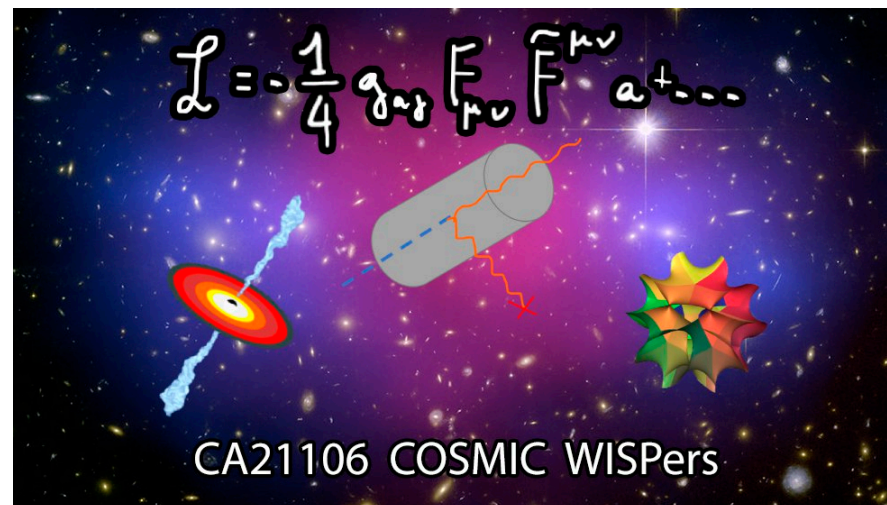
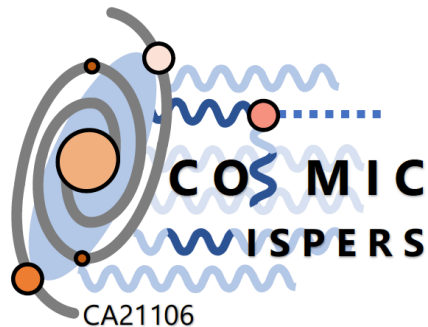


COST ACTION CA21106

COSMIC WISPerS in the Dark Universe:

Theory, astrophysics and experiments

Alessandro Mirizzi
(Bari Univ. & INFN, Italy)



Funded by the
European Union

**COST Action CA21106: "COSMIC WISPerS in the Dark Universe: Theory, astrophysics and experiments"
Management Committee Meeting
Draft Agenda
From 05/09/2023 at 09:00:00 to 08/09/2023 at 18:00:00
Hybrid, Bari, Italy
Centro Polifunzionale Studenti (ex Palazzo delle Poste e Telegrafi), Bari, Italy**

1. Welcome to participants, verification of the quorum and adoption of agenda
2. Information to the MC
 - a) Recap of the minutes of the last meeting, e-votes and matters arising since the last meeting
 - b) Core Group: report from the Core Group, including delegated decisions
 - c) Action Membership: New Specific Organisations and COST Members represented in the MC
 - d) Action Participation: WG membership and applications, New MC members/Observers and provisional substitution.
 - e) Budget status: summary from the Grant Holder.
 - f) Update from the COST Association (if representative is present)
3. Follow up and discussion on the
 - a) Action management: structure, leadership positions and other supporting roles. Mandates to the Core Group (if applicable)
 - b) Implementation of the COST Excellence and Inclusiveness Policy
 - c) Grant Awarding by the Action
 - d) Progress of each working group
 - e) Science Communication Plan
 - f) Progress on MoU Objectives, WG tasks, deliverables, and Goals for the current GP.
4. Planning
 - a) Revision of Work and Budget Plan of the current GP (if applicable)
 - b) Draft plans for the following GP(s).
 - c) Upcoming activities
5. Monitoring and Reporting to the COST Association
6. AOB
7. Summary of MC decisions
8. Closing

1. WELCOME TO PARTICIPANTS, VERIFICATION OF THE QUORUM AND ADOPTION OF AGENDA

QUORUM

- At Action MC meetings if a quorum of 2/3 of COST Full and Cooperating Members is present (including virtually) or represented

25 COST Full or Cooperating Members . 2/3 → 17 Countries

2. a) Recap of minutes of 1 st MC Meeting 03/10/2022 and e-votes

5) Decisions by the Management Committee

a. Election of the Chair and Vice-chair and selection of the Grant Holder (Scientific Representative)

Prof Alessandro Mirizzi (Italy) was elected Chair.

Dr Francesca Calore (France) was elected Vice Chair.




The MC selected Universita' degli Studi di Bari (Italy) as Grant Holder Institution, represented at the MC by Prof Alessandro Mirizzi.

b. Agreement on the Action Structure

The MC decided that the Action structure shall be as followed:

- WG1 – WISPs Model Building
- WG2 – WISPs Dark Matter and Cosmology
- WG3 – WISPs in Astrophysics
- WG4 – Direct WISPs searches
- WG5 – Dissemination and Outreach

Further to the mandatory leadership position the Action agreed on the following leadership positions or committees:

- Equity and Inclusiveness Advisor  Deniz Sunar Cerci (TR)
- Young Researchers and Innovators Representative  Pierluca Carenza (SW)
- Grant Evaluation Committee  Venelin Kozhuharov (BL)
- Working Group leaders will be supported by co-leads.

c. Election of other mandatory leadership positions

The following participants were elected for mandatory leadership positions:

Position	Name	Country	YRI	Gender
Grant Awarding Coordinator	Venelin Kozhuharov	BG	N	M
Science Communication Coordinator	Olga Mena	ES	N	F
WG1 Lead	Michele Cicoli	IT	N	M
	Ilaria Brivio	DE	Y	F
WG2 Lead	Nick Rodd	CH	Y	M
	Javier Redondo	ES	N	M
WG3 Lead	Inma Dominguez	ES	N	F
	Andrea Caputo	IL	Y	M
WG4 Lead	Claudio Gatti	IT	N	M
	Marin Karuza	HR	N	M

Edoardo Vitagliano (IL, Y, M)

Oscar Straniero (IT, N, M)

WG5 Lead	Olga Mena	ES	N	F
	Loredana Gastaldo	DE	N	F

Science Communication Leader

HORIZONTAL COMMITTEES



Grant Evaluation Committee: provides to the Action MC a proposal of selected grants and amounts for their approval

Grant Awarding Coordinator: **Venelin Kozhuharov** (Sofia Univ., BG)



Young Researchers and Innovators Representative Council: involve the ECI in the management of the Action and in organization of the Activities

Coordinator: **Pierluca Carenza** (Stockholm Univ., SW)



Gender and Diversity Advisor: monitor the gender balance and provide a plan to implement gender balance

Deniz Sunar Cerci (Adiyaman Univ., TR)

d. Core Group and mandates

A Core Group was established. It is constituted by Chair, Vice-Chair, WG Leaders, Grant Holder Scientific Representative, Science Communication Coordinator, Grant Awarding Coordinator, Young Researchers Council Representative, Gender Advisor. The Management Committee gives a mandate to the Core Group to relocate budget up to EUR 7500, which was not used for already implemented activities, to any other upcoming activity foreseen in the Grant Period or to any new activity deemed in line with the Goals of the current Grant Agreement Period. The MC also gives mandate to the Core Group for the acceptance of WG membership.

The MC gives mandate for the Grant Holder: "Upon receipt of the official e-COST invitation to an Action activity the recipient shall respond within two weeks, either accepting or declining their participation. The GH is mandated upon Core Group approval to withdraw the entitlement for reimbursement of an invitee, when they do not have accepted the invitation via the e-COST platform within this deadline, even when they later participate in the respective activity. This applies also to invitees being Management Committee Members or their substitutes. The invitee shall be duly informed about the withdrawal.»


e. Discussion on Work and Budget Plan

During the first Grant Period it was planned to carry on the following activities:

- ✓ Development of the webpage of the Action
- ✓ Present a Science Communication plan withing 6 months
- ✓ Organize online Monthly Webinars about the physics case of the Action
- ✓ Organize WG Online Meetings.
- ✓ Organize a Hybrid Kick-off Meeting (2 days) to plan WG activities (National INFN Laboratory, Frascati, IT, Febr. 2023)
- ✓ Organize a General Conference (Bari, IT, Sept. 2023, 4-5 days)
- ✓ Organize a Training School 4-5 days (Lecce, IT, Sept. 2023, 4-5 days)
- ✓ Support STSM


The tentative proposed budget plan is the following:

- Meetings. Hybrid Kick-off meeting Frascati (10.5 kE), General Conference+MC Bari: 37.5 kE (37.5 kE)
- Training School. Lecce (20 kE)
- Mobility of researchers and innovators (28 kE)
- Presentations at Conferences organized by Third Parties (3 kE)
- Dissemination and Communication products. Webpage, brochure, poster, online proceedings (5 kE)
- Other expenses Related to Scientific Activities. E.g. zoom licences (2 kE)
- **Total Science Expenditure:** 106.25 kE
- Financial and Scientific Administration (max 15 % of B): 18.75 kE












- **Total budget: 125 kE**  **153,582.50 EUR**

MC Decisions

Please carefully read the [e-Vote Guide](#) before using this tool

Filter by  status:

Select one or more status

 Title / Initiator	Type	 Status	 Result	 Dates		
<input type="text" value="Search a vote ..."/>						Export
Budget reallocation Alessandro Mirizzi (Action Chair)	MC-Voting	Closed	✓ Approved	16/07/2023 23/07/2023	 View vote	Options ▾
Leadership position WG2 Alessandro Mirizzi (Action Chair)	MC-Voting	Closed	✓ Approved	11/05/2023 18/05/2023	 View vote	Options ▾
Guiding principles for the procedure and application for grants and schools Alessandro Mirizzi (Action Chair)	MC-Voting	Closed	✓ Approved	19/04/2023 26/04/2023	 View vote	Options ▾
Science Communication Plan Alessandro Mirizzi (Action Chair)	MC-Voting	Closed	✓ Approved	13/03/2023 20/03/2023	 View vote	Options ▾
Rules for Applications to ITC Conference, STSMs, Dissemination Conferences GRANTS Alessandro Mirizzi (Action Chair)	MC-Voting	Closed	✓ Approved	10/03/2023 17/03/2023	 View vote	Options ▾
Leadership positions in WG3 Alessandro Mirizzi	MC-Voting	Closed	✓ Approved	05/01/2023 13/01/2023	 View vote	Options ▾
Rules for Approvals of WG Applications Alessandro Mirizzi	MC-Voting	Closed	✓ Approved	24/10/2022 31/10/2022	 View vote	Options ▾

Showing 7 total votes

2. b) Core Group

Meeting on monthly basis. Strong input in organizing all events (workshop, training schools), setting rules for participations to WGs and for STSMs and in budget re-modulation

2. c) Action Memberships

Sept. 2023

Action Profile

Action General Information

Action Code	CA21106	MC Chair	Prof Alessandro Mirizzi
Action Title	CA21106 - COSMIC WISPerS in the Dark Universe: Theory, astrophysics and experiments		
MOU	020/22	Draft MOU	OC-2021-1-25120
CSO Approval Date	2022-05-27		
Action Start Date	03/10/2022	Action End Date	02/10/2026
Science Officer	Dr Ralph Stuebner	Administrative Officer	Ms Rose Cruz Santos

Beginning of Action

Participation in the Action:

Number of	COST Full or Cooperating Members	COST Partner Members	Specific Organisations	Near Neighbour Countries	Third States	Total
Countries						
COST Members / Specific Organisations represented in the MC	25	0	0	n.a.	n.a.	25
	ITC 56%					
	Non-ITC 44%					
Countries represented in the Working Groups	26	0	0	0	7	33
	ITC 50%					
	Non-ITC 50%					
Individuals						
Nominated MC Members / MC Observers	35	0	0	n.a.	n.a.	35
	ITC 51%					
	Non-ITC 49%					
Approved Working Group members	109	0	0	0	13	122
	ITC 32%					
	Non-ITC 68%					

Participation in the Action:

Number of	COST Full or Cooperating Members	COST Partner Members	Specific Organisations	Near Neighbour Countries	Third States	Total
Countries						
COST Members / Specific Organisations represented in the MC	25	0	0	n.a.	n.a.	25
	ITC 52%					
	Non-ITC 48%					
Countries represented in the Working Groups	30	0	0	1	9	40
	ITC 53%					
	Non-ITC 47%					
Individuals						
Nominated MC Members / MC Observers	38	0	0	n.a.	n.a.	38
	ITC 47%					
	Non-ITC 53%					
Approved Working Group members	229	0	0	2	20	251
	ITC 29%					
	Non-ITC 71%					

Working Groups

	WG Title	WG Leader	Number of WG members
WG1	WG1: WISPs Model Building	Prof Michele Cicoli	37
WG2	WG 2: WISPs Dark Matter and Cosmology	Prof Nicholas Rodd	74
WG3	WG 3: WISPs in Astrophysics.	Prof María Inmaculada Domínguez Aguilera	58
WG4	WG4: Direct WISPs searches.	Dr Claudio Gatti	49
WG5	WG 5: Dissemination and Outreach	Dr Olga Mena	38

Sept. 2023

Working Groups

	WG Title	WG Leader	Number of WG members
WG1	WG1: WISPs Model Building	Prof Michele Cicoli	69
WG2	WG 2: WISPs Dark Matter and Cosmology	Dr Edoardo VITAGLIANO	148
WG3	WG 3: WISPs in Astrophysics.	Dr Andrea Caputo	94
WG4	WG4: Direct WISPs searches.	Dr Claudio Gatti	88
WG5	WG 5: Dissemination and Outreach	Dr Olga Mena	63

2.e) Budget status

COST Action CA21106 Annex A of the Grant Agreement (not editable) from 2022-11-01 to 2023-10-31

Networking Tools	Quantity	Budget
Meetings	2	EUR 64 840.12
Training Schools	1	EUR 37 500.00
Mobility of Researchers and Innovators	tbd.	EUR 22 300.00
Presentation at Conferences organised by Third Parties	tbd.	EUR 3 250.00
Dissemination and Communication Products	3	EUR 4 150.00
Other Expenses Related to Scientific Activities (OERSA)	2	EUR 1 400.00
Total Science Expenditure		EUR 133 440.12
Financial and Scientific Administration and Coordination (FSAC) - MAX. 15%	15 %	EUR 20 016.02
Total Grant		EUR 153 456.14

Funds available to spend globally: EUR 11 950.00

Total	Grant budget (a)	Expenditure					Delta (g=f-a)
		Actuals (b)	Accruals (c)	Total (d=b+c)	Forecast (e)	Total (f=d+e)	
Meeting	64 840.12	0.00	11 340.12	11 340.12	53 500.00	64 840.12	0.00
Training School	37 500.00	0.00	0.00	0.00	37 500.00	37 500.00	0.00
Short-Term Scientific Mission Grant	22 300.00	0.00	11 500.00	11 500.00	0.00	11 500.00	-10 800.00
Virtual Mobility Grant	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inclusiveness Target Countries Conference Grant	2 000.00	0.00	850.00	850.00	0.00	850.00	-1 150.00
Dissemination Conference Grant	1 250.00	0.00	1 250.00	1 250.00	0.00	1 250.00	0.00
Dissemination and Communication Products	4 150.00	0.00	1 600.00	1 600.00	2 550.00	4 150.00	0.00
Other Expenses Related to Scientific Activities (OERSA)	1 400.00	0.00	0.00	0.00	1 400.00	1 400.00	0.00
Virtual Networking Support Grant	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Networking expenditure	133 440.12	0.00	26 540.12	26 540.12	94 950.00	121 490.12	-11 950.00
Eligible Networking expenditure	133 440.12	0.00	26 540.12	26 540.12	94 950.00	121 490.12	-11 950.00
FSAC 15% of Eligible Networking expenditure	20 016.02	0.00	3 981.02	3 981.02	14 242.50	18 223.52	-1 792.50
Eligible Costs	153 456.14	0.00	30 521.14	30 521.14	109 192.50	139 713.64	-13 742.50

2.f) Update from COST Association

3.a) Follow-up discussion on Action Management

- Need to replace WG1 co-leader Ilaria Brivio. She is chair of new COST Action CA22130 COMETHA (Comprehensive Multi-boson Experiment-Theory Action). Congratulations to Ilaria for this great achievement !!
- Find a new ECI Council Coordinator

14 Leadership positions: 3 from ITC countries, 4 ECI, 5 F

Proposal: increase Leadership positions from ITC and/or F, e.g. co-leaders?

3.b) Implementation of COST Excellence and Inclusiveness Policy

SUGGESTIONS OF THE SCIENTIFIC COMMITTEE

To comply with the COST Excellence and Inclusiveness Policy, in the implementation of the Action:

- **the level of involvement of Inclusiveness Target Countries (ITCs) should be maintained** and the plans described in the proposal for ensuring ITC involvement should be implemented;

We maintained the level of involvement of ITC countries

At the beginning 39 ITC participants (32 %). Now 72 ITC participants (29 % participants)

We give priority to participants from ITC countries for the participations in the Meetings and in the Training School

1 ITC Conference Grant Attributed

2/6 STSM attributed to ITC participants

Cosmic WISPer member Federico Urban and his team have just been awarded a **Czech Inter-COST grant** to work on spin-2 WISPs over the next two years. Massive spin-2 fields typically arise in certain extensions of General Relativity, such as bigravity or higher-dimensional gravity; some of these spin-2 fields can be viable dark matter candidates, and can have masses in the WISP range. The focus of the project will be to understand if and how current astrophysical/cosmological WISP production mechanisms and WISP laboratory detection techniques can be adapted for spin-2 WISPs, what new techniques could be used to search specifically for spin-2 WISPs, and how to distinguish them from their spin-0 and spin-1 counterparts. The team will include fellow Action members Alex Vikman, Iggy Sawicki, Sabir Ramazanov and the students Georg Trenkler and Pavel Kůs and is based out of CEICO, Prague.

SUGGESTIONS OF THE SCIENTIFIC COMMITTEE

- the level of involvement of Early Career Investigators (ECIs) should be increased and a plan should be developed and implemented to ensure the full involvement of ECIs in all aspects of the Action's implementation (including in Action leadership positions);

We established the **ECI Council** which is in charge of the Monthly Colloquium, the Journal Club, the monthly newsletter, the twitter account and the newsletter

4/8 Grants attributed to ECI

SUGGESTIONS OF THE SCIENTIFIC COMMITTEE

the gender balance should be improved and a plan should be developed and implemented to ensure gender balance in all aspects of the Action's implementation (including in Action leadership positions).

We nominated a Gender Advisor

14 Leadership positions: 5 F. Possibility to improve.
Difficulty to find available candidates.

3.c) Grant Awarding by the Action

3.d) Progress by each WG

3.e) Science Communication Plan

3.f) Progress on MoU objectives, WG tasks, deliverables and goals

OBJECTIVES (from MoU)

- ✓ Provide a discussion forum for **European coordination** of WISPs Physics activities
- ✓ Develop a **Roadmap** for WISPs Physics in Europe
- ✓ Coordinate and support in a **synergic** way WISPs searches
- ✓ Compare WISPs **theoretical** models and assess performance of different **experimental** techniques
- ✓ Provide input to **Small and Medium Size Enterprises** (SMEs)
- ✓ **Disseminate** the research results
- ✓ Provide **cross community discussions** to enable new experiments
- ✓ Stimulate **transfer of knowledge** among established leading groups on the field and emerging excellent scientists in ITC
- ✓ Promote **gender balance**
- ✓ Involve **new research groups** from ITC
- ✓ Attract **young talented researchers**

STRATEGIES

- **Common platform** to connect WISP research activities in different areas. **Collaborations in a structured way through Working Groups, Workshops and Short-Term Missions**
- Organize much of the scientific foundation for present and next generation WISPs experiments. Develop a **European roadmap** for experiments. **Interplay between theorists, experimentalists and representatives of SMEs**
- **Training activities** to offer **inter-disciplinary** research competences which are difficult to obtain locally
- Offer to **ECI the opportunity to develop management** skills sharing responsibility in the management of the Action. Particular emphasis on the **gender balance**
- Promote **the visibility of researchers from ITC** connecting them with leading scientists in EU countries
- **Outreach activities.** Improve the **communication skills** of the young participants

MoU objectives, Action deliverables and Grant Agreement Period Goals

Action Objectives from MoU

Aim/primary Objective
organize the scientific foundation for the next generation of WISPs experiments and searches, and to promote a roadmap for the researchers, research sponsors and the broader scientific community
Secondary objectives
<ol style="list-style-type: none">1. Provide a discussion forum for the European coordination of WISPs Physics and express collective view on the development of WISPs research.2. Develop a Roadmap for WISPs Physics in Europe, a description of the status and perspectives of the field within Europe, linking them to activities in other parts of the world.3. Coordinate and support in a synergic way WISPs searches carried on by the different WGs, in order to stimulate and consolidate collaborations.4. Develop a common database on WISPs theoretical models, experimental and astrophysical bounds.5. Coordinate the experimental searches in order to maximize the discovery potential of current and future experiments and optimize the detection strategies.6. Compare WISPs theoretical models and assess performance of different experimental technique.7. Provide input to Small and Medium Size Enterprises (SMEs) identifying progresses needed in key technologies for present and future experiments.8. Disseminate the research results broadly to the scientific community, to the stakeholders and to the general public, attracting representative of SMEs and young students towards these subjects.9. Provide cross community discussions to enable new experiments.10. Promote the gender balance of the Action, favoring more women in leading positions.11. Stimulate transfer of knowledge among established leading groups in the field and emerging excellent scientists in COST Inclusiveness Target Countries (ITC), as well as SMEs.12. Involve new research groups from ITC countries into the Action.13. Attract young talented researchers from all over the world towards the activities of the Action through training activities.

Grant Agreement Period

Grant Agreement Period Start Date	01/11/2022	Grant Agreement Period End Date	31/10/2023
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Grant Agreement Period Goals

Number	Grant Agreement Period Goal	MoU Objective(s) it relates to
GAPG 1	To draft a review on the state-of-the-art concerning: WISP models (WG1), cosmological (WG2), astrophysical (WG3) and experimental (WG 4) bounds	<ul style="list-style-type: none"> • Secondary objective 2 • Secondary objective 6
GAPG 2	To stimulate discussions in the WGs to investigate the priorities and goals, the possible synergies and collaborations	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 2 • Secondary objective 3 • Secondary objective 9 • Secondary objective 11
GAPG 3	To train Phd students and young post-docs in order to have a common interdisciplinary background across the WGs to work on the physics case	<ul style="list-style-type: none"> • Secondary objective 8 • Secondary objective 11 • Secondary objective 12 • Secondary objective 13
GAPG 4	To prepare a plan of Outreach Activities and of the Dissemination strategies.	<ul style="list-style-type: none"> • Secondary objective 7 • Secondary objective 8 • Secondary objective 12
GAPG 5	To start discussions on the technologies needed to develop next-generation WISP experiments	<ul style="list-style-type: none"> • Secondary objective 1 • Secondary objective 7 • Secondary objective 9 • Secondary objective 11 • Secondary objective 12
GAPG 6	To increase the contributions of Young Researchers and Innovators from ITC countries by 20%, while safeguarding gender balance and enhancing diversity in the Action	<ul style="list-style-type: none"> • Secondary objective 10 • Secondary objective 11 • Secondary objective 12 • Secondary objective 13

Draft review will be published in the proceeding of General Meeting

Online and in presence WG meetings (typically on monthly basis)

Training School in Lecce

Science Comm. Plan, online Colloquium and JC. Outreach talks in Frascati and Bari Meeting. Webpage. Newsletter, twitter

Technology Forum on magnets in Frascati meeting

Doubled ITC participants. ITC grants attributed

DELIVERABLES (from MoU)

Deliverable number	Deliverable title	WG number	Deliverable date (months)
D1.1	Draft Report on theory and pheno	1	12
D1.2	Interim Report on theory and pheno	1	24
D1.3	Final Report on theory and pheno	1	48
D2.1	Draft Report on DM and cosmology	2	12
D2.2	Interim Report on DM and cosmology	2	24
D2.3	Final Report on DM and cosmology	2	48
D2.4	Public code to simulate axion effects on LSS	2	40
D3.1	Draft Report on astroph.	3	12
D3.2	Interim Report on astroph.	3	24

Draft report will be published in the Proceedings of the General Meeting in the Open Access Journal «Proceedings of Science»

4.a) Planning. Revision of W&B Plan

Use all unspent funds to cover as much as possible the travel costs for the participation to the General Meeting and Training School, and slight increase of costs in proceedings and webpage.

4.b) Draft Plan of the 2 GP

4.c) Upcoming activities

5) Monitoring and reporting to the COST Association

6) AOB

7) Summary of MC decisions

8) Conclusions