DRAFT Programme of NuFact08 Accelerator Working Group (draft v0.2 - 11-03-08)			
Monday, 30th June 2008			
Session 1: PROTON DRIVER (PD) 15:00 - 17:00 (Chairperson: **M. Zisman ?**)			
Time	Title	Speaker	Duration
15:00	**NF PD: preferred scenarios & remaining issues**		00:20
15:20	**Discussion**		00:10
15:30	**Baseline scenario for SB PD, challenges and synergies with other programmes**	**M. Zito ?**	00:20
15:50	**Discussion**		00:10
16:00	**Baseline scenario for MC PD, challenges and synergies with other programmes**		00:20
16:20	**Discussion**		00:10
16:30	**Discussion session: Updates on the PD baseline specification (if any) and endorsement**	**C. Prior ?**	00:30
17:00	**Session ends**		00:00
Session 2: CAPTURE 17:30-19:00 (Chairperson:)			
Time	Title	Speaker	Duration
17:30	**Horn vs. solenoid options for NF?**	**speaker from Japan?**	00:20
17:50	**Discussion**		00:10
18:00	**Challenges and progress on the SB horn design**	**M. Dracos ?**	00:20
18:20	**Discussion**		00:10
18:30	**Discussion session: Updates on the capture scheme specification (if any) and endorsement**		00:30
19:00	**Session ends**		00:00

Tuesday, 1st July 2008			
Session 3: **JOINT WITH WG4** : FRONT END 15:00-17:00 (Chairperson:)			
15:00	**Pro and cons of existing cooling schemes?**	**R. Fernow ?**	00:20
15:20	**Discussion**		00:10
15:30	**Experimental tests of cooling: expected results and what else should be done?**	**MICE speaker?**	00:20
15:50	**Discussion**		00:10
16:00	**RF issues for muon ionisation cooling channels**		00:20
16:20	**Discussion**		00:10
16:30	**JOINT Discussion session with WG4: Updates on the front end specification (if any) and endorsement**		00:30
17:00	**Session ends**		00:00
Session 4: **JOINT WITH WG4** : MUON STORAGE RING 17:30-19:00; (Chairperson:)			
17:30	**What are the remaining issues/difficulties/trade-offs for NF Muon storage ring?**		00:20
17:50	**Discussion**		00:10
18:00	**Can we share a muon source among NF, MC and low energy muon programmes?**		00:20
18:20	**Discussion**		00:10
18:30	**Discussion session with WG4: Updates on the decay ring specification (if any) and endorsement**		00:30
19:00	**Session ends**		00:00

Thursday, 3rd July 2008			
Session 5: TARGET 15:00-17:00 (Chairperson: **H. Kirk?**)			
15:00	**Particle production vs. energy: how do simulation results match experimental measurements?**	**L. Gatignon?**	00:20
15:20	**Discussion**		00:10
15:30	**Can solid target vs. liquid target survive SB and/or NF proton beam structure at 2-4 MW?**		00:20
15:50	**Discussion**		00:10
16:00	**What additional experimental results are needed to make a choice of SB and NF target?**	**C. Densham?**	00:20
16:20	**Discussion**		00:10
16:30	**Discussion session: Updates on the target specification (if any) and endorsement**		00:30
17:00	**Session ends**		00:00
Session 6: **JOINT WITH WG1** : BETA BEAMS 17:30-19:30; (Chairperson: **M. Lindroos**)			
17:30	**RCS design**	**A. Lachaize**	00:15
17:45	**Discussion**		00:05
17:50	**Decay ring status / studies**	**A. Chance**	00:15
18:05	**Discussion**		00:05
18:10	**High frequency ECR source (60 GHz) in pre-glow mode for bunching of beta-beam isotopes**	**TBC (Grenoble/ IN2P3)**	00:15
18:25	**Discussion**		00:05
18:30	**Direct production of 8Li and 6He using neutrons from low energy deuterons**	**D. Hirsh (Weizmann Ins**	00:15
18:45	**Discussion**		00:05
18:50	**R&D challenges in FP7**	**E. Wildner**	00:15
19:05	**Discussion session with WG1:**		00:25
19:30	**Session ends (NOTE THAT THIS SESSION IS PROPOSED TO BE EXTENDED BY 1/2 h)**		00:00

Friday, 4th July 2008			
Session 7: **JOINT WITH WG1**: Experiences with operating beams for Neutrino experiments 15:00-17:00; (Chairperson: **E. Gschwendtner?**)			
15:00	**Horn operational experience in K2K, NuMI and CNGS**	**A. Pardons? (CERN)**	00:20
15:20	**Discussion**		00:10
15:30	**Radiation Protection lessons**	**H. Vincke? (CERN)**	00:20
15:50	**Discussion**		00:10
16:00	**Beam diagnostics requirements and experiences from operating facilities**		00:20
16:20	**Discussion**		00:10
16:30	**Discussion session with WG1: From sessions 1-7: overall accelerator issues for NF**		00:30
17:00	**Session ends**		00:00
Session 8: ACCELERATION + END TO END SIMULATION 17:30-19:00; (Chairperson:)			
17:30	**Pro and cons of existing acceleration scheme?**	**S. Berg? (BNL)**	00:20
17:50	**Discussion**		00:10
18:00	**Status of END to END simulation**	**ISS or IDS speaker**	00:20
18:20	**Discussion**		00:10
18:30	**Discussion session: Updates on the acceleration scheme specification (if any) and endorsement**		00:30
19:00	**Session ends**		00:00

Monday, 30th June 2008	
Session 1: PROTON DRIVER (PD) 15:00 - 17:00 (Chairperson: M. Zisman?)	
Time	Title and Questions to be addressed by the speaker during the talk
15:00	**NF PD: preferred scenarios & remaining issues**
	a- Present latest ISS/IDS beam parameters and scenarios
	b- Problems with reaching 1ns rms bunches?
	c- Issues with 1 bunch scenario ?
	d- All other issues for the different scenarios ?
	e- Present overall table showing the pros and cons of each scenarios
	f- Work plan + tests/experiments needed?
15:20	**Discussion**
15:30	**Baseline scenario for SB PD, challenges and synergies with other programmes**
	a- Present latest beam parameters and scenarios
	b- Explain major challenges and possible trade-offs?
	c- What are the synergies with NF and MC programmes?
15:50	**Discussion**
16:00	**Baseline scenario for MC PD, challenges and synergies with other programmes**
	a- Present latest beam parameters and scenarios
	b- Explain major challenges and possible trade-offs?
	c- What are the synergies with NF and MC programmes?
16:20	**Discussion**
16:30	**Discussion session: Updates on the PD baseline specification (if any) and endorsement**
Session 2: CAPTURE 17:30-19:00 (Chairperson:)	
Time	Title and Questions to be addressed by the speaker during the talk
17:30	**Horn vs. solenoid options for NF?**
	Can we discard the horn option?
	Do we need and are we ready to launch R&D for NF target solenoid?
17:50	**Discussion**
18:00	**Challenges and progress on the SB horn design**
	work status - simulation - what experimental results are needed?
18:20	**Discussion**
18:30	**Discussion session: Updates on the capture scheme specification (if any) and endorsement**

19:00	**Session ends**

Tuesday, 1st July 2008	
Session 3: **JOINT WITH WG4** : FRONT END 15:00-17:00 (Chairperson:)	
15:00	**Pro and cons of existing cooling schemes?**
	Review of schemes ending with Pros&Cons table for each scheme
	Recommendation on which NF cooling scheme should be used
	Recommendation on which absorber material should be used
15:20	**Discussion**
15:30	**Experimental tests of cooling: expected results and what else should be done?**
	Other experimental tests needed?
	If so, can they be part of MICE programme? or are additional efforts needed?
15:50	**Discussion**
16:00	**RF issues for muon ionisation cooling channels**
	What experiments are needed to understand and mitigate breakdown at 201 MHz for NC cavities?
	What is the limiting gradient at 201 MHz with magnetic field
	Do we need more 805 MHz experiments and if so, what should they be?
	With what precision can we measure the absolute voltage in each cavity (either with or without beam)
16:20	**Discussion**
16:30	**JOINT Discussion session with WG4: Updates on the front end specification (if any) and endorsement**
	The following topics will be treated as part of the scheduled talks of session 3 (+posters) and can be debated.
	beam line design work (cooling) by Muons Inc., Roland Johnson, Fermilab/Muons Inc.
	beam line design using phase rotation at JPARC, M. Aoki, Osaka
17:00	**Session ends**
Session 4: **JOINT WITH WG4** : MUON STORAGE RING 17:30-19:00; (Chairperson:)	
17:30	**What are the remaining issues/difficulties/trade-offs for NF Muon storage ring?**
	Do we need to inject both signs in one ring?
	If so, is the lattice compatible?
	Do we need to accommodate 20-50 GeV or will fixed energy suffice?
	What are the effects of errors? (strength, multipole, alignment…)
17:50	**Discussion**
18:00	**Can we share a muon source among NF, MC and low energy muon programme?**
18:20	**Discussion**
18:30	**Discussion session with WG4: Updates on the decay ring specification (if any) and endorsement**
	issues of sharing the muon source among neutrino factory, muon collider, low energy muon program
19:00	**Session ends**

Thursday, 3rd July 2008	
Session 5: TARGET 15:00-17:00 (Chairperson: **H. Kirk ?**)	
15:00	**Particle production vs. energy: how do simulation results match experimental measurements?**
	Synthesis of particle production vs. energy for different materials and codes
	How do simulation results match experimental data (MERIT + HARP + others)?
15:20	**Discussion**
15:30	**Can solid target vs.. liquid target survive SB and/or NF proton beam structure at 2-4 MW?**
	What simulation results show? Can they be trusted? What safety factors are taken?
	What are the risks / unknowns ?
	What operating targets can teach us? (K2K, NuMI, CNGS…)
	What experimental set-up results say? (all labs results)
15:50	**Discussion**
16:00	**What additional experimental results are needed to make a choice of SB and NF target?**
	What are the key questions to answer?
	What must be measured? How? With which precision? When? For how long? Budget estimate?
16:20	**Discussion**
16:30	**Discussion session: Updates on the target specification (if any) and endorsement**
17:00	**Session ends**
Session 6: **JOINT WITH WG1** : BETA BEAMS 17:30-19:30; (Chairperson: **M. Lindroos**)	
17:30	**RCS design**
	Can we pin down parameters, such as energy and intensity?
17:45	**Discussion**
17:50	**Decay ring status / studies**
18:05	**Discussion**
18:10	**High frequency ECR source (60 GHz) in pre-glow mode for bunching of beta-beam isotopes**
18:25	**Discussion**
18:30	**Direct production of 8Li and 6He using neutrons from low energy Deutrons**
18:45	**Discussion**
18:50	**R&D challenges in FP7**
19:05	**Discussion session with WG1:**
	Can we achieve g=350 with LHC upgrades ?
	What storage ring for g=350, taking into account relaxed duty cycle ?
	Activation of PS, SPS, storage ring ?
	Production of ions: status of Rubbia's proposal, Li/B vs. He/Ne
19:30	**Session ends**

Friday, 4th July 2008	
sion 7: **JOINT WITH WG1**: Experiences with operating beams for Neutrino experiments 15:00-17:00; (Chairperson: **E. Gschwendtn**	
15:00	**Horn operational experience in K2K, NuMI and CNGS**
	Any breakdowns? Which ones? When? Why? Under which beam conditions (p.o.t? Power? Beam structure?)
	Solutions? Implemented? Did it work?
	Lessons for the next beam generations?
15:20	**Discussion**
15:30	**Radiation Protection lessons**
	Any problems? Where? When? Why?
	Understood by modeling? Simulations?
	Solutions? Implemented? Did it work?
	Lessons for the next beam generations?
15:50	**Discussion**
16:00	**Beam diagnostics requirements and experiences from operating facilities**
	Beam precision at target?
	How difficult to fulfill?
	How to monitor?
	Used of continuous feedback?
	Lessons for the next beam generations?
16:20	**Discussion**
16:30	**Discussion session with WG1: From sessions 1-7: overall accelerator issues for NF**
	List of main points and decisions. Proposal on next steps
	Low versus High nufact: physics, detector, accelerator issues.
17:00	**Session ends**
Session 8: ACCELERATION + END TO END SIMULATION 17:30-19:00; (Chairperson:)	
17:30	**Pro and cons of existing acceleration scheme?**
	How do the different scenarios compare?
	Can we accept or reject the non-scaling FFAG concept?
	What are the matching requirements between the various accelerators? Efficiency of each section?
	What is responsible for the Q slope in the 201 MHz SRF case?
	Can it be avoided by improved fabrication techniques?
17:50	**Discussion**
18:00	**Status of END to END simulation**
	What matching sections are designed?
	What remains to be designed?
18:20	**Discussion**
18:30	**Discussion session: Updates on the acceleration scheme specification (if any) and endorsement**

19:00	**Session ends**

List of subjects for poster + paper contributions for SB, BB, NF

Categories	Title	Authors
Proton Driver		
	SPL accumulator and compressor scenarios for NF	M. Aiba
Target		
Decay and Capture		
Front-End		
	beamline design work (cooling) by Muons Inc.	Roland Johnson, Fermilab/Muons Inc.
	beamline design using phase rotation at JPARC	M. Aoki, Osaka
Acceleration		
Decay ring		
END-to-End simulation		
Beta beam topics		
Others	muon collider developments	Steve Geer, Fermilab
	Project X at Fermilab	D. McGuiness?, S. Geer, Eric Prebys, or C. Ankenbrandt
	low energy muons beams at JPARC	
	low energy muons beams at RAL	