

**Programme of the symposium on threshold meson production  
in pp and pd interaction.**

**(Extended COSY-11 Collaboration Meeting)**

**Institute of Physics, Jagellonian University**

**Hall 057, Reymonta 4, Cracow**

**20. – 24. June 2001**

**21.06.2001 Thursday**

**–  $\eta$  and  $\eta'$  production in pp and pd reactions –**

**Morning session                      9:00 – 13:00                      Chairman: R. Kulesza**

9:00 – 9:15

Welcome / Opening

9:15 – 10:45

*Steven Bass (München University & ECT, Trento)*

Gluonic effects in  $\eta$  and  $\eta'$ -nucleon interactions

10:45 – 11:15

*Pawel Moskal (Jagellonian University & Research Centre Jülich)*

Quasi-free creation of  $\eta'$  meson in the reaction  $pn \rightarrow pn \eta'$

11:15 – 11:45    coffee break

11:45 – 12:15

*Andrzej Magiera (Jagellonian University)*

Charge and isospin symmetry breaking in meson production reactions close to  $\eta$  threshold

12:15 – 12:40

*Heinz-Hermann Adam / Alfons Khoukaz (Münster University)*

Study of  $\eta$ -meson production in the reaction  $pd \rightarrow {}^3\text{He} \eta$ ;  
one step or two step mechanism?

12:40 – 13:00

*Jerzy Smyrski (Jagellonian University)*

Investigation of near-threshold  $\eta$  production in the  $pd \rightarrow pd \eta$  reaction

13:00 – 14:00    lunch

–  $\eta$  and  $\eta'$  production in pp and pd reactions –

Afternoon session

14:00 – 18:00

Chairman: A. Budzanowski

14:00 – 14:45

*Frieder Kleefeld (CFIF, Lisboa)*

ISI and FSI in NN  $\rightarrow$  NNX reactions close to threshold

14:45 – 15:20

*Sasa Ceci (Rudjer Boskovic Institute, Zagreb)*

Present knowledge about the pp  $\rightarrow$  pp  $\eta$  reaction and the  $\eta$ -nucleon interaction

15:20 – 15:40 coffee break

15:40 – 16:10

*Roman Skibiński (Jagellonian University)*

Faddeev equations and three nucleon forces; introductory lecture

16:10 – 16:40

*Kurt Kilian (Research Centre Jülich)*

The Dalitz plot as a tool in particle physics

16:40 – 17:10

*Slawomir Wycech (Warsaw University)*

Final state interactions of  $\eta$  mesons and  $\eta$ -nucleon scattering length

17:10 – 17:30

*Peter Winter (Research Centre Jülich)*

$\eta$  meson production with a polarized proton beam

17:30 – 18:00

*Stanisław Kistryn (Jagellonian University)*

Time reversal symmetry violation: search examples

22.06.2001 Friday

– study of  $\phi$ ,  $\omega$  and  $\eta'$  mesons –

Morning session

9:00 – 13:00

Chairman: K. Kilian

9:00 – 10:30

*Kanzo Nakayama (University of Georgia, Athens)*

Pseudoscalar and vector meson production in the nucleon-nucleon collisions

10:30 – 11:00 coffee break

11:00 – 11:40

*Piotr Salabura (Jagellonian University)*

How can we measure meson masses in the dense nuclear matter ?

11:40 – 12:00

*Magnus Wolke (Research Centre Jülich)*

Total cross section of the  $pp \rightarrow pp \phi$  reaction at threshold

12:00 – 12:30

*Dieter Grzonka / Georg Schepers (CERN & Research Centre Jülich)*

$pp \rightarrow pp \omega$  close to threshold

12:30 – 12:45 coffee break

12:45 – 13:10

*Alfons Khoukaz (Münster University)*

$pp \rightarrow pp \omega / \eta'$  at higher excess energies

13:10 – 13:40

*Hans Stockhorst (Research Centre Jülich)*

Stochastic cooling, gamma transitions and future of COSY

13:40 – 14:40 lunch

– COSY-11 internal meeting –

Afternoon session

14:30 – 18:00

Chairman: M. Wolke

14:40 – 15:10

*Paweł Moskal (Jagellonian University & Research Centre Jülich)*

- Status of the  $\eta'$ -meson production in the pp interaction
- Do we see signal from  $f_0$  or/and  $a_0$  mesons?

15:10 – 15:30

*Marek Siemaszko / Piotr Kowina (University of Silesia, Katowice & Research Centre Jülich)*

Reduction of pion background by means of the Cerenkov detector;  
can we measure  $pp \rightarrow n \Sigma^+ K^+$  ?

15:30 – 15:50

*Christian Kolf (Research Centre Jülich)*

Track reconstruction in the hexagonal drift chambers

15:50 – 16:10 coffee break

16:10 – 16:40

*Dieter Grzonka (CERN & Research Centre Jülich)*

Physics, simulations and name for the super COSY-11

16:40 –

New detectors: i) mechanical installation, ii) software installation, iii) read out.

Future needs for the COSY-11 facility

Conferences and Publications, open questions and/or concerns, etc.

23.06.2001 Saturday

– open strangeness production –

Morning session

9:00 – 13:00

Chairman: A. Strzałkowski

9:00 – 9:30

*Piotr Kowina (University of Silesia, Katowice & Research Centre Jülich)*

Energy dependence of the  $\Lambda/\Sigma^0$  cross section ratio

9:30 – 10:15

*Ashot Gasparyan (ITEP Moscow & Research Centre Jülich)*

Theoretical explanations for the energy dependence  
of the  $\Lambda/\Sigma^0$  cross section ratio?

10:15 – 10:45 coffee break

10:45 – 11:30

*Johann Haidenbauer (Research Centre Jülich)*

Theoretical aspects of the  $pp \rightarrow pp K^+ K^-$  and  $pp \rightarrow pp a_0/f_0$  reactions

11:30 – 12:00

*Alfons Khoukaz / Magnus Wolke (Münster University / Research Centre Jülich)*

Total and differential cross sections of the  $pp \rightarrow pp K^+ K^-$  reaction

12:00 – 12:40

*Walter Oelert (CERN & Research Centre Jülich)*

Future Aspects of Physics at COSY

12:40 – 13:00

*Magnus Wolke (Research Centre Jülich)*

Summary

Afternoon session

18:00 – – –

Chairman: P. Moskal

Violinist: P. Winter

Grill in Czulówek