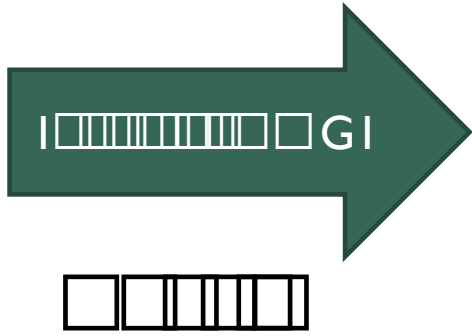


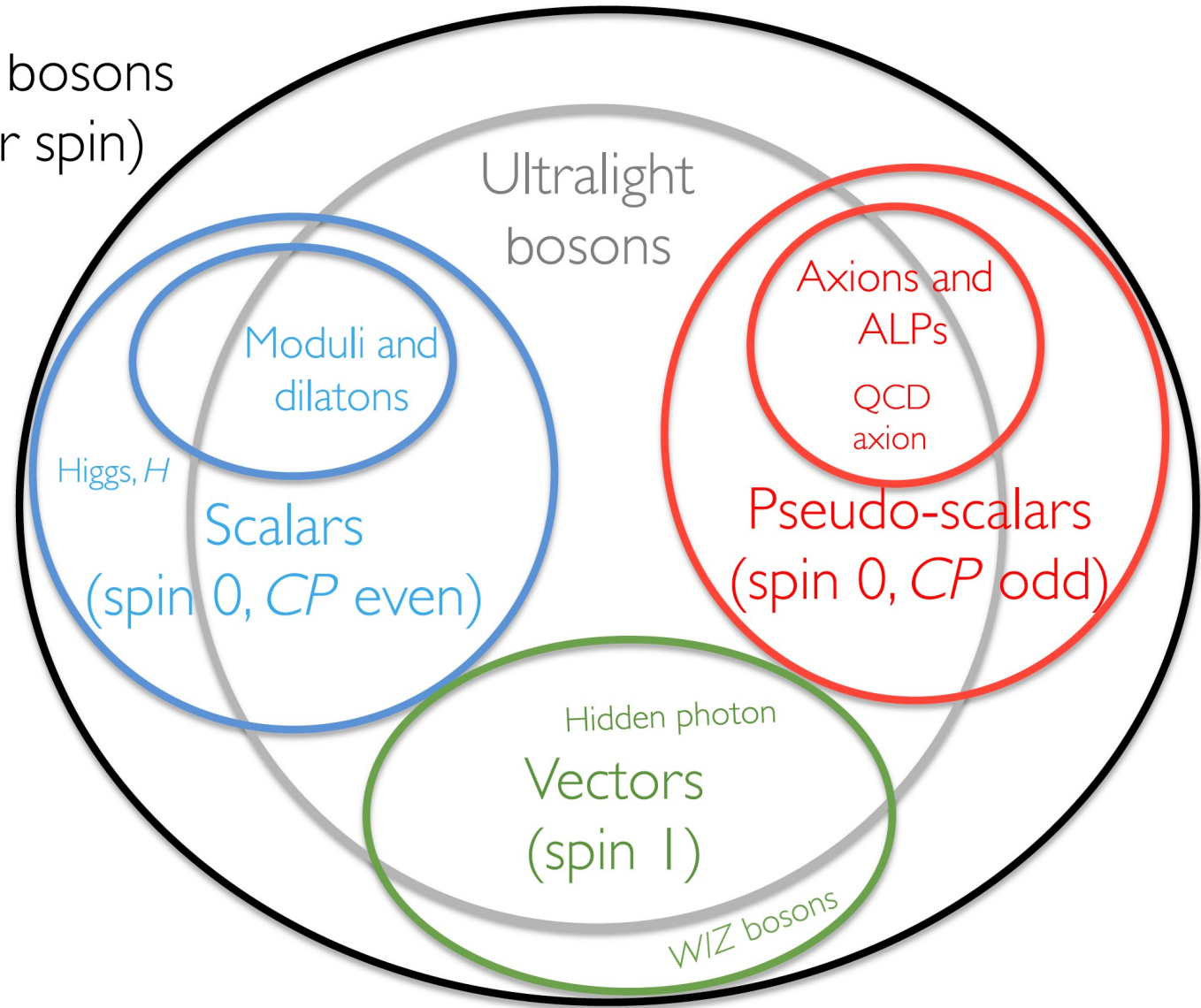


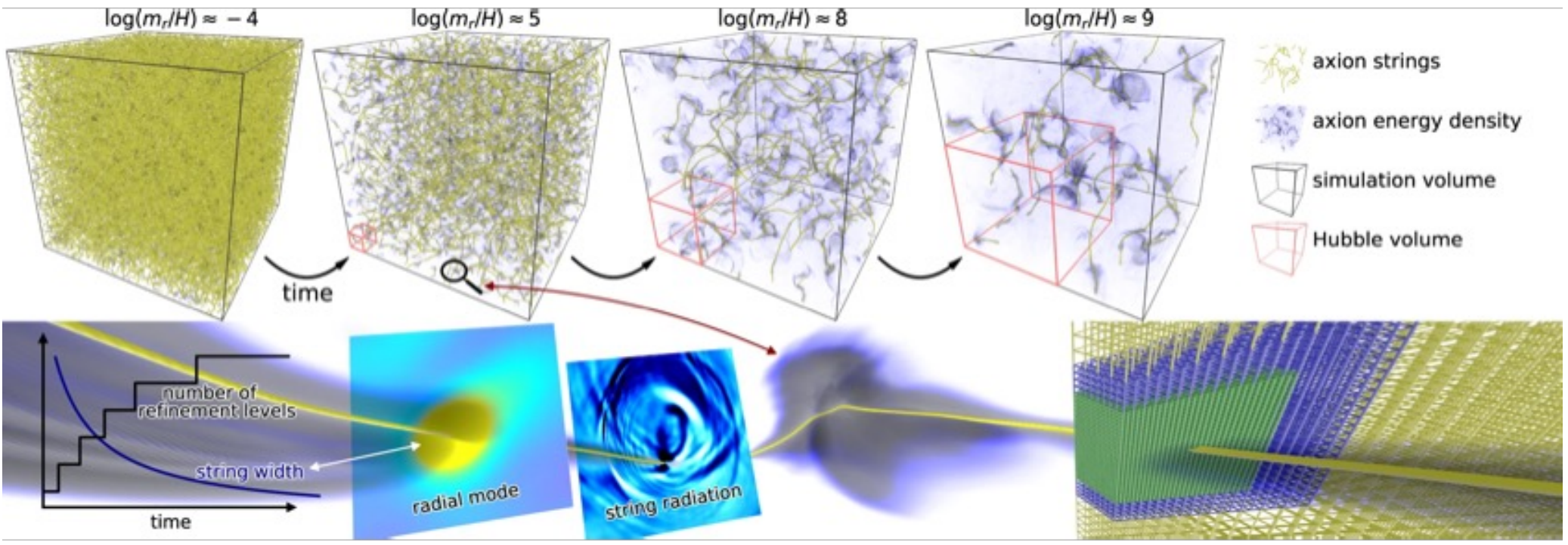
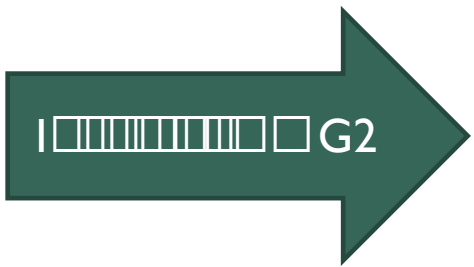
□ G 4 □ E □ □ □ □
□ G 4 □ D I □ E C □ □ I □ □ □ A □ C H E □

C □ A □ D I □ G A □ □ , □ A □ □ □ A □ □ □ A G A □ □ - □ □ A □ □ □ A

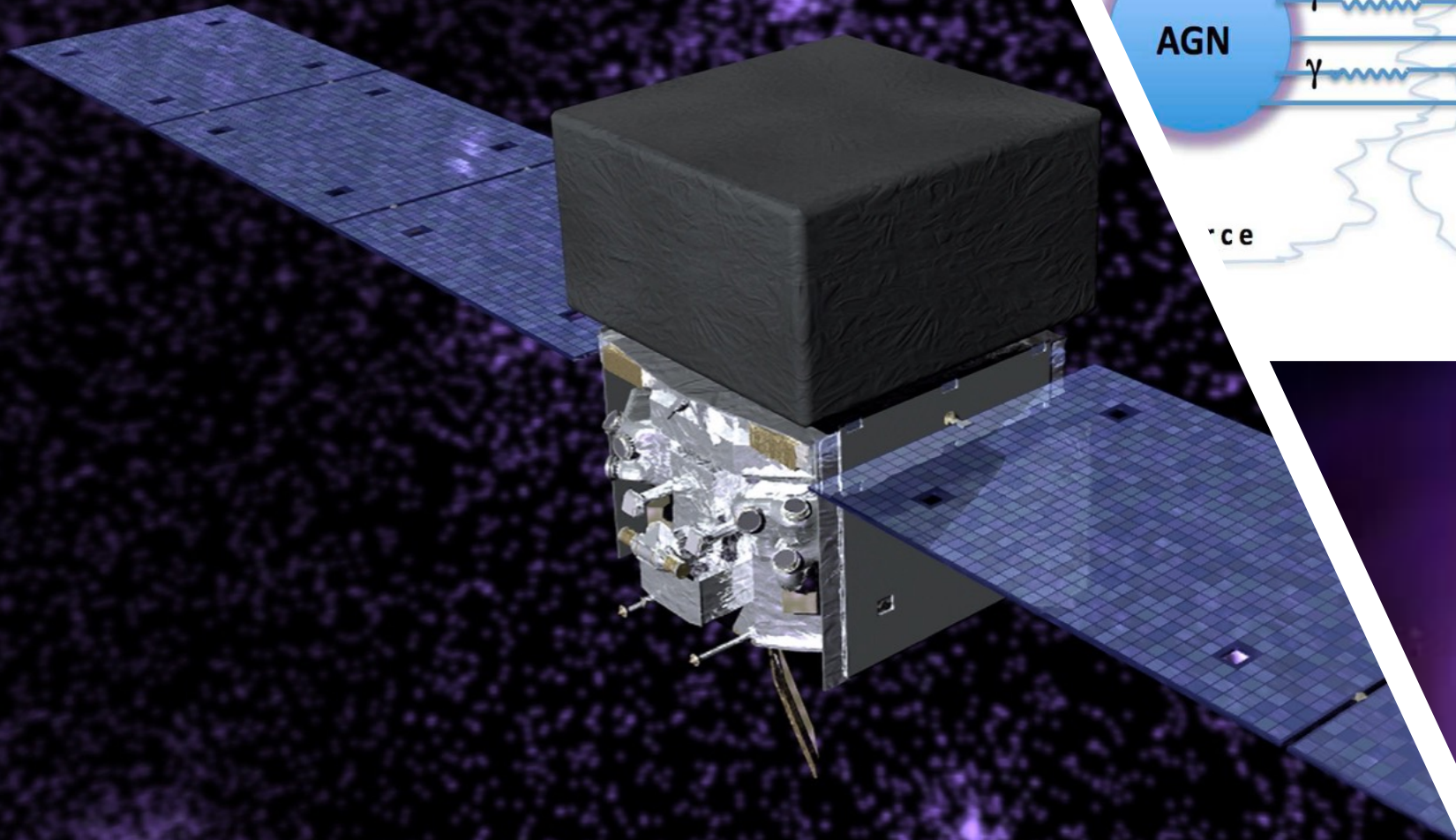


Massive bosons
(integer spin)

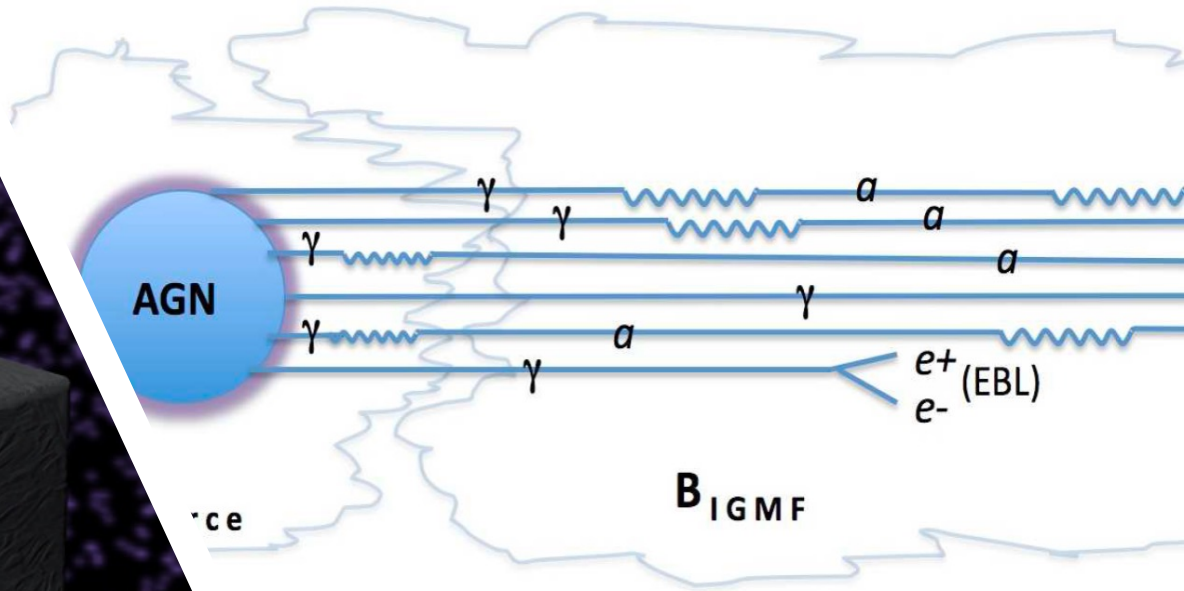




||||||| G3



A ||| (|||)



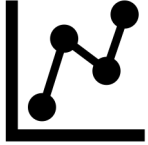
E



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- H
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-
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- 5⁰⁰F
- C
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- G
- A
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- C
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- C
- B
-
-



Axion-photon coupling

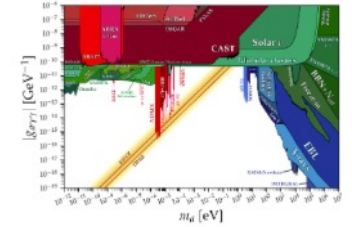
Data files

Plot (pdf, png)

Plot with projections (pdf, png)

Plot of dimensionless coupling (pdf, png)

Plot of dimensionless coupling with projections (pdf, png)

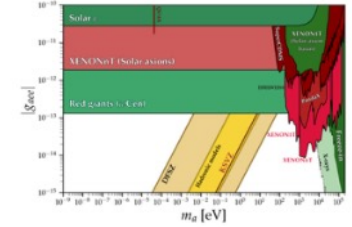


Axion-electron coupling

Data files

Plot (pdf, png)

Plot with projections (pdf, png)

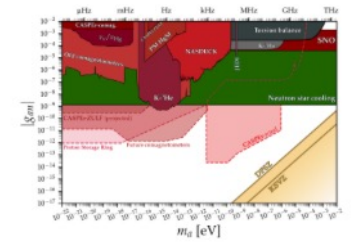


Axion-neutron coupling

Data files

Plot (pdf, png)

Plot with projections (pdf, png)

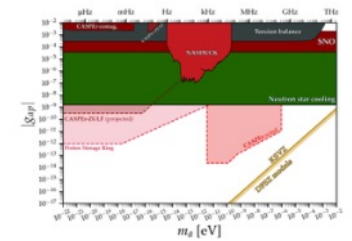


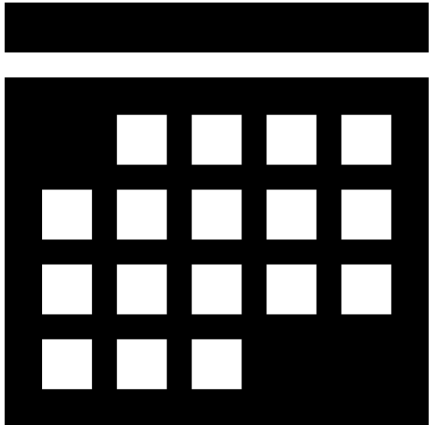
Axion-proton coupling

Data files





Plot (pdf, png)

Plot with projections (pdf, png)





F 

-  | 
-  | 
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- C   |  
-  | 
- D  

Working Group 4

835/

Working Group 4

June 2023

27 Jun [June meeting](#)

May 2023

25 May [May Meeting](#)

April 2023

26 Apr [April meeting](#)

March 2023

29 Mar [March Meeting](#)

January 2023

23 Jan [1st WG4 meeting](#)

E

A - C

B A - H

I E

H A

H

G G

E

H G

2 D - F

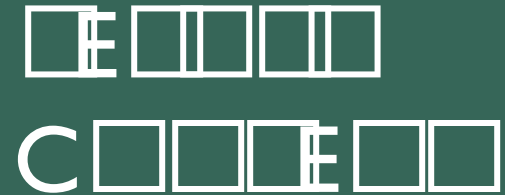
E

A H

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Contents

1	Introduction	3
2	Theory	3
3	EU Experiments	3
3.1	Pure lab (LSW, collider etc.)	3
3.2	Helioscope	3
3.3	Haloscope	3
3.4	beam dump ($M < 1$ GeV)	4
3.5	Non-WISP focused experiments with ability to detect WISPs	4
3.6	TEMPLATE Experiment	4
3.7	ALPS experiment	5
3.8	The QUAX experiment	5
3.9	The FLASH experiment	7
4	Summary Plots	8



5	Ongoing EU R&D	8
5.1	Resonators	8
5.2	Magnets	8
5.3	Sensors	8
6	EU WISP Infrastructures and Labs	8
7	The Frascati National Laboratory of INFN	8
8	New experimental schemes for WISPS searches	9
8.1	The Piezoaxionic Effect arXiv:2112.11466	9
8.2	Production and detection of an axion dark matter echo arXiv:1902.00114	9
8.3	Directly Deflecting Particle Dark Matter PHYSICAL REVIEW LETTERS 124, 011801 (2020)	9
8.4	Sound of Dark Matter: Searching for Light Scalars with Resonant-Mass Detectors PRL 116, 031102 (2016)	9
8.5	Axion production in unstable magnetized plasmas. Phys. Rev. D 101, 051701(R)	9



3.6. TEMPLATE Experiment

- 5-10 lines of description (1 or 2 pictures of experimental site)
- Experimental site
- goal of experiment
- Collaboration
- Status: Proposal, R&D, Construction, Running, Finished
- (expected) Period of operation
- R&D and technologies
- Bibliography

Plots of results and projections will be shown in the summary plots by Ciaran in a separate section and are not needed here.

Additional information useful for the summary plots are:

- Definition of coupling (i.e. what lagrangian interaction term)
- Assumed dark matter density
- Definition of the projection (i.e. is it an estimated sensitivity, projected 90% CL limit, order-of-magnitude estimate etc.)
- Location (required for the dark photon case and for experiments sensitive to a daily modulation)

Template experiment uses the following Lagrangian definition:

$$\mathcal{L} = \frac{1}{2}(\partial^\mu a)(\partial_\mu a) + \frac{\alpha_s}{8\pi} \frac{a}{f_a} \tilde{G}^{\mu\nu} G_{\mu\nu} + \frac{1}{4} g_{a\gamma\gamma}^0 a \tilde{F}^{\mu\nu} F_{\mu\nu} + \frac{1}{2f_a} (\partial_\mu a) j_{a,0}^\mu, \quad (1)$$

Experiment position and orientation are listed in Tab. 1.

Table 1. Position and magnetic-field direction of template experiment

Latitude	41° 49' 26''
Longitude	12° 40' 13''
Elevation	100 m
B field direction	East–northeast



