Minutes of the 4th Meeting of the COSY Beam Time Advisory Committee (CBAC)

June 27-28, 2016

Location: Institut für Kernphysik, Forschungszentrum Jülich GmbH, 52428 Jülich

Participants:

CBAC members: Aulenbacher, Kurt Univ. Mainz, DE Chao, Alexander W. SLAC, US Kester, Oliver GSI, DE (excused) GSI, DE Schmidt, Christian Joachim Steffens, Erhard Univ. Erlangen-Nürnberg, DE (chair) Trubnikov, Grigory V. JINR Dubna, RU KIT, DE Weber, Marc CBAC secretary: Frank Goldenbaum (IKP-1) IKP: Mei Bai (IKP-4 Director) Ulf-G. Meißner (IKP-3 Director) (excused) Dieter Prasuhn (IKP-4, representative of the IKP staff) James Ritman (IKP-1 Director, IKP Managing Director) Hans Ströher (IKP-2 Director, Scientific Coordinator COSY) Board of Directors FZJ: Sebastian Schmidt

1. General remarks

The 4th CBAC session took place on June 27-28th in the Institute of Nuclear Physics (IKP) of the Research Center Jülich GmbH, in Jülich, Germany. The beam time requests of the individual groups were presented in the open session of the CBAC#4 meeting (for the programme and the list of applications see the Addendum).

Closed sessions of the CBAC members took place on Monday morning 9:00-9:30 and Tuesday morning until 12:20. The closed session on Monday morning was opened by Hans Ströher (Scientific Coordinator COSY) welcoming the participants listed above. Oliver Kester (CBAC member), Ulf-G. Meißner (IKP-3 Director) and Sebastian Schmidt (Board of Directors FZJ) are excused for not being able to participate in the CBAC session on Monday.

Hans Ströher summarized the current status and strategy process of the Research Center Jülich and the IKP within the POF-3 period (2015-2019) and beyond. The whole IKP is confronted with highly adverse prospects in the ongoing strategy discussion of FZJ. The committee expresses the opinion that a liquidation of the IKP end of POF-3 period including termination of future activities for the JEDI and FAIR (HESR, PANDA) programs and other activities of the IKP --- all being part of international cooperations---- is of tremendous detriment for the scientific community. A final decision on IKPs closure requires the approval of the advisory committee of FZJ (Aufsichtsrat) does yet not exist and has not yet been taken.

Prof. Mei Bai mentioned the kickoff meeting "Expanding COSY Capability for Multidisciplinary

Science" which took place at FZ-Jülich recently. A summary report of that meeting will be available soon.

A technical failure of the second magnetic septum currently prevents COSY from providing extracted beam of momenta above 1.8 GeV/c. The COSY team is working with the highest priority on restoring the capability of extraction for higher momenta. However for the time being, experiments using extracted beams and requesting beam momenta higher than 1.8 GeV/c are temporarily postponed.

The beam time schedule and operation of COSY for the second half of 2016 was presented in the open session by Dieter Prasuhn. In addition to requests of external users, the planned operation of COSY for the second half of 2016 includes 13 weeks of maintenance/shutdown, 3 weeks of machine development, and approximately 10 weeks for FAIR, EDM and external activities.

The 17 proposals submitted to CBAC#4 ask for 21 weeks in II/2016 and 7 weeks of beam time in I/2017, respectively.

An overview of all the applications to CBAC#4 is given as a table in the Addendum. The electronic versions of all proposals and reports as well as the pdf files of all contributions presented in the open session of CBAC#4 are located on the web page

http://www.ikp.fz-juelich.de/CBAC/documents/cbac04.html

2. Summary of the discussion and recommendations

2a) Procedure For the sake of completeness, our system of rating is outlined as it was done in the previous recommendations. - After the proposals had been presented in talks in the open session and questions had been posed to the proponents from the audience and by CBAC members, a comparative discussion took place in the closed session. In particular, the proposals were scrutinized with special emphasis on

- (i) **Feasibility** (here other assessments, like POF review or accepted proposals, may enter; also boundary conditions imposed by the facility have to be considered)
- (ii) **Importance** (e.g. how important is it that this particular test needs to be done in this period)
- (iii) Readiness (e.g. an assessment of possible risks that elements required for the test are not available in time). It should be noted that CBAC as external group cannot make a complete assessment of possible delays. In his summary, the CBAC chair asked the proponents to put in their application more emphasis on a detailed validation on the readiness of the instrumental requisites necessary for the requested test.

All these considerations lead to a Rating A, B, C as explained above. As in the previous report, there is no total rating given at this time, because the committee felt that the set of the three partial ratings represents in the best way the message the committee wants to convey to the Laboratory. - The result of the discussion is summarized in Table 1.

2b) Comments to Table 1 The relevant figures are listed for all 17 applications.

Experiment	Request II/2016 [weeks]	Request I/2017 [weeks]	Feasibility	Importance	Readiness	Recomm. II/2016	Recomm. I/2017
D1 PANDA MVD	1*	1	A	A	A	1*	1
D2 PANDA STT	1*	-	-	-	-		1 confirmed
D4 CBM	1*	2	A	A	A	1*	2
D6 INT Irradiation	18 shifts = 6d	-	A	A	A	18 shifts = 6d	
D7 LHCb	1d	-	В	В	А	1d	
D8 Eta-prime	4d	-	А	А	А	4d	
D9 Cluster target	-	1	A	A	A		1
A1 Stochastic Cooling	1*	1	A	A	A	1*	1
A2 Electron Cooling	2	-	A	A	A	2	
A5 Machine COSY Optics	2	-	A	A	A	1+1	
A6 INM	-	1-2 shifts occasionally	-	-	-		as requested
A7 COSY Inst.	1*	1"new"	-	-	-	1*	(1w CBAC#5)
A8.1+2 ESS Inst.	1* 1/2w	-	A	A	?	 addit. info needed!	
A9 Sib. snake	2	-	А	A	А	2	
A10 HBS	2	-	А	A	В	1	
E2 JEDI Polarimeter	1	-	A	А	В	1	
E4 JEDI Pol Database	2*	-				2* confirmed	
E5 JEDI RF-WiFi	-	2					(2w CBAC#5)
SUM	19	8				15	6 - 7

Table 1: Summary of Evaluation and Recommendations of CBAC#4 for 2^{nd} half of 2016 and 1^{st} half of 2017. Items are: Experiment, number of weeks requested in rest of 2016, and for I/2017; and the three partial ratings. In the last two columns, a number of weeks for 2016/17 is recommended for every application, based on the discussion in the closed session.

 $1^* = 1$ wk recomm. by CBAC#3;

A comparison of the requested 15 weeks with the available about 10 weeks in the remaining period of 2016 shows a marked discrepancy which is due to the strong increase of requests from non-IKP groups other than FAIR. The committee expects a further increase of the requested beam time for

detector and accelerator tests in the future. A reliable prediction depends on the final FAIR timelines and cannot be done at present.

2c) Short reports and recommendations on individual proposals

<u>Proposal D001.3</u> Detector Tests for the PANDA Microvertex-Detector

The PANDA-MVD developments are in a state that full system tests with the detectors and the complete data driven readout chain may be performed. In view of the lengthy ASIC development cycles, particular urgency is seen in the evaluation of system performance of both, the Pixel-readout ASIC ToPix and the entirely novel strip readout ASIC PASTA. Availability of these devices clearly defines the critical path for the MVD. With the previous beam time scheduled to Q2/2016 and cancelled due to technical issues at COSY this necessity prevails.

The proposal is fully supported, the amount and allocation of beam time fully justified.

Ratings:Feasibility AImportance AReadiness ARecommendation:1 week in Nov.2016, 1 week in spring 2017.

<u>Proposal D002.2</u> Beam Request for STT Tests with dE/dx Readout for PID

Rating and Recommendation submitted by CBAC#3 confirmed.

<u>Proposal D004.3</u> CBM Detector and Electronics Tests at COSY

The CBM experiment suggests testing the charge collection efficiency of the final STS microstrip sensor prototypes before and after irradiation and for different track inclinations. In addition tests of the time resolution of single crystal diamond sensors with new readout electronics based on the Hades TRB-3 electronics and SEU tests of the TMS 570 microcontroller are proposed. This is a good use of the proposed one week of beam time.

For February 2017, a second testing campaign is requested. This is a major undertaking with a new beam telescope, new STS data acquisition hardware and software, poly-crystalline diamond strip detectors, the first DiRICH readout electronics and various SEU electronics tests. The requested two weeks of beam time are more than justified.

It should be considered to combine the SEU electronics tests with those requested by other groups.

Ratings: Feasibility A Importance A Readiness A

Recommendation: One week in 2016, two weeks in I/2017.

<u>Proposal D006.1</u> Investigating p- Induced SEE in modern Microelectronics @ COSY

Due to the unfortunate break-down of the magnetic septum, the corresponding INT beam time allocated for May 2016 could not be provided as scheduled. The original research program is proposed again and remains an attractive use of COSY. The Fraunhofer INT team is fully prepared to start the campaign any time, and access to COSY should be granted with high priority.

Several other groups are proposing radiation tests of electronics. These groups and the COSY team should consider combining their request which would both save valuable beam time and may yield to fruitful scientific exchange and synergies between the research groups.

Ratings: Feasibility A Importance A Readiness A Recommendation: the requested 18 shifts.

<u>Proposal D007.1</u> Measurements of radiation effects induced in integrated circuits, error mitigation methods and efficiencies

The Horia Hulubei National Institute of Physics and Nuclear Engineering IFIN-HH (Romania), in collaboration with the Omega Microelectronics design center, are proposing irradiation tests for FPGAs and custom integrated circuits. The test program is motivated both by the needs of the LHCb RICH electronics upgrade and generic accelerators and space applications. The team is well-prepared for the irradiation campaign and has carried through or prepared radiation tests previously.

Several other groups are proposing radiation tests of electronics. These groups and the COSY team should consider combining their request. The proposed measurements would benefit from the flux and dosimetry measurements considered by INT.

The requested amount of beam time is moderate and fully justified.

Ratings: Feasibility A Importance B Readiness A

Recommendation: at least 3 shifts - Contact Person on-site to be nominated!

<u>Proposal D008.1</u> Eta-prime detector for SFRS at FAIR

Eta-prime at SFRS is an exemplary and initial proposal for a physics program at the FAIR-SFRS, as such it is very well justified for a preparatory beam time at COSY. The outcome of this beam time will have implications for the scope and experimental set-up of the SFRS at FAIR, a fact which addresses the importance of this endeavor.

The detector system presented is a dedicated and specialized set-up already available in hardware, its electronic integration, though not realized to date, is doubtlessly feasible, taking the GSI-FRS experience into account. Assuming that the targeted beam momentum of 3.6 GeV/c will be available very soon again, the proposal is fully supported. Potential delays by a few months should be used to automatize the set-up for an angular scan, which would enhance the practical efficiency enormously (set up of the detector onto a motorized manipulator which allows to scan without entering the cave).

Ratings:	Feasibility A	Importance A	Readiness A
Recommendation:	One week as se	oon as the full m	omentum is available again

Proposal D009.1 PANDA Cluster Target

The Cluster Jet Target is a key component of the PANDA experiment. Because of its long distance between nozzle and dump of about 4 m, careful testing in its final configuration is mandatory. Lab tests at Münster University are being prepared for II/2016. Various investigations at the WASA position with stored cooled COSY beams have been proposed for test and optimization, starting with a commissioning run after installation in Winter 2017, followed by a series of runs of 5 weeks in total,

extending into 2018. New diagnostic tools have been developed, yielding online images of the Cluster beam position at the first skimmer, and of the overlap of Cluster and Ion beam, which will ease tuning of the beams.

The committee is pleased to note the steady progress of this complex target facility.

Ratings: Feasibility A Importance A Readiness A

Recommendation: 1 week in I/2017; the further test program of about 5 weeks in 2017/18 is supported subject to the progress reports at future meetings.

<u>Proposal A001.3</u> Stochastic Cooling

Progress was made in the stochastic cooling proposal during the past several months. The vertical stochastic cooling pickup tank was removed and replaced by a new HESR pickup. The new tank cools to 35-45K with a cooling time of one night, and reaches a vacuum of 10^{-9} mbar. The longitudinal Schottky spectrum was measured with ¹/₄ of the tank. However, there seemed so far no sign of betatron sidebands, and this issue needs to be resolved to see if it is due to some unforeseen system malfunction. Kicker tank final assembling has started. Installation is planned in summer 2016.

Notch filtering seems to be functioning as expected, yielding a notch depth of -25 dB. The Notch depth of the GaN prototype was tested and is comparable or somewhat better than the GaAs based amplifier. The achieved notch depth is expected to be sufficient for operational needs, while the notch frequency can be adjusted and optimized during operation.

The beam transfer function (BTF) was measured at COSY using the old horizontal system. There are persistent measurements indicating the presence of impedance as the beam intensity goes beyond $2 \cdot 10^{10}$.

Machine time is requested to test the new system to detect Schottky signals from each port, to test the kicker structure, and to integrate the notch filtering. High beam momentum at 3.1 GeV/c will be needed. Coordination with MD, e cooling, and cluster target shifts in terms of coordinated experiments and even joint shifts are strongly encouraged. The effect of the impedance remains a concern at high beam intensities. It is suggested that the initial BTF analysis be carried out using results already obtained to get initial experiences in the BTF studies.

Ratings: Feasibility A Importance A Readiness A

Recommendation: 1 week (new), and confirmation of already recommended week (CBAC#3).

<u>Proposals A002.3</u> Electron Cooling

The 2 MeV electron cooler at COSY remains a unique device worldwide as it combines high energy and magnetized electrons. Impressive results from the recent two-weeks beam time in May/June were shown. Analysis is ongoing. Longitudinal cooling time at 3.1 GeV/c is 100-150 s, and the transverse one was found to be longer than expected. E-cooling in the presence of heating by the Cluster Jet was investigated with encouraging results. Commissioning of the COSY model with 2 MeV cooler included was started which will facilitate all kinds of further systematic studies. Additional software tools have been introduced which will speed up the tuning of the electron beam. It is suggested if time allows exploring electron cooling above transition (> 2.1 GeV/c) with barrier bucket and zero dispersion to see if it behaves differently. Two weeks of beam time are requested for additional studies in II/2016, and two more weeks in 2017.

The CBAC endorses these studies at this unique machine combining stochastic and electron cooling with internal targets which are of great importance for the accelerator community worldwide.

Ratings:	Feasibility A	Importance A	Readiness A
Recommendation:	2 weeks in II/2016;	2 weeks in 2017: decision a	at CBAC#5 (Dec. 2016).

<u>Proposal A005.2</u> COSY Beam Studies

In preparation for high performance tasks such as JEDI precursor, the COSY team has steadily improved its orbit and optics diagnostic and correction tools, both in hardware and in software. This precision optics proposal aims to improve the operational efficiency, and to substantially enhance the understanding of the COSY as a modern storage ring. The committee supports efforts in this general direction and wishes to also add the emphasis again of the educational value in these efforts.

An automated orbit response matrix (aORM) technique has been successfully implemented. The normal preparation time of a typical ORM run is reduced from ~10 hrs to ~0.5 hr. The LOCO software has also been implemented yielding results on beta-function corrections to their modeled values.

A total of one week was allocated in early 2016 to study the extraction line optics concerning short time extraction operation. A high intensity of $4 \cdot 10^{10}$ with a 4 sec cycle time was achieved. On the other hand, a beam size control at JESSICA point has been requested by the experimenters. Simulation efforts are currently on-going using the new optics control tools to identify what are needed to improve the situation. The committee expects a timely resolution of this beam size issue, and the important effort on precision optics be continued full steam.

Two weeks are requested with unpolarized proton beam in the present proposal. Included in the proposed machine time are the studies of the so-far unexplained fluctuation of the intensity of the injected beam and the beam loss at injection with electron cooler turned on. Machine development (MD) efforts need to be streamlined perhaps with overlap with this proposal. In addition, there seems to be a need to establish some machine study time, which seems to be falling through the crack of MD and proposals. It is recommended that a dedicated allocation of such times be made at regularly scheduled (e.g. one day per month), in such a way that they are separated out from the MD times and the accelerator staff can plan their efforts with focus on these regular dedicated schedules as is done in most major laboratories and accelerator user facilities.

Rating:Feasibility AImportance AReadiness ARecommendation:2 weeks in II/2016

<u>Proposal A006</u> Medical Radionuclide Development

Rating and Recommendation submitted by CBAC#3 confirmed.

<u>Proposal A007.1</u> COSY Beam Instrumentation

CBAC considers all experiments which serve to improve the beam diagnostics and the related feedback with the beam control system as very important. The installation of new BPM electronics

will provide indispensable improvement for the EDM precursor, since it allows much better control of the closed orbit.

Two projects have been presented in the Open Session: (i) a new read-out electronics for the BPM's based on commercially available components – here the timelines call for testing and final order by 07/16, and installation till 04/17; a commissioning run of 1 week is requested for May 17. (ii) A Beam Loss Monitor (BLM) system to be developed on the basis of scintillators with PM read-out. One week of BT is requested for late II/2016 measuring the response of a test set-up to intentional beam-losses at different energies. The diagnostics of the injection beam line will be improved as well.

We recommend to investigate how the different of beam diagnostics can projects can be organized in the most efficient way, probably several activities can be handled in parallel, including also the beam dynamics investigation (A.005).

Ratings:	Feasibi	lity A	Importance A	Readiness A	
Recommendation:		1 week in 2016 recommended by CBAC#3 confirmed.			
		1 week in	I/2017: Decision move	ed to CBAC#5 (Dec. 2016).	

<u>Proposal A008.1+2</u> ESS Instrumentation

The activities related to the ESS (Luminescent monitor for external, BIF monitor for internal beam) intensify the long standing, extremely useful output IKP is providing for other communities.

<u>A008.1 Luminescent Monitor</u> It is proposed to investigate the option to use gas luminescence for minimal invasive beam diagnosis. Data for the excitation of several molecoles such as CO2 CO and H2 shall be collected by transporting light via a fibre into an efficient spectrometer that is able to achieve a high sensitivity.

<u>A008.2 Scintillating coatings</u> It is proposed to test a specific scintillating coating of surfaces for its ability to indicate the intensity distribution of high power proton beams (BIF = Beam-Induced Fluorescence). In particular the contamination of the signal from background emanating from the target is to be studied.

Both proposals are made with the intention to obtain valuable information for the operation of the upcoming ESS. They have therefore already been recommended by CBAC#3. There is also no doubt that these experiments are feasible at COSY. CBAC is, however, concerned about the status of preparations for the experiment. It seems that in some cases hardware procurement has not been completed yet and that testing of several devices (low level light detection with spectrometer in A008.1 and operation of the several detectors in A008.2 together with translational movements) has not yet been extensively done. CBAC recommends to submit a suggestion when preparations for the experiments can be considered as finalized, which steps are necessary to complete this procedure and until which date experimental readiness can be achieved.

Recommendation: none (additional information required)

<u>Proposal E002.2</u> JEDI: Towards EDM Polarimetry

This request is part of the program to develop a polarimeter for stable beam rates, based on radiationhard LYSO crystals. In parallel to beam times, Lab spectra with Co source and internal radiation were studied, indicating very good resolution at higher energies. A test bench for in-beam tests has been set up at the BIG-Karl area of COSY. Impressive results of the March LYSO test beam time were presented, incl. spectra and resolution curves of scattered deuterons at $T_d = 100 - 270$ MeV with PMT and SiPM light detectors and different read-out systems. The best resolution achieved was 0.5 % with SiPM photodiodes. The new request aims at testing a system of movable forward detectors with polarized deuterons. Stable polarization during extraction is required. One week in II/2016 after Nov.1 is requested.

Ratings:Feasibility AImportance AReadiness BRecommendation:request endorsed by CBAC

<u>Proposal E004.1</u> JEDI: Polarization Database

In his JEDI overview, J.Pretz confirmed that the rebuilding of the WASA area is on schedule, enabling that this experiment can be performed as planned (week #45+46). A *Status Report on Proposal E004* by V. Hejny et al (May 17, 2016) has been submitted to CBAC#4. Based on these inputs, the CBAC#3 review is confirmed.

Recommendation: two weeks in II/2016

<u>Proposal E005</u> JEDI: RF Wien Filter

Good progress was made with the mechanical and electromagnetic designs of the new waveguide rf Wien filter. All hardware components are scheduled to be completed in July-August. Clean-room assembly is scheduled in September, followed by installation in PAX low-beta section. The system is expected to be available in the winter 2016/17.

The filter is designed to yield a strength of up to $\int B \cdot dl = 0.02$ T mm, and with zero integrated Lorentz force. It is driven at spin resonance frequency resulting in a frozen spin configuration so that any EDM contributions to vertical polarization can be accumulated. The accuracy of the system is designed to make it a "best possible device" for the detection of any possible EDM. Four feedback loops are designed to fine tune the device during operation, by controlling the resonance driving frequency, the beam orbit, and the residual beam oscillations after the filter due to nonzero Lorentz force. Simulations suggest that with an rms vertical orbit controlled to 0.1 mm, one might aim to detect EDM down to the level of 5E-20 e-cm.

The proposal requests two weeks preceded by one week of MD around March 2017. The committee considers the proposal well planned and thought out, and the first test of Wien filter EDM search a well deserving goal.

Ratings: Feasibility A Importance A Readiness?

Recommendation: Progress report and decision at CBAC#5 (Dec. 2016).

3. Conclusions

Seventeen new requests for beam time at COSY - in its role as testing ground for FAIR, a place for future precision experiments and other applications- for the period II/2016 have been presented to CBAC#4, some of them with overlap to I/2017 (number in brackets: CBAC#3):

- *three* (3) on detector tests for FAIR (D1, D4, D8)

- four (2) on irradiation and isotope production (D6, D7, A6, A10),
- *eight* (3) on machine studies for COSY, HESR and ESS (D9, A1, A2, A5, A7, A8.1+2, A9)
- *two* (4) on preparations of the JEDI experiments.

In addition, two requests recommended by CBAC#3 have been confirmed (D2, E4). – Two requests were presented in the open session via video conferencing. The committee feels that this type of presentation is much less effective as those presented by a local speaker. In addition, a local Contact Person should be determined for such external applications. It is suggested that in future all applications should be presented orally in the open session either by a representative of the applying group, or by the local Contact Person.

A total of about 22 weeks of beam time were recommended by CBAC#4 for scheduling after mid 2016. In addition, the decision for 2 JEDI weeks (E005) and 1 week COSY Instrumentation (A7) have been shifted to CBAC#5 in December for a final review of Readiness. Again, the Committee stresses the importance that the RF Wien-Filter, which is time-critical for the precursor experiment, will be assembled, installed and tested with beam soon. Two weeks in early 2017 are conditionally recommended, subject to a final review of readiness at CBAC#5 in December.

From FAIR, there are besides three detector applications (D1, D2 and D4) and the machine-related experiments two new applications on the test of the PANDA Cluster target (D9) and on the eta-prime detector for the SFRS (D8). Increased demand on beam time for studies of radiation hardness and isotope production is visible. A strong increase is noted for beam instrumentation for COSY and ESS.

The committee regrets that no request has been put forward for short accelerator sessions for training students in accelerator science and technology. CBAC proposes that such training sessions are organized during setting-up and MD sessions. Hopefully these training sessions are already taking part on an informal basis.

The beam time recommendations for the period I/2017 and beyond are subject of a detailed evaluation of a CBAC session in December 19 and 20, 2016, i.e. well in advance of the period spring 2017 and the start of the period II/2017.

4. Comment on the future of the Institute of Nuclear Physics (IKP)

In addition to our Comment as part of the CBAC#3 minutes to which we refer, we note that the FZJ Strategy process still includes the closure of the IKP with all the adverse consequences outlined in our previous comment. In particular, we pointed out that after elimination of the IKP, there are several projects being pursued which are based on application of Nuclear Physics and which have been conducted in – somehow informal – co-operations with IKP. Examples are the requests A6 (collaboration with INM on isotope production) and A10 (study on optimization of the design of HBS = Jülich High Brilliance neutron Source).

An attempt to identify current and new applications of COSY has been undertaken by Prof. Mei Bai recently. The report of an International Workshop *Expanding COSY Capability for Multi-disciplinary Science* has become available <u>https://seafile.ikp.kfa-juelich.de/d/c16c3efa63/</u> demonstrating how involving COSY in the long term could result in unique scientific opportunities in several field of research at FZJ and other institutions.

The Committee hopes that these and other arguments may persuade the decision making bodies of the FZJ to continue supporting the IKP so that it can continue its major and successful contribution to FAIR, realize its unique searches for the EDM of ions and support other disciplines with nuclear methods indispensable for modern science and development.

The CBAC#5 session is scheduled to take place on December 19th - 20th, 2016 in the DPG-Physikzentrum Bad Honnef coupled to the CANU/FFE workshop.

E. Steffens

Erhard Steffens (CBAC Chair)

AGENDA CBAC#4 2016 Meeting, June 27 and 28, 2016

Monday, June 27th, 2016

09:00 - 09:30	Closed session (IKP, room 311)			
	H. Ströher	Welcome, issues t.b.d.,		
	E. Steffens (chair)	Organization, committee work		
	Open session (IKP, ro	om 312)		
09:30 - 09:40	H. Ströher	Welcome		
09:40 - 10:00	D. Prasuhn (tbc)	Status of COSY		

Proposals are scheduled for 15' presentation + 10' discussion

10:00 - 10:25 10:25 - 10:50	D001.3	MVD LHCb	T. Stockmanns
10.25 - 10.50	D007	LICO	r. Maciuc
10:50 - 11:10	Coffee		
11:10 - 11:35	D004.3	СВМ	J. Heuser
11:35 - 12:00	D006.2	INT	S. Höffgen
12:00 - 12:25	D008	eta-prime	Y. Tanaka
12:30 - 14:00	Lunch		
14:00 - 14:25	D009	PANDA cluster jet t.	A. Khoukaz
14:25 - 14:50	A001.3	stoch. Cooling	R. Stassen
14:50 - 15:15	A002.3	elec. Cooling	V. Kamerdzhiev
15:15 - 15:45	A005.2	COSY beam studies	B. Lorentz
	A007.1	COSY beam instrum.	C. Böhme
15:45 - 16:15	A008.1	ESS beam instrum.	C. Thomas
	A008.2	ESS beam instrum.	C. Thomas
16:15 - 16:45	Coffee		
16:45 - 17:10	A010	HBS	P. Zakalek
17:10 - 17:35	A009	Sib. Snake in COSY	A. Lehrach
17:35 - 17:50		JEDI-Overview	J. Pretz
	F002.2	(Incl. Status E004.1)	T TZ 1 1 1 ·1·
1/:50 - 18:15	EUUZ.Z	JEDI-POI.	I. Kesnelashvili
18:15 - 18:30	E005.1	(Status report)	A. Nass
18:30 - 19:00	Closed sessio	n	
19:30 - 21:30	Dinner (FZ-S	eekasino) also for spe	eakers
21:30	Bus transfer	to Stadthotel Jülich	

AGENDA CBAC#4 2016 Meeting, June 27 and 28, 2016

Tuesday, June 28th, 2016

12:30 - 14:00	Lunch (IKP, room 310) / End of meeting		
12:15 - 12:25	Summary of CBAC Recommendations		
	Onen session (IKP, room 312)		
09:00 - 12:10	CBAC closed session (IKP, room 311) representatives of the experiments should be available for additional information or questions		