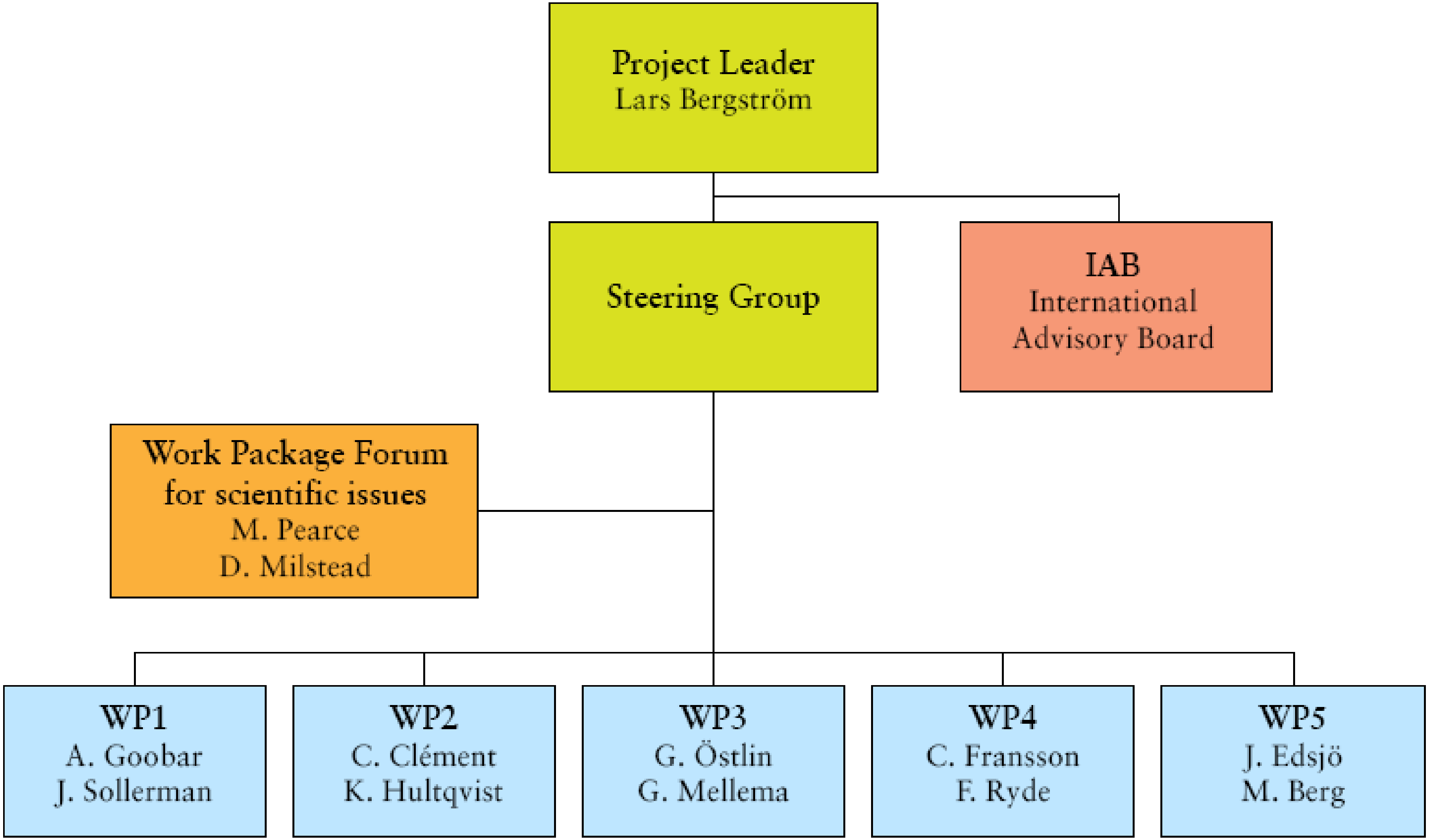
First CPC Steering Group Meeting, 4/9 – 08

- Logo, signs etc
- AlbaNova web site?
- Room problem?
- International Advisory Board (IAB)
- Internal organization
- Workpackage leaders & co-leaders
- CPC Seminars: responsible person, frequency?
- Outreach activitites: email about birth of center
- Guest programme

- Inauguration party? Party committee?
- Inauguration Symposium? With IAB?
- Minutes of meetings? Secretary? Language: English (at least for written notes)?
- Urgent requests?
- AOB
- How often shall Steering Group meet?
- Next meeting?


Project Leader
Lars Bergström
Steering Group
IAB
International
Advisory Board
Work Package Forum
for scientific issues
M. Pearce
D. Milstead
WP1
A. Goobar
J. Sollerman
WP2
C. Clément
K. Hultqvist
WP3
G. Östlin
G. Mellema
WP4
C. Fransson
F. Ryde
WP5
J. Edsjö
M. Berg

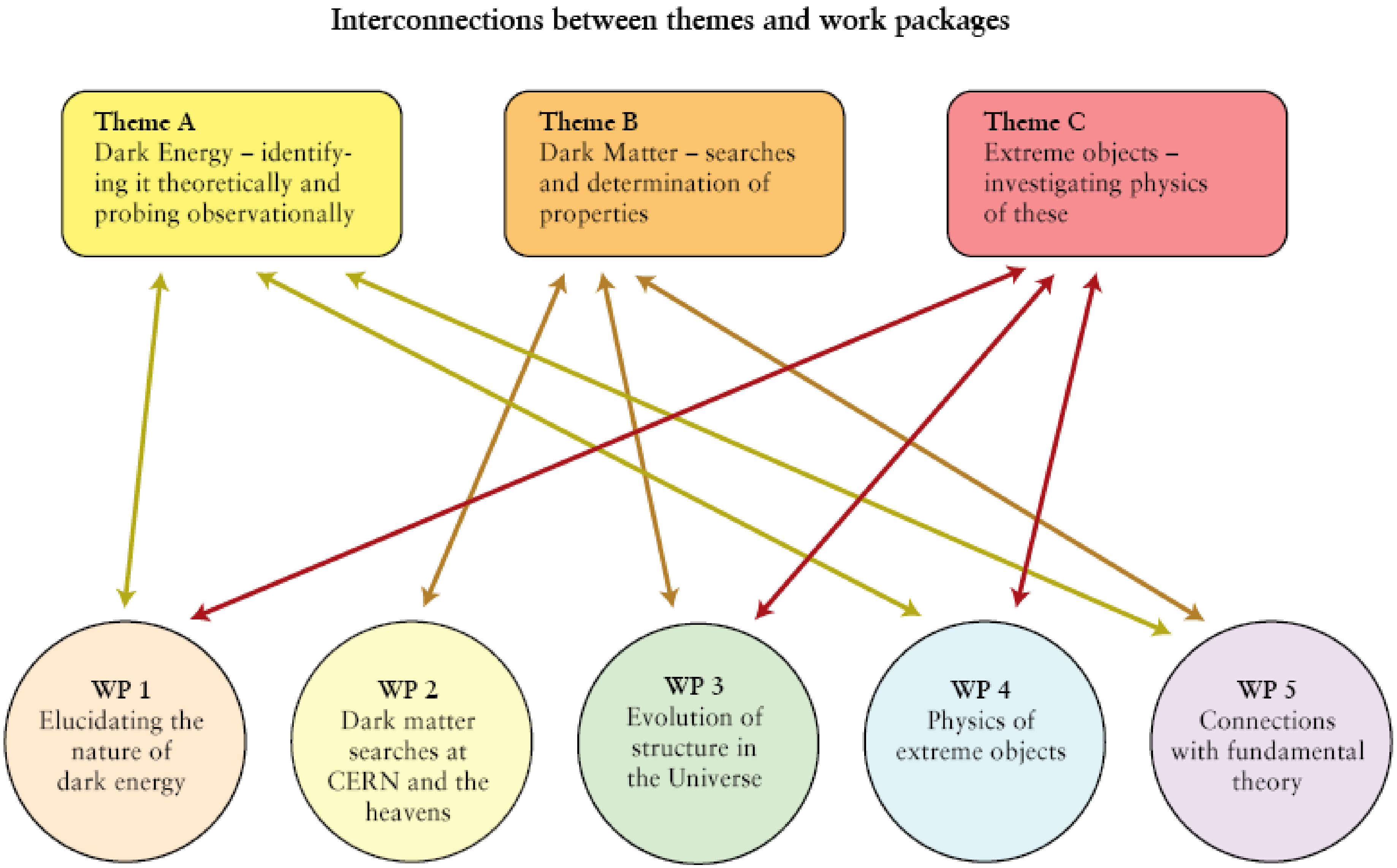
1. Elucidating the nature of dark energy
   (Conveners: Ariel Goobar and Jesper Sollerman)

2. Connecting searches for dark matter at CERN and in the sky
   (Conveners: Christophe Clément and Klas Hultqvist)

3. Formation and evolution of structure in a dark Universe
   (Conveners: Göran Östlin and Garrelt Mellema)

4. Physics of Supernovae, Gamma-ray bursts and Black holes
   (Conveners: Claes Fransson and Felix Ryde)

5. Connections with fundamental theory
   (Conveners: Joakim Edsjö and Marcus Berg)



The main connections between the main themes and the workpackages. Naturally, the work packages will have some interconnections as well, not shown in the above figure.

Milestones

We will here highlight the most important milestones and in particular show how the new collaborations formed through this proposal will be of crucial importance.

Short-term milestones (within 2 years)

Within the first two years of the project we will

- start-up the Steering Group (see appendix V), form the international advisory board (IAB), start-up the working packages and the work package forum, recruit the people needed (with guidance of the IAB) for the different work packages (mainly postdocs and junior researchers initially),
- analyze the data from GLAST, IceCube, PAMELA and ATLAS in the context of dark matter. We will also develop the first tools needed to do a cross-disciplinary analysis of these data sets,
- complete the data-taking of ongoing large ground-based supernova searches and prepare for SNAP and develop theoretical tools and collect observations for analyzing the explosion physics of Type Ia and core collapse supernovae, and
- study models for high energy emission for supernovae, gamma-ray bursts and compact objects applicable to observations from GLAST, IceCube and POGO.

Mid-term milestones (2–5 years)

In this time frame we expect the majority of our first results from the work packages to be ready, namely

- have finished a first full analysis of data from LHC, satellite experiments and IceCube to gain new understanding of the dark matter's properties, mostly in terms of supersymmetric models,
- have finished new major analysis of nearby (redshift $0<z<1$) type Ia supernovae to gain understanding of these both in their own right, but also for their use in cosmology
- obtained a much better understanding of the dynamics and structure of dark matter, both for interpreting dwarf galaxy data and for connections with dark matter searches from the sky
- tested models of extreme objects (like core-collapse supernova, gamma-ray bursts and black holes) against observations and used this knowledge to refine both our theoretical understanding of these objects and predictions of high-energy particles, neutrinos and gamma rays, crucial for upcoming observations like IceCube, and
- obtained a better understanding of the physical processes and nature of sources that reionized the Universe

Long-term milestones (5–10 years)

In the longer perspective, it gets more difficult to give precise answers to what the outcome will be, as it depends on the results from the previous years. However, we expect to

- have cornered in the dark matter candidate both from accelerator searches and more indirect searches from the heavens. We also expect to have made the necessary connections with fundamental theory to either confirm or refute hypothetical models of extensions of the standard model of particle physics.
- have gained a much better understanding of the properties of dark energy and made the connection between observed properties and theoretical modelling
- have found something completely new and unexpected!

Appendix U.1

Summary of proposed spending, The CosmoParticle Collaboration

	Number	SEK/mo.	Social costs	Cost/yr/ pers.	Person-yrs
Assoc. profs (>4 yr)	2	40000	1,55	744000	12
Junior researchers	5	33000	1,55	613800	20
Postdocs	12	29000	1,55	539400	24
Graduate students	5			300000	20
					76

All sums with overhead excluded

Sum/10 yrs	45547080		
Travel 15'/pers/yr	1140000		
Mtrls 10'/pers/yr	760000		
Lectures, workshops, IAB etc	4352920	435292	per yr
Total	51800000		

Year	PD	Res.asst	d. stud.	Lecturers	Tot.pers.	Cost/yr	Travel & materials	Other	Spending profile	Surplus/deficit	Fraction of total nominal funding	Sum incl OH
1	2	3	2	0	**7**	3520200	175000	635292	4330492	849508	0,016	5846164
2	2	5	2	0	**9**	4747800	225000	435292	5408092	-228092	-0,004	7300924
3	2	5	2	0	**9**	4747800	225000	435292	5408092	-228092	-0,004	7300924
4	2	5	2	0	**9**	4747800	225000	435292	5408092	-228092	-0,004	7300924
5	2	2	2	2	**8**	4394400	200000	585292	5179692	308	0,000	6992584
6	4	0	2	2	**8**	5519280	200000	435292	6154572	-974572	-0,019	8308672
7	4	0	3	2	**9**	5909280	225000	435292	6569572	-1389572	-0,027	8868922
8	2	0	3	2	**7**	4506840	175000	335292	5017132	162868	0,003	6773128
9	2	0	1	2	**5**	3726840	125000	335292	4187132	992868	0,019	5652628
10	2	0	1	2	**5**	3726840	125000	335292	4187132	992868	0,019	5652628
Total person-yrs	**24**	**20**	**20**	**12**	**76**			Sum	**51850000**			
								Incl OH	**69997500**			69997500