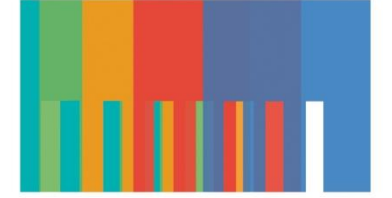


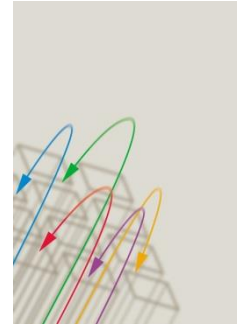
Fundamental



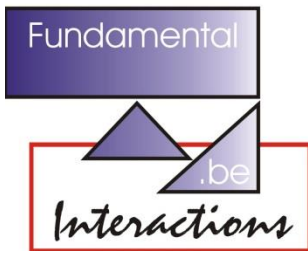
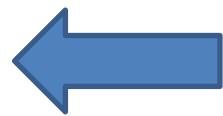
General meeting IAP VII/37, LLN Dec 19th 2013



belspo



IAP VII



F-I.be serves the whole community

FNRS

FRIA
IISN



<http://agenda.irmp.ucl.ac.be/PAI>

(get link from F-I.be)

For Instance, National calendar ..

The screenshot shows a Firefox browser window displaying a calendar for December 2012. The calendar is a grid with days from Sunday to Saturday. Events are listed in colored circles next to the dates. A legend on the right side of the calendar identifies the event types by color: blue for Common activities, green for CP3, orange for IIHE, pink for Joint Seminars THEP, red for Antwerpen HEP events, yellow for ULB PhysTh, light blue for IFPA (ULg) seminars, and dark blue for HEP Gent. Below the legend is a 'Jump to' section with a dropdown menu set to 'December 2012' and a 'Pick multiple:' section with a list of event categories (0_common, 1_CP3, 2_IIHE, 3_Joint-THEP, 4_Antwerpen) and a 'Go' button. At the bottom right, there are two small calendar views for November 2012 and January 2013.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	25 ● 2:00 llbb CP3	26	27 ● 12:30 ULB PhysTh journal club ● 1:00 Invited Seminar - Chiara Arina - Asymmetric Cold Dark Matter from Leptogenesis	28 ● 10:00 Bi-Weekly IIHE Internal Seminar: Martin Casier, "Studying Gamma Ray Bursts and Active Galactic Nuclei Emissions with IceCube: Method and Statistical Analysis" - IIHE	29 ● 11:00 ULB PhysTh seminar. M. Muehleitner (Karlsruhe U.); "Physics of the Brout-Englert-Higgs Boson in the SM and Beyond at the LHC" ● 11:30 Drink Saint-Elai ● 2:00 Search for high-mass dilepton resonances with the ATLAS detector (Dr. Tracey Berry) - IIHE	30
2	3 ● 2:00 llbb CP3	4 ● 11:00 LHC pheno meeting - Mr. Mathieu Buchkremer - Long-lived quarks : review ● 6:00 Canceled - Tier-2 / Madgraph / Cosmo / NA62 clusters: Shutdown	5 ● 6:00 Canceled - Tier-2 / Madgraph / Cosmo / NA62 clusters: Shutdown ● 12:30 ULB PhysTh journal club ● 1:00 Invited seminar - Andrea Romanino - Simple and direct communication of dynamical supersymmetry breaking	6 ● 10:00 Bi-Weekly IIHE Internal Seminar: Thierry Maerschalk, "High-Eta Upgrade for CMS : Triple-GEM" - IIHE	7 ● 11:00 PhysTh seminar: E.-J. Chun (KIAS-Seoul); "LHC Phenomenology of Type II Seesaw". ● 2:00 DM@BXL meeting	8
9 ● 2:00 llbb CP3	10	11	12 ● 12:30 ULB PhysTh seminar. Michele Redi (CERN); "Axion-Higgs Unification". ● 12:30 ULB PhysTh journal club ● 1:00 Lunch seminar - Marco Zaro - aMC@NLO phenomenology at the LHC ● 4:30 Mathematica: unavailable / License server upgrade	13	14	15
16 ● 2:00 llbb CP3	17	18	19 ● 12:30 ULB PhysTh journal club ● 1:00 Lunch seminar - Krzysztof Piotrzkowski - Exclusive physics at the LHC	20 ● 9:45 IAP kick-off meeting	21	22
23 ● 2:00 llbb CP3	24	25	26 ● 12:30 ULB PhysTh journal club	27	28	29
30 ● 2:00 llbb CP3	31	1	2 ● 10:00 Frachat veut faire une thèse	3	4	5

New in physics ...

IceCube sees extra-terrestrial neutrinos !!

Scalar boson is .. Scalar !

Searches for other scalars go on at LHC,

... and for a lot of other things

Dark matter direct detection remains in mystery



François Englert avec Corinne Lejour et Véronique Feys (BELSPO)



<http://www.svtplay.se/video/1628203/nobelstudion>

After 28:48 François says no to «Higgs boson », FE and PWH agree on « boson H »





Prof. Peter Higgs

Dr. Jonas Strandberg

New in IAP - structure

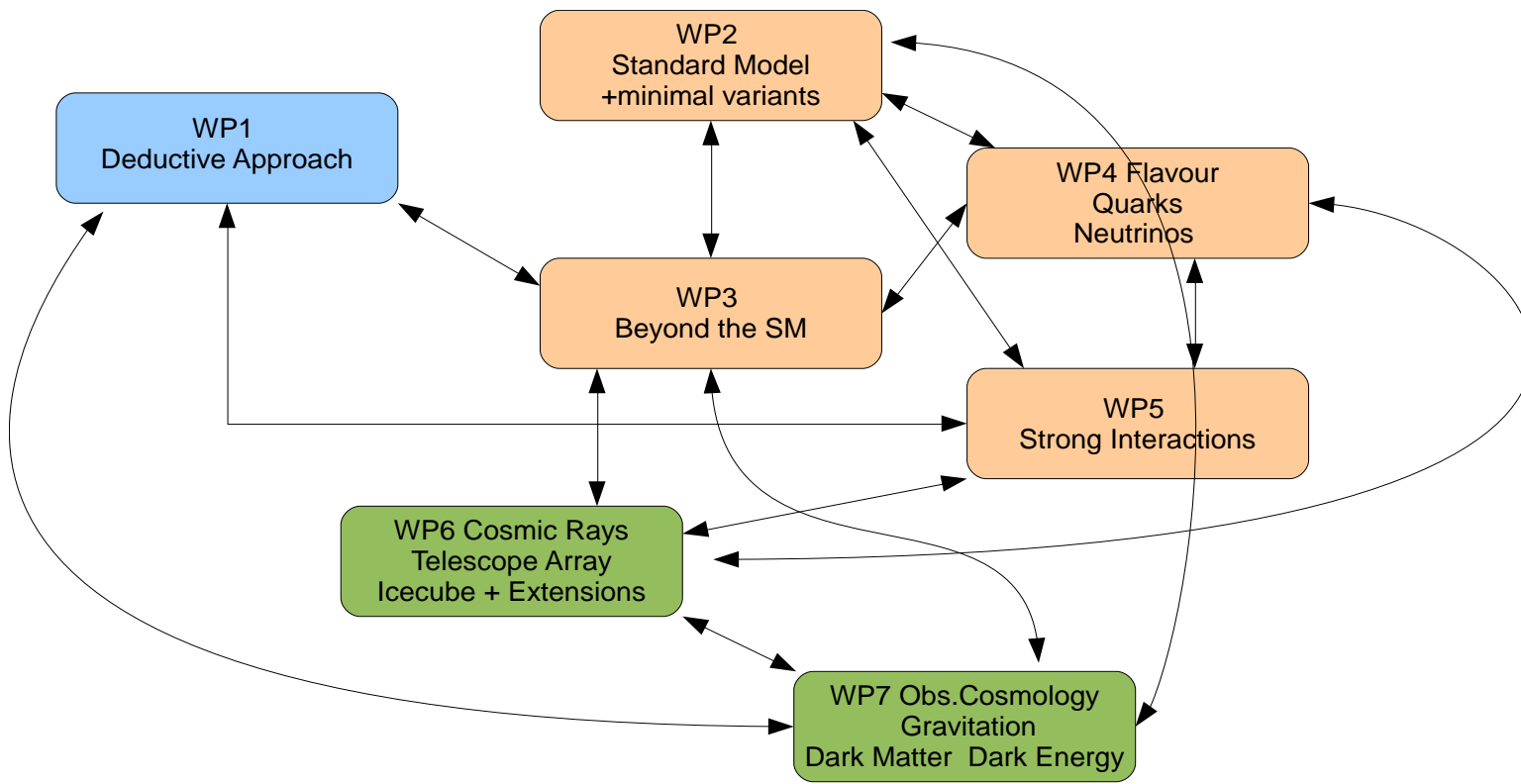
	Name Partner	Institution's abbreviation
P1	Jean-Marie Frère	ULB-Th
P2	Giacomo Bruno	UCL-Exp
P3	Barbara Clerbaux	ULB-Exp
P4	Fabio Maltoni	UCL-Th-Pheno
P5	Alexandre Sevrin	VUB-FI
P6	Nick Van Remortel	UA-Exp
P7	Antoine van Proeyen	KULeuven-Th
P8	Dirk Ryckbosch	UGent-Exp
INT1*	Steven Abel	Durham-IPPP
INT2*	Etienne Augé	Orsay-LAL
INT3*	Nicolo de Groot	NIKHEF
INT4*	Valery Rubakov	INR-Moscow

Work Package Coordinators

WP1	B Craps, F Deneff
WP2	C Delaere, M Tytgat, F Maltoni
WP3	F Blekman, B Clerbaux
WP4	E Cortina, JM Gérard, Th Hambye, J D'Hondt
WP5	P Van Mechelen
WP6	N Van Eindhoven, K Hanson, P Tinyakov, D Ryckbosch
WP7	C Ringeval, P Tinyakov
WP8	F Maltoni, N Van Remortel, G de Lentdecker
WP9	A Sevrin



New partner : INR

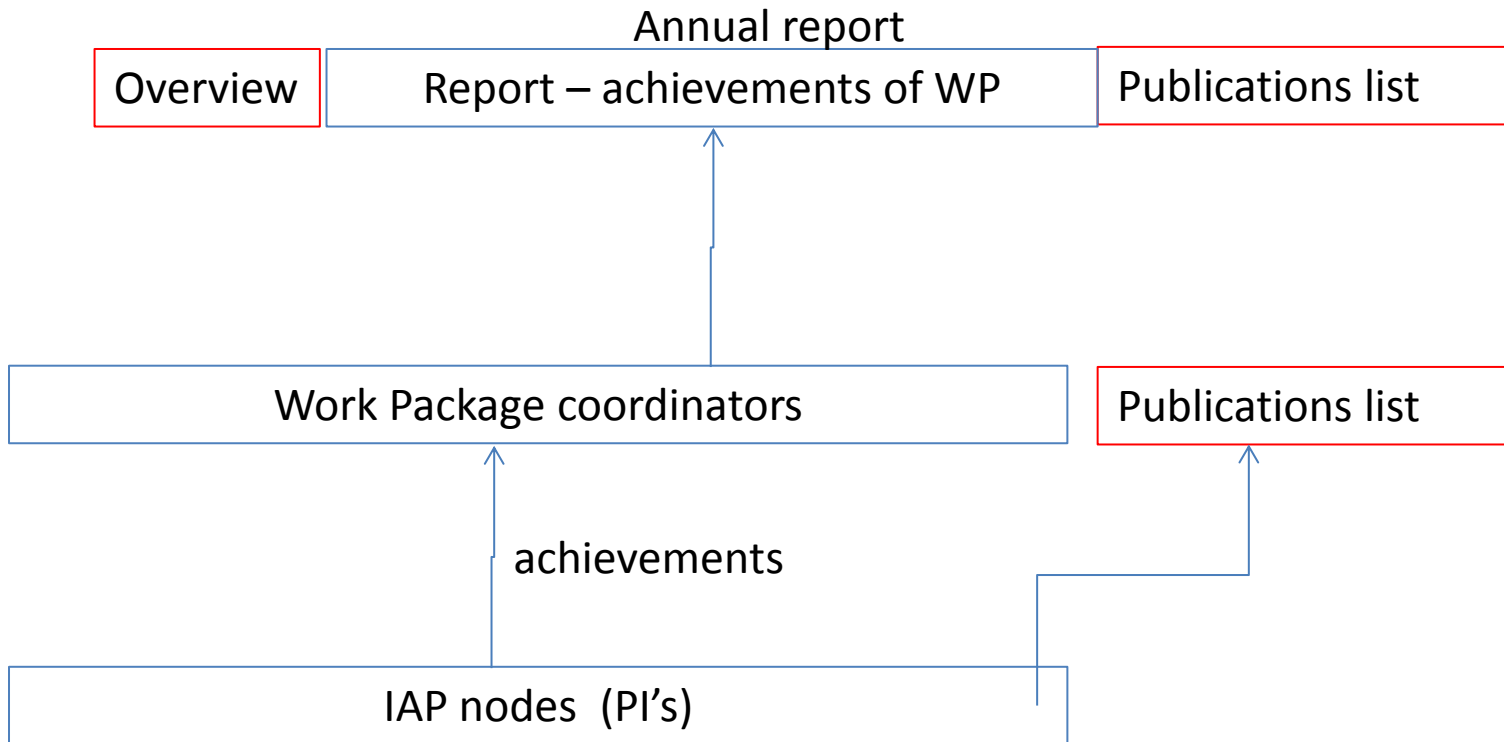


WP8 Future Searches

WP9 Common activities
(web, courses,
Conferences, schools...)



WP1	B Craps, F Denef
WP2	C Delaere, M Tytgat, F Maltoni
WP3	F Blekman, B Clerbaux
WP4	E Cortina, JM Gérard, Th Hambye, J D'Hondt
WP5	P Van Mechelen
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WP7	C Ringeval, P Tinyakov
WP8	F Maltoni, N Van Remortel , G de Lentdecker
WP9	A Sevrin



Prospects for Physics ...in particular in Belgium and IAP

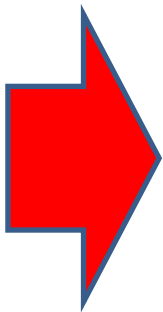
Current :

- LHC / CMS : *SM higher precision + Beyond SM direct searches*
- NA 62 : *precision tests in K decays, indirect BSM search*
- Icecube/ARA/DeepCore: *high energy neutrinos, cosmics, indirect DM, ...*
- Telescope array : *high energy cosmic rays (starts collab. with Auger)*
- Opera: *nearing completion*
- Neutron EDM (Van Duppen IAP)

Future ?

SEE WP 8 :

- Coordinate/optimize Belgian searches in CMS ?
- SOLID?
- **We are currently absent from**
 - Direct Dark Matter searches
 - Neutrino mass (neutrinoless double beta decay)
 - Most satellite / observational cosmology expts and obs.
 - (except for individual – not institutional - access to Planck, Fermi , ..



Inter-University Robert Brout Prize 2013

Awarded to the Master's Thesis

*Monochromatic neutrinos
from dark matter decay:
theory and detection*

by Chaïmae El Aisati

