

AIDA 2020

Advanced European Infrastructures
for Detectors at Accelerators

Infrastructure for advanced calorimeters

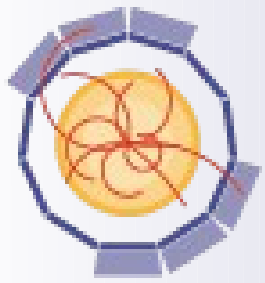
Face-to-Face Meeting Introduction and overview

F. Simon, R. Pöschl

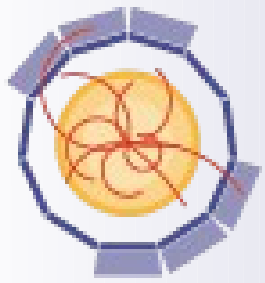
AIDA-2020 WP14, Face-to-Face Meeting Jan. 10, 2019



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 654168.



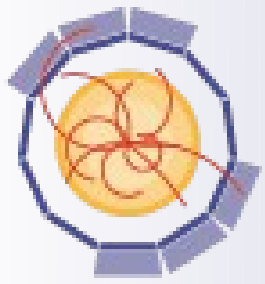
- **14.1** Scientific coordination (MPP-MPG, CNRS-LAL)
- **14.2 Test infrastructure for innovative calorimeters with optical readout**
 - 14.2.1** Test benches for characterisation of organic and inorganic scintillator material (CERN [CERN, RINP, Brunel], INFN [Torino, Roma, MiB, UNIMiB], VU, ETHZ)
 - 14.2.2** Test benches for the characterisation of highly granular calorimeter elements with scintillator and SiPM readout (JGU, DESY [Uni Heidelberg], MPG-MPP, UiB, IPASCR)
- **14.3 Test infrastructure for innovative calorimeters with semiconductor readout**
 - 14.3.1** Assembly and QA Chain for silicon-based ECALs (CNRS [LLR, LAL, LPNHE], CERN [CERN, Imperial])
 - 14.3.2** Infrastructure for very compact Tungsten based calorimetry (DESY [Zeuthen], AGH-UST, TAU [Tel Aviv, IFJPAN], Vinca)
- **14.4 Readout systems for innovative calorimeters**
 - 14.4.1** LC Calorimetry specific DAQ interfaces (IPASCR, CNRS [IPNL, LLR], DESY [Hamburg])
 - 14.4.2** Low Power Readout & Monitoring systems (CNRS [LAL, IPNL], DESY [Hamburg, Uni Wuppertal])
- **14.5 Mechanical and thermal tools for innovative calorimeters**
 - 14.5.1** Precision mechanics for calorimeter structures (CIEMAT [Madrid])
 - 14.5.2** Infrastructure to evaluate thermal properties of calorimeter structures (CNRS [LPSC], DESY [Hamburg])



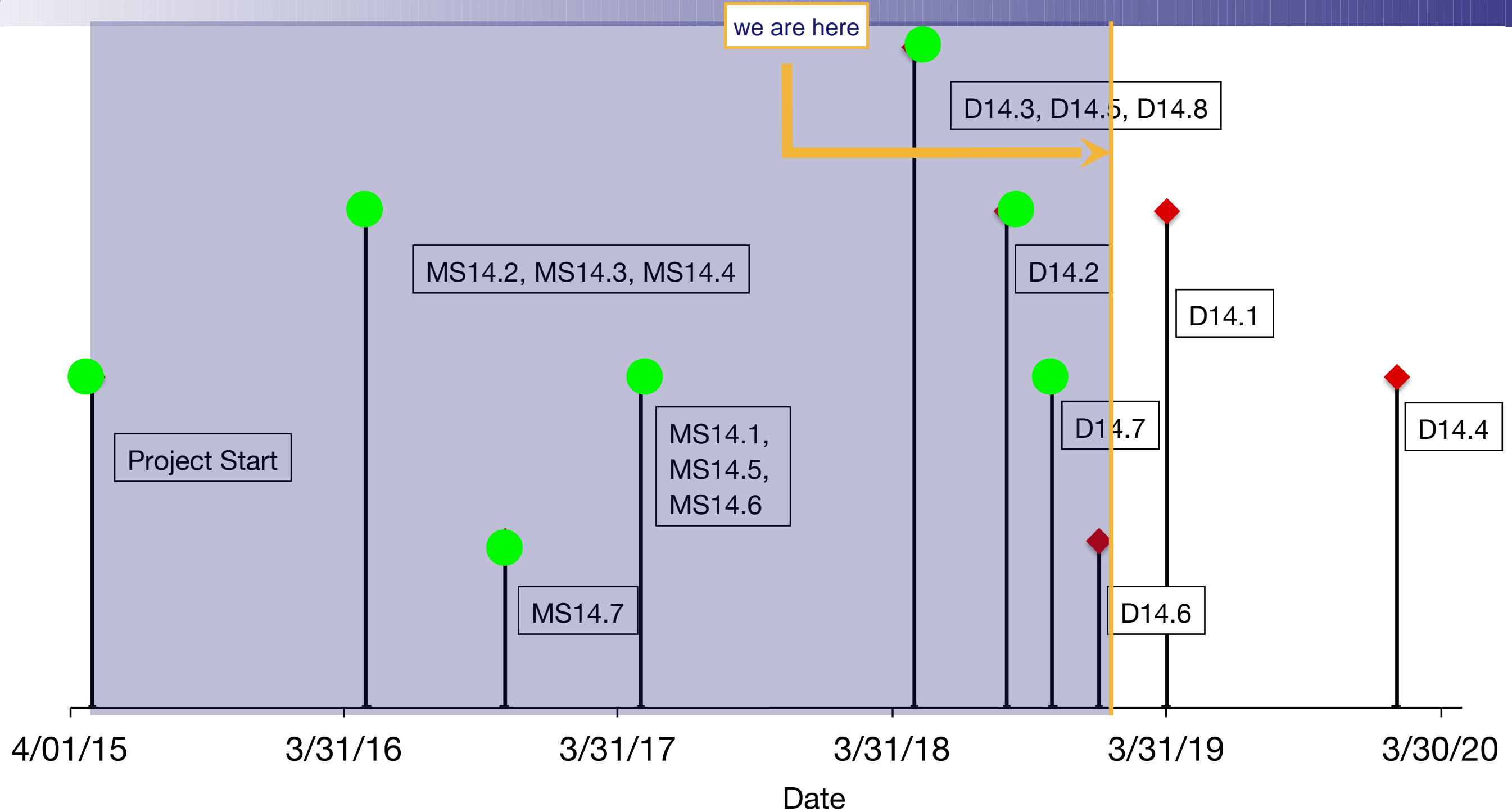
- Beneficiaries

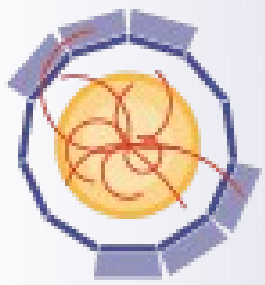
- AGH-UST
- CERN
- CIEMAT
- CNRS - IPNL, LAL, LLR, LPNHE, LPSC
- DESY
- ETHZ
- INFN - MI, RTV, TO
- IPASCR
- JGU
- MPG-MPP
- TAU
- UiB
- VU

- Associated Partners - receive funding through beneficiaries
- CERN: Brunel, Imperial, Minsk
 - DESY: U HD, U W
 - INFN: UniMIB
 - TAU: IFJPAN



WP14 Timeline

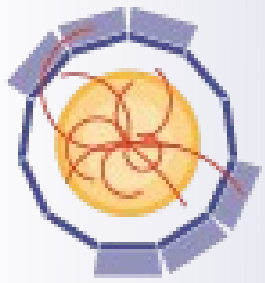




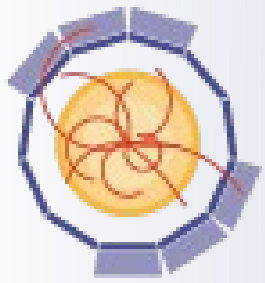
	Title	Lead Ben.	Task	Month
D14.1	Fibre test benches	CERN	14.2.1	47
D14.2	Performance of test infrastructure for highly granular optical readout	MPG-MPP	14.2.2	40
D14.3	Advanced assembly chain for Si calorimeters	CNRS	14.3.1	36
D14.4	Very compact calorimeters	AGH-UST	14.3.2	57
D14.5	Common running of calorimeter prototypes	DESY	14.4.1	36
D14.6	Updated readout system	CNRS	14.4.2	44
D14.7	Electron beam welding demonstrator	CIEMAT	14.5.1	42
D14.8	Large leak-less system, thermal model	DESY	14.5.2	36

Draft exists

- 5 Deliverables achieved in 2018, D14.6 proof-read by Scientific Coordinator
- Deliverable 14.4 is part of AIDA2020 Extension



- WP14 enters largely into the “after delivery phase”
- Extension of AIDA2020 allows us to “harvest the fruits” of the work achieved so far
- How will the infrastructures been used?
- We would like to monitor this “harvest” with a first overview at the Annual Meeting
- Tightening of interplay among projects within WP14 but also with other work-packages
- See overview talks of WP3 (software) and WP5
- Note that some of WP14 members are also participating to other WP, want to exploit this fact
- Will/want to contribute to coherent picture on how AIDA2020 shapes the European Detector R&D landscape

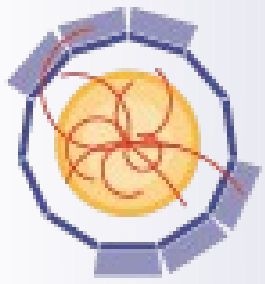


Publication Score Board

WP	No. of journal publications	No. of conference/ workshop proceedings	Other publications	Total
WP2	0	0	7 press articles 9 "On track" newsletter issues 1 Academic dissertation	17
WP3	5	1	7 presentations 3 scientific notes	16
WP4	1	2	1 poster	4
WP5	0	2	7 presentations 2 scientific notes 2 posters	13
WP6	17	3	1 poster	21
WP7	16	6	2 presentations 2 posters	26
WP8	4	3	0	7
WP9	1	0	8 presentations 1 scientific note 1 poster	11
WP13	4	5	4 presentations 3 posters	16
WP14	10	9	14 presentations 1 scientific note 1 poster	35
WP15	2	6	12 presentations 6 scientific notes 7 posters	33
TOTAL	60	37	102	199
TARGET	60	50	-	180

- The publication record is good
... **We are the best in the scoreboard with 35 pubs!!!**
Number 36 sent yesterday to secretaries
- Expect more publications as tasks reach their final stages
... in particular Journal Publications
... prefer OpenAccess Journals
Contact us in case of doubt where to publish
- AIDA2020 offers nice tool for publication query
<https://cds.cern.ch/collection/AIDA-2020?ln=en>

Source: <http://aida2020.web.cern.ch/science/publications>



- Please be reminded on the AIDA2020 Newsletter which allows to inform a broader community about your work



OUR TEAM

Editors:

Romain Muller (CERN)

Barbara Warmbein (DESY)

Editorial Board:

Daniela Bortoletto (Oxford)

Paolo Giacomelli (INFN)

Felix Sefkow (DESY)

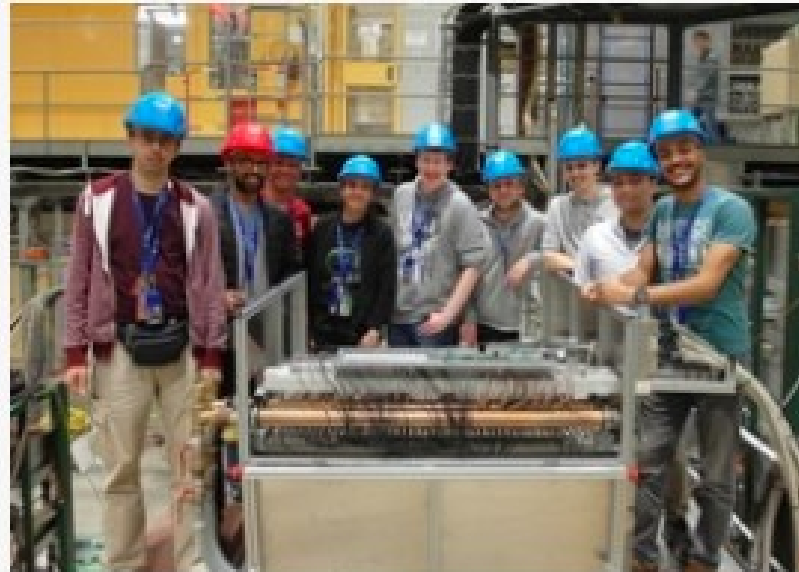
GET INVOLVED

Want to contribute or have questions?

Please contact

AIDA-2020-newsletter-editor@cern.ch (link sends e-mail) and we will do our best to get back to you as soon as possible.

... or contact
Frank and R.P.

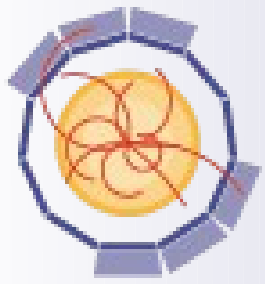


e.g. AHCAL (14.2.2) beam test 2018

New CALICE calorimeter sees beam

12/07/2018

Workpackages come together for a massive test beam campaign at CERN.



- CERN shutdown until Spring 2021
- DESY beam test heavily subscribed
 - Full in 1st half of 2019
 - 6 weeks reserved for WP14 related activities
- Call for 2019/2 closed 15/12/18
 - Also many requests

DESY TEST BEAM
Ralf Diener, Norbert Meyners, Marcel Stanitzki - DESY Test Beam Coordinators

DESY Test Beam Schedule 2019 - Version 2 15/11/2018

Week	TB21	TB22	TB24/1	TB24	
7-Jan-19	Shutdown				
14-Jan-19	Shutdown				
21-Jan-19	Shutdown				
28-Jan-19	Shutdown				
4-Feb-19	Startup	Startup	Startup	Startup	
11-Feb-19	CMS-Pixel-Phase2 X	STRIDENAS		LYCORIS	X
18-Feb-19	CMS-Pixel-Phase2 X			dSPM	
25-Feb-19	CLIC PIXEL X	TEALPID X			
4-Mar-19	ELAD X	ATLAS-ITk-Pixel X			
11-Mar-19	ATLAS-X0 X	ATLAS-ITk-Pixel X		CALICE AHCAL	
18-Mar-19	CMS-Pixel-Phase2 X	ATLAS-ITk-Pixel X		CALICE AHCAL	
25-Mar-19	CMS-Pixel-Phase2 X	ATLAS-HGTD X			
1-Apr-19	TBMST X	ATLAS-HGTD X		ATLAS-BCM	X
8-Apr-19	ACDC	ATLAS-ITk-Pixel X			
15-Apr-19	CMS-Pixel-Phase2 X	ATLAS-ITk-Pixel X			
22-Apr-19	CMS-Pixel-Phase2 X	ATLAS-ITk-Pixel X			
29-Apr-19	Setup Time		Setup Time		
6-May-19	ATLAS-ITk-Strips X	Mu3e X	LYCORIS+TPC		
13-May-19	CMS Outer Tracker X	Mu3e X		TOTEM	X
20-May-19	CMS Outer Tracker X	ATLAS-HGTD X			
27-May-19	CMS-Pixel-Phase2 X	ATLAS-ITk-TICMOS X		CMS-BCMLF	X
3-Jun-19	CMS-Pixel-Phase2 X	ATLAS-ITk-TICMOS X		NICA-MPD	
10-Jun-19	Setup Time		Setup Time		
17-Jun-19	CLIC PIXEL X	ATLAS-ITk-Strips X	T2K		
24-Jun-19	TBMST X	ATLAS-ITk-Strips X	T2K		
1-Jul-19	CMS-Pixel-Phase2 X	AFP-TDF X	CALICE-SW-ECAL		
8-Jul-19	CMS-Pixel-Phase2 X	Mu3e X	CALICE-SW-ECAL		
15-Jul-19	GammaMeV X			CALICE AHCAL	
22-Jul-19	CLIC PIXEL X			CALICE AHCAL	
29-Jul-19	X-Ray Crystal-Rad X				
5-Aug-19	Summer Shutdown				
12-Aug-19	Summer Shutdown				
19-Aug-19	Summer Shutdown				
26-Aug-19	Summer Shutdown				
2-Sep-19	Summer Shutdown				
9-Sep-19	Summer Shutdown				
16-Sep-19	Summer Shutdown				
23-Sep-19	Summer Shutdown				
30-Sep-19	Summer Shutdown				
7-Oct-19	Summer Shutdown				
14-Oct-19	Summer Shutdown				
21-Oct-19	Summer Shutdown				
28-Oct-19	Summer Shutdown				
4-Nov-19	Summer Shutdown				
11-Nov-19	Summer Shutdown				
18-Nov-19	Summer Shutdown				
25-Nov-19	Summer Shutdown				
2-Dec-19	Summer Shutdown				
9-Dec-19	Summer Shutdown				
16-Dec-19	Summer Shutdown				
23-Dec-19	Summer Shutdown				
30-Dec-19	Shutdown				

ANNOUNCED

CALL 2

- The AIDA2020 P2 report covering November 2016 to April 2018 has been submitted (on-time) the EU. It contains a section about WP14
The scientific part and a publishable summary thereof can be found at the links below:

AIDA-2020 P2 report – public version:

<https://espace.cern.ch/AIDA2020-intranet/Reporting%20%20documents/Periodic%20reports/AIDA-2020%20P2%20report-PUBLIC.pdf>

AIDA-2020 P2 report – publishable summary:

<https://aida2020.web.cern.ch/sites/aida2020.web.cern.ch/files/Documents/AIDA-2020%20P2%20-%20Publishable%20Summary.pdf>

- The extension of AIDA2020 by another year has been approved.
-> This means that AIDA2020 will be extended until April 2020
- The next annual meeting that is going to take place in the week of the **1/4/19 - 5/4/19 at Oxford/UK**



AIDA²⁰²⁰

AIDA2020 4th Annual Meeting

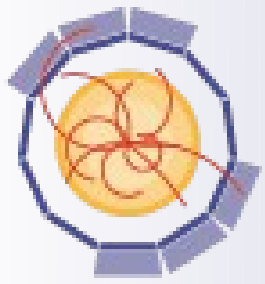
- 2-7 April 2019
- St Anne college, Oxford

- Registration will open ... **soon**
- Poster will be sent ... **soon**

- Topical workshop **on Tracking** 1-2 April 2019



Slide D. Bartoletti, SG Meeting 22/11/18, slightly modified



AIDA²⁰²⁰

The WP14 Team

- Two task leaders for each task - to provide expertise in all topics within a task and to represent the full breadth of the WP14 community
- Work package leaders (and Task 14.1):
Roman Pöschl (CNRS-LAL), Frank Simon (MPG-MPP)
- Task 14.2: Etienne Auffray (CERN), Lucia Masetti (JGU)
- Task 14.3: Vincent Boudry (CNRS-LLR), Marek Idzik (AGH-UST)
- Task 14.4: Katja Krüger (DESY), Dirk Zerwas (CNRS-LAL)
- Task 14.5: MaryCruz Fouz (CIEMAT), Denis Grondin (CNRS-LPSC)
- Technology Transfer Officer (TTO): Etienne Auffray (CERN)