discussing necessary technology developments in the handling of high-mass test particles and in assuring the required environmental conditions for macroscopic quantum experiments in space.

Organizers: R. Kaltenbaek, V. Usenko, R. Filip

Proposed budget: 17.000 Eur

Breakdown of costs:

- Accommodation: 80 Eur/night (max 3 nights).
- Travel: max 300 Eur (exceptions are possible, under prior approval of the Action Chair).
- Meals as per COST rules.
- Local transport and taxi as per COST rules.

Deadline for voting: Friday 1st March 2018.

No reply means that you approve.

Thank you and kind regards,

Da: Angelo Bassi bassi@ts.infn.it
Ogetto: COST Action CA15220: Result of eVote of 24th February 2019 - New WG2 meeting in Olomuc
Data: 4 marzo 2019 15:18

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina MANISCALCO smanis@utu.fi , Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it , Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, Serkan Ateş serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifsrh.hr, Miralem Mehic miralem@mehic.info

Cc: Gary Hall g.hall@qub.ac.uk



To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 24th February 2019 - New WG2 meeting in Olomuc

Dear Friends and Colleagues,

I received no objection to the eVote of 24th February 2019, it is unanimously approved.

Thank you and kind regards,
Angelo

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[Email: bassi@ts.infn.it](mailto:bassi@ts.infn.it)
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Da: Angelo Bassi bassi@ts.infn.it 
Oggetto: COST Action CA15220: Workshop in Rome (eVote)

AB

Data: 10 marzo 2019 21:14

A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it, Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groebelacher s.groebelacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruner valerio.pruner@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, Serkan Ateş serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifsr.hr, Miralem Mehic miralem@mehic.info

Cc: Gary Hall g.hall@qub.ac.uk

To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Workshop in Rome (eVote)

Dear Friends and Colleagues,

I am writing to ask for your approval for another activity we will carry on during the current GP. It is a satellite event and thematic session at the conference "Quantum Information and Measurement V: Quantum Technologies", Rome 4–6 April 2019. Herewith attached you may find the relevant information. The allocated budget is 15,000 Eur and the reimbursement rules are the standard COST ones.

Deadline for voting: Friday 15th March 2019.

No reply means that you approve.

Thank you and kind regards,
Angelo



Doc12.pdf

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Web: www.qmts.it

Da: Angelo Bassi bassi@ts.infn.it
Ogetto: COST Action CA15220: Result of eVote of 10th March 2019 - Workshop in Rome
Data: 18 marzo 2019 13:45
A: Angelo Bassi bassi@ts.infn.it, Mauro Paternostro m.paternostro@qub.ac.uk, Rupert Ursin rupert@ursin.com, Rainer Kaltenbaek rainer.kaltenbaek@univie.ac.at, Vladyslav Usenko usenko@optics.upol.cz, Albert Roura albert.roura@uni-ulm.de, Christoph Marquardt christoph.marquardt@mpl.mpg.de, Michael Drewsen drewsen@phys.au.dk, Maciej Lewenstein maciej.lewenstein@icfo.es, Romain QUIDANT romain.quidant@icfo.es, Philippe BOUYER philippe.bouyer@institutoptique.fr, Antoine Heidmann antoine.heidmann@lkb.upmc.fr, Sabrina Maniscalco smanis@utu.fi, Gheorghe-Sorin Paraoanu sorin.paraoanu@aalto.fi, Lucia Hackermuller lucia.hackermuller@nottingham.ac.uk, Wolf von Klitzing wvk@iesl.forth.gr, Savvidis Ioannis i.savvidis@cmc.gov.gr, Lajos Diosi diosi.lajos@wigner.mta.hu, Géza Toth geza.toth.hu@gmail.com, Mario Stipcevic mario.stipcevic@irb.hr, Catalina Curceanu catalina.curceanu@lnf.infn.it , Guglielmo Tino tino@fi.infn.it, Hagai Eisenberg hagai.eisenberg@huji.ac.il, Alexander RETZKER retzker@phys.huji.ac.il, Emanuele Pelucchi emanuele.pelucchi@tyndall.ie, Vyacheslav Kashcheyevs slava@latnet.lv, Marcis Auzinsh Marcis.Auzins@lu.lv, Andre Xuereb andre.xuereb@um.edu.mt, joakim.bergli@fys.uio.no, lars.m.johansen@hbv.no, Simon Groeblacher s.groeblacher@tudelft.nl, Yasser Omar yasser.omar@lx.it.pt, Jose Leitao jleitao@lx.it.pt, Jaroslaw Miszczak jarek@miszczak.eu, Radu Ionicioiu r.ionicioiu@theory.nipne.ro, marius.trusulescu@spacescience.ro, boure@fysik.su.se, Jan-Åke Larsson jan-ake.larsson@liu.se, Mario Ziman ziman@savba.sk, Özgür Müstecaplıoğlu omustecap@ku.edu.tr, Humeyra Caglayan hcaglayan@bilkent.edu.tr, Andre Stefanov andre.stefanov@iap.unibe.ch, ulrik.andersen@fysik.dtu.dk, Fabian Steinlechner Fabian.Steinlechner@univie.ac.at, Nikolai Kiesel nikolai.kiesel@univie.ac.at, Jaromir Fiurasek fiurasek@optics.upol.cz, Radim Filip filip@optics.upol.cz, Erik Beckert erik.beckert@iof.fraunhofer.de, Claus Laemmerzahl claus.laemmerzahl@zarm.uni-bremen.de, Valerio Pruneri valerio.pruneri@icfo.es, Serge Reynaud serge.reynaud@upmc.fr, Astrid Lambrecht astrid.lambrecht@upmc.fr, Hendrik Ulbricht h.ulbricht@soton.ac.uk, Laszlo Bacsardi bacsardi@inf.nyme.hu, Paolo Villaresi paolo.villaresi@dei.unipd.it, David Vitali david.vitali@unicam.it, kjetil.borkje@usn.no, Markku Jaaskelainen mjk@du.se, Landragin ARNAUD arnaud.landragin@obspm.fr, Ivette FUENTES ivette.fuentes@nottingham.ac.uk, Eric Wille eric.wille@esa.int, Bruno.Leone@esa.int, Eamonn Murphy - ESA eamonn.murphy@esa.int, Serkan Ateş serkanates@iyte.edu.tr, Humeyra Caglayan humeyra.caglayan@tut.fi, Ticijana Ban ticijana@ifr.hr, Miralem Mehic miralem@mehic.info
Cc: Gary Hall g.hall@qub.ac.uk



To: MC Members of the COST Action CA15220 "Quantum Technologies in Space"

Cc: Substitute Members and Observers

Gary Hall (Action's Manager)

Subject: Result of eVote of 10th March 2019 - Workshop in Rome

Dear Friends and Colleagues,

I received no objection to the eVote of 10th March 2019, it is unanimously approved.

Thank you and kind regards,
Angelo

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COST Action CA15220

QTSpace: Quantum Technologies in Space



4th Management Committee Meeting
Noordwijk, 20th November 2018

Angelo Bassi – Action Chair

Verification of the presence

COUNTRY	PRESENCE
Austria	
Bosnia & Herzegovina	
Croatia	
Czech Republic	
Denmark	
Finland	
France	
Germany	
Greece	
Hungary	
Ireland	
Israel	
Italy	
Latvia	
Malta	
Netherlands	
Norway	
Poland	

COUNTRY	PRESENCE
Portugal	
Romania	
Slovakia	
Spain	
Sweden	
Switzerland	
Turkey	
United Kingdom	
TOTAL: 26	TOTAL PRESENT:

COUNTRY	PRESENCE
ESA	Bruno Leone
ESA	Eamonn Murphy
ESA	Erik Wille

The Management Committee is comprised of up to two MC Members per Participating COST Country [...]

Simple majority vote at a MC Meeting - decisions taken at MC Meetings by majority vote can only take effect if at least **two-thirds** of the Participating COST Countries **are present** and have their vote recorded - each Participating COST Country has one vote.

Agenda

1. Welcome to participants
2. Verification of the presence of two-thirds of the Participating COST Countries or, if applicable, a quorum
3. Adoption of agenda
4. Approval of minutes and matters arising of last meeting
5. Update from the Action Chair
 - a) Status of Action: start and end dates of Action, participating COST countries, participating NNC/IPC institutions and Specific Organisations.
 - b) Short Term Scientific Missions (STSM): review of completed reports and new applications
6. Update from the Grant Holder: Action budget status
7. Update from the COST Association
8. Monitoring of the Action
9. Implementation of COST policies on:
 - a) Promotion of gender balance and Early Career Investigators (ECI)
 - b) Inclusiveness and Excellence
10. Follow-up of MoU objectives: progress report of working groups
11. Scientific planning
 - a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)
 - b) Action Budget Planning
 - c) Long-term planning (including anticipated locations and dates of future activities)
 - d) Dissemination planning (Publications and outreach activities)
12. Requests to join the Action from:
 - a) COST countries
 - b) Institutions in Near Neighbouring Countries, International Partner Countries, and/or Specific Organisations: EU agencies, European RTD Organisation, International Organisations
- 13. Preparation of the Progress Report**
14. AOB
15. Location and date of next meeting
16. Summary of MC decisions
17. Closing

4. Approval of minutes and matters arising of last meeting

Approval of minutes of last MC meeting

Lisbon – 14th September 2017. Minutes sent to MC on 28th September 2017

Matters arising in last meeting

None

MC eVotes:

- 19/12/2017: Update of Work Plan for Grant Period 2
- 24/01/2018: Reimbursement rules for the Erlangen, Bratislava and Vienna
- 20/03/2018: Meeting in Oberkochen & STSMs - Update of Work Plan for GP2
- 29/03/2018: Budget increase for the forthcoming meeting in Vienna
- 22/04/2018: New meeting + reimbursement rules for GP2
- 23/05/2018: Call for STSMs for GP3
- 10/09/2018: Participation of Bosnia and Herzegovina to the MC of QTSpace
- 21/09/2018: Participation of QTSpace to the Φ-week at ESA-ESRIN
- 27/09/2018: ESTEC meeting on QT in Space + MC meeting
- 15/10/2018: Proposal for a COST workshop at ZARM / DLR-RY Bremen, Germany
- 04/11/2018: Proposal for a COST training school at INSPYRE - Frascati, Italy

+ Regular updates and 7 Newsletter (22/11/2017, 01/02/2018, 23/02/2018, 26/03/2018, 12/06/2018, 25/09/2018, 31/10/2018)

5. Update from the Action Chair

a) Status of Action: start and end dates of Action, participating COST countries, participating NNC/IPC institutions and Specific Organisations

Start Date: 20 October 2016

End date: 19 October 2020

Now: end of second year

Participating COST countries (25 + 1): Austria, **Bosnia and Herzegovina**, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom.

Participating NNC/IPC institutions: None

Specific Organizations: ESA

5. Update from the Action Chair

b) Short Term Scientific Missions (STSM): review of completed reports and new applications

From the eVote of 23/05/2018

Four collections dates

30th June 2018

31st August 2018

31st October 2018

31st December 2018

After the last collection date, if there is still available money, applications for STSMs will be dealt with based on a “first come, first served” basis, till the end of GP3 (30th April 2019).

Available budget: 4800Eur

Cost per STSM: 800 Eur (estimated number of STSM: 6)

Critical points: 1 received, but not done because of visa problems

Actions to take: No idea (information has been sent out: website, newsletter, emails), this problem was already present during the previous GPs.

6. Update from the Grant Holder: Action budget status

Planned – approved by MC

Activity	Eur
Meetings Istanbul: 10.000,00 Eur Bern: 33.010,00 Eur ESTEC: 45.986,00 Eur Budapest: 19.992,00 Eur	108.988,00 Eur
Training School	0,00 Eur
STSMs	4.800,00 Eur
ITC Conference Grant	3.000,00 Eur
Dissemination	0,00 Eur
OERSA (Bank charges)	603,30 Eur
Subtotal	117.391,30 Eur
FSAC (overheads) 15% of subtotal	17.608,70 Eur
TOTAL	135.000,00 Eur

Current status

Activity	Eur
Meetings Bern: 13.878,54 Eur ESRIN: 4.000,00 Eur (estimation) ESTEC: 28.500,00 Eur (estimation) ZARM: 15.000,00 Eur (allocated) <i>Rome: 12.000,00 Eur (requested)</i>	73.378,54 Eur
Training School Frascati	15.000,00 Eur
STSMs	4.800,00 Eur
ITC Conference Grant	3.000,00 Eur
Dissemination	0,00 Eur
OERSA (Bank charges)	603,30 Eur
Subtotal	96.781,84 Eur

7. Update from the COST Association

None

8. Monitoring of the Action

Things are going very well

PLUS

A large community has been reached. Coordination activities work

Meetings: Plenty of activities

Collaboration with ESA (ESTEC and ESRIN)

Collaboration with the QT Flagship

Ongoing discussions with the EC (DG GROW and DG CONNECT)

MINUS

STSMs: not working

9. Implementation of COST policies

a) Promotion of gender balance and Early Career Investigators (ECI)

Action's members (member = who registered on the Action website)

Total: 184 (Lisbon: 126, Malta: 48)

Male: 166 (Lisbon: 115, Malta: 45)

Female: 18 (Lisbon: 11, Malta: 3)

ECIs: 81 (Lisbon: 56, Malta: 10)

Core Group (Chair, Deputy Chair, WG leaders and Deputy Leaders, Manager)

Total: 11

Male: 10

Female: 1

ECIs: 3

STSMs: 7 (ECIs, male, 1 in GP1 & 6 in GP2)

MoU

Gender balance. QTSpace already includes a significant representation from female scientists (in line with typical percentage in the community). The Action will ensure that female members of QTSpace take leading roles in its management. Moreover, suitable measures will be taken to facilitate the participation of female scientists to any meeting of QTSpace, whenever necessary (for example in the form of childcare facilities). Finally, the Action will liaise with any country-specific initiative for the enhancement of the participation of women in science to establish factual joint-programme for the stimulation of a balanced contribution from all genders.

Early Career Investigators (ECIs). Significant space will be given to ECIs as speakers at workshops and conferences. ii. Participation of ECIs to Action's events will be supported through targeted measures of financial support. iii. WG Vice Leaders will be selected among ECIs (or, in any case, among junior researchers). iv. In the selection of STSMs, priority will be given to ECIs.

9. Implementation of COST policies

b) Inclusiveness

Action participating countries

Total: 26

ITCs: 11

Action's Members

Total: 184 (Lisbon: 126, Malta: 48)

ITCs: 26 (Lisbon: 24, Malta: 15)

Core Group

Total: 11

ITCs: 3

MoU

ITC participation. QTSpace will be advertised to colleagues working in ITCs to encourage their active participation in the Action, above and beyond the level of participation from such countries that have already been secured (9 countries already). Action members from ITCs will be given leading roles in the Action and at least 30% of the QTSpace events will be organized in ITCs.

Events: GP1 (100% in ITCs), GP2 (33% in ITCs), **GP3 (0% in ITCs, so far)**

As per MoU: at least 30% in ITCs

Inclusiveness countries: Bosnia-Herzegovina, Bulgaria, Cyprus, Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Luxembourg, Malta, Montenegro, Poland, Portugal, Romania, Slovenia, Slovakia, the former Yugoslav Republic of Macedonia, Republic of Serbia and Turkey.

9. Implementation of COST policies

b) Excellence

Major scientific actors: contacted/involved. These include:

- Scientific community (constantly growing)
- Industrial community (growing)
- ESA (ESTEC and ESRIN)
- QT Flagship
- EC (DG GROW and DG CONNECT)

Strategic Report on “Quantum Technologies in Space”

<http://www.qtspace.eu/?q=strategicrep>

Participation to the writing of the “Supporting Quantum Technologies beyond H2020”

<https://qt.eu/news/working-paper-v1-1/>

Companies

Airbus Defense & Space, OHB, Airbus, SES, Thales Alenia Space, Optica, Single Quantum, PhotonSpot, E2V, British Telecom, Deutsche Telekom, ONERA, Lusospace, IDQ, Tekever, Embvraer, Muquans, iXBlue, e2V

10. Follow-up of MoU objectives: progress report of working groups

WG1: Fundamental science studies

→ André Xuereb

WG2: Applications

→ Rainer Kaltenbaek

WG3: Proof-of-principle experiments

→ Hendrik Ulbricht

WG4: Implementations

→ Christoph Marquardt



Bern (8-12/10): Quantum photonics technologies in space (workshop)



ESTEC (20-21/11): Quantum technology – implementation for space (workshop + MC)



Bremen (15-17/04): Large mass Q-interferometry in μg (workshop)



ESRIN (15/11): Workshop on Quantum Computing for EO

INFN (01-05/04): School @ INSPYRE

Rome (04-06/04):
V Quantum Information and measurement (conference)



11. Scientific planning

a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)

Challenge: Develop core technologies for space applications of quantum mechanics and the understanding of the foundations of physics.

1. Identify fundamental questions to be addressed as well as the scientific/technical requirements to perform related experimental tests in space.
2. Identify possible applications of quantum technology in space, define the scientific and technical requirements.
3. Identify principles that should be demonstrated on ground, coordinate which experiments to perform.
4. Share knowledge with respect to available technologies and experimental techniques for performing experiments in space-relevant settings.
5. Identify common challenges regarding technology needs, mission parameters, mission design.
6. Technology development in international cooperation, with space agencies and with industrial partners.
7. Share experience and coordinate efforts in hardware testing in space-relevant environments (vibrations, radiation hardness, vacuum, cryogenic environment, temperature cycling, etc.).
8. Identify funding opportunities, communication with funding agencies.
9. Further broaden international support by researchers and their respective national space agencies.
10. Identify and coordinate technology-development or mission-proposal opportunities, communication with industry and space agencies.
11. Identify common ground and possible synergies.
12. Exchange know-how related to hardware testing, space-relevant proof-of-principle experiments, data acquisition and evaluation, mission design, ground-segment operation.
13. Share relevant contacts to industry, funding agencies and national agencies.

11. Scientific planning

a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)

GP1 Goals

1. Identify the most relevant fundamental questions to be addressed, for space missions; initiate the discussion about the scientific/technical requirements.
2. Identify first applications of quantum technology in space; initiate the discussion about the scientific and technical requirements.
3. Initiate the discussion about principles that should be demonstrated on ground before launching a space mission.
4. Initiate the discussion about common challenges on technology needs for space missions, mission parameters, mission design, technology.

GP2 Goals

1. Identify potential industrial partners and their specific interests for quantum technologies in space
2. Identify potential applications of quantum technology in fundamental tests of physical principles in space
3. Define the state of the art of proof of principle experiment relevant for quantum experiments in space and expectations for tests needed in the near future.
4. Identify experimental ideas for implementing quantum technologies in space and define a brief guideline of implementation challenges, including the identification of the theoretical developments needed to enable such experimental endeavours.
5. Train researchers, as well as private and public sector stakeholders, interested in quantum technologies in space.

GP3 Goals

Number	Grant Agreement Period Goal	MoU Objective(s) it relates to	
GAPG 1	Identify the future challenges in fundamental science addressable by long-haul photonics architectures.	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 2 • Secondary objective 4 	<p>Bern + Rome</p> <p>Bremen + Frascati</p> <p>Coming</p> <p>ESRIN</p>
GAPG 2	Define the foreseeable pathway that Europe should follow to remain relevant in the current race for quantum communication through space-based channels.	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 2 • Secondary objective 4 	
GAPG 3	Understand the steps needed to translate existing technology towards photonics channels for quantum communication via space.	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 2 • Secondary objective 4 	
GAPG 4	Promote scientific collaborations and the exchange of researchers.	<ul style="list-style-type: none"> • Secondary objective 4 • Secondary objective 5 • Secondary objective 6 • Secondary objective 12 	
GAPG 5	Promote Quantum Technologies in Space to the scientific community, to the space agencies, to the policy makers, to the general public.	<ul style="list-style-type: none"> • Secondary objective 4 • Secondary objective 7 • Secondary objective 9 • Secondary objective 13 	
GAPG 6	Identify the future challenges in fundamental science addressable by cold atom QTSpace.	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 2 • Secondary objective 4 	
GAPG 7	Define the foreseeable pathway that Europe should follow to remain relevant in the current race for cold atom QT in space.	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 2 • Secondary objective 4 	
GAPG 8	Understand the steps needed to translate existing cold atom technology towards space.	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 2 • Secondary objective 4 	
GAPG 9	Coordinate the Action and engage with the different stakeholders	<ul style="list-style-type: none"> • Challenge • Secondary objective 2 • Secondary objective 4 • Secondary objective 8 • Secondary objective 9 • Secondary objective 11 • Secondary objective 13 	

11. Scientific planning

a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)

WG1: Fundamental Studies

TASKS

- T1.1) Evaluate tests of fundamental theories in a space environment.
- T1.2) Evaluate experimental possibilities to test fundamental theories.
- T1.3) Explore the possibility of joint space mission for the different experimental platforms.

DELIVERABLES

- D1.1) List of experiments with different physical systems [scientific paper].
- D1.2) List of fundamental tests [report].
- D1.3) List of key parameters to enable tests [technical paper].
- D1.4) Information about possible joint mission [report].

WG2: Applications

TASKS

- T2.1) Technology developments (from proof of principles to applications) with industrial partners.
- T2.2) Link to industry partners to develop enabling technologies for space experiment.
- T2.3) Investigate applications of quantum technologies outside fundamental tests.
- T2.4) Investigate the need of society and industry for QT in space.

DELIVERABLES

- D2.1) At least two identified concrete applications of QT in space [white paper].
- D2.2) List of technical requirements for each application [technical paper].
- D2.3) Two alternative paths for each realization of applications in D2.1 [technical paper].
- D2.4) Industrial partners identified with interest/need in QT in space [report].

WG3: Proof-of-Principle Experiments

TASKS

- T3.1) Define the experimental details of each envisaged test in space.
- T3.2) Check the technical availability for space approved technology.
- T3.3) Definition of outstanding proof-of-principle tests.
- T3.4) Planning of Earth-based tests: parabola flights, drop tower, sounding rockets etc.

DELIVERABLES

- D3.1) List of experimental parameters to be reached for each envisaged test [scientific paper].
- D3.2) List of status quo of technology in space [review paper].
- D3.3) Delivery of realistic time schedule for outstanding proof-of-principle tests [scientific paper].
- D3.4) Plan for strategic preparation of space missions based on experimental reality [white paper].

WG4: Implementation

TASKS

- T4.1) Identify common challenges regarding technology needs, mission parameters and design.
- T4.2) Technology development in cooperation with space agencies and industrial partners.
- T4.3) Share experience and coordinate efforts in hardware testing in space-relevant environments.
- T4.4) Further international support by researchers and their respective national space agencies.
- T4.5) Identify and coordinate technology-development and mission-proposal opportunities.

DELIVERABLES

- D4.1) List of mission parameters [report].
- D4.2) List of technology [report].
- D4.3) List of partners [report].
- D4.4) List of opportunities [white paper].

11. Scientific planning

b) Action Budget Planning

The use of GP2's budget is work in progress (impossible/unnecessary to plan everything one year ahead).

Information and eVote for future activities will be sent out in due time.

Happy to receive suggestions for future activities!

11. Scientific planning

c) Long-term planning (including anticipated locations and dates of future activities)

Training School @ INSPYRE (Frascati, 1-5 April 2019)

Workshop “Large-Mass Quantum Interferometry in Microgravity ” (ZARM, 15-17 April 2019)

Workshop on "Quantum Information and Measurement V" (Rome, 4-6 April 2019) → possibly in collaboration with the COST Action NQO.

Activity in connection with AtomQT – to be defined

Plan for GP3 Period (May 2019 – April 2020): too early

11. Scientific planning

d) Dissemination planning (Publications and outreach activities)

Website QTSpace (main activity)

- Public area: for the wider community
- Reserved area: for registered members (registration is moderated)
- Collect information for statistics and reports

Newsletters: 8 sent out so far

Publications: needs to be updated → email to Action members

Video “QTSpace: Learn from Laika the dog and Schrodinger's cat”

Check on the QTSpace website

12. Requests to join the Action

a) COST countries

No pending request

b) Institutions in Near Neighbouring Countries, International Partner Countries, and/or Specific Organisations: EU agencies, European RTD Organisation, International Organisations

No new request

13. Preparation of the Progress Report

3.1.2. GANTT Diagram (MCm = MC meeting, WGm = WG meeting, Ws = Workshop, TS = Training School, M = milestone, D = deliverable).

Working Groups	Tasks	Year 1	Year 2	Year 3	Year 4
WG1 Activities: 1 WGm + Ws per year. 1 TS, year 1. STSMs.	T1.1	M1.1	D1.1		
	T1.2		M1.1, D1.2	M1.3	D1.3
	T1.3				M1.4, D1.4
WG2 Activities: 1 WGm + Ws per year. 1 TS, year 2. STSMs.	T2.1	M2.1	D2.1		
	T2.2		M2.2	D2.2	
	T2.3		M2.3		D2.3
	T2.4			M2.4	D2.4
WG3 Activities: 1 WGm + Ws per year. 1 TS, year 3. STSMs.	T3.1	M3.1	D3.1		
	T3.2	M3.2	D3.2		
	T3.3		M3.3		D3.3
	T3.4			M3.4	D3.4
WG4 Activities: 1 WGm + Ws per year. 1 TS, year 4. STSMs.	T4.1		M4.1	D4.1	
	T4.2		M4.2		D4.2
	T4.3		M4.3		D4.3
	T4.4			M4.4	
	T4.5				D4.4
Kick Off meeting		Month 0			
MC meetings		Month 11	Month 23	Month 35	Month 47
International Action Conferences		With MCm	With MCm	With MCm	With MCm
STSMs					
Progress & Final Report			Month 18	Month 36	Month 48

13. Preparation of the Progress Report

Milestones

WG1: Fundamental Studies

- M1.1) Revision and definition of key experiments using photons or atoms or large particles.
- M1.2) Definition of key fundamental tests to be done.
- M1.3) Definition of key parameters for planned experiments.
- M1.4) Definition of possible joint missions.

WG2: Applications

- M2.1) Identified applications of quantum technologies in space.
- M2.2) Define the technical requirements for QT in space.
- M2.3) Define pathway to reach technical requirements.
- M2.4) Links to industry.

WG3: Proof-of-Principle Experiments

- M3.1) Definition of experiments to be done in space.
- M3.2) Assessment of status quo of technological readiness for space.
- M3.3) Coordination of outstanding proof-of-principle tests.
- M3.4) Definition of realistic scenarios for space missions.

WG4: Implementation

- M4.1) Definition of mission parameters for each envisaged mission.
- M4.2) Assessment of status quo of technology and definition of further [needed] technologies.
- M4.3) Definition of industrial partners to develop technology to reach mission parameters.
- M4.4) Definition of mission opportunities [funding] and pathways to reach technical readiness.

13. Preparation of the Progress Report

Deliverables

WG1: Fundamental Studies

- D1.1) List of experiments with different physical systems [scientific paper].
- D1.2) List of fundamental tests [report].
- D1.3) List of key parameters to enable tests [technical paper].
- D1.4) Information about possible joint mission [report].

WG2: Applications

- D2.1) At least two identified concrete applications of QT in space [white paper].
- D2.2) List of technical requirements for each application [technical paper].
- D2.3) Two alternative paths for each realization of applications in D2.1 [technical paper].
- D2.4) Industrial partners identified with interest/need in QT in space [report].

WG3: Proof-of-Principle Experiments

- D3.1) List of experimental parameters to be reached for each envisaged test [scientific paper].
- D3.2) List of status quo of technology in space [review paper].
- D3.3) Delivery of realistic time schedule for outstanding proof-of-principle tests [scientific paper].
- D3.4) Plan for strategic preparation of space missions based on experimental reality [white paper].

WG4: Implementation

- D4.1) List of mission parameters [report].
- D4.2) List of technology [report].
- D4.3) List of partners [report].
- D4.4) List of opportunities [white paper].

13. Preparation of the Progress Report

Other data

List of publications: those with authors (Action participants) from at least two different countries

Bibliographic data	Countries participating in the Action among authors	Open Access	COST cited?	COST funds?	Relevance to H2020 Societal challenge	Peer Reviewed?

Research grants: from at least one Action participant

#	Title	Countries participating in the Action among proposers	Main proposer name	Funder	Amount	Call identifier	Relevance to H2020 Societal Challenge

Any additional achievement

Description of the impact, i.e. what will change, and for whom, as a result of what the Action achieved	Type of impact	Timing of impact

14. AOB

...

15. Location and date of next meeting

Yet to be defined

Still in connection to ESA meetings?

16. Summary of MC decisions

None, as we do not have the 2/3 majority

17. Closing

Many thanks to:

- The COST Association (Fatima and Cassia)
- The MC
- The CG
- ESA and EC for positive discussions and feedback
- Local organizers of the ESTEC meeting (B. Leone)

REMEMBER to sign the attendance list!!!