

WG6:

Radiative return and Monte Carlo tools

H. CZYŻ, IF, UŚ, Katowice Orsay 2007

II Meeting of the Working Group on
Radiative Corrections and Generators for
Low Energy Hadronic Cross Section

FRASCATI 25-26 June 2007

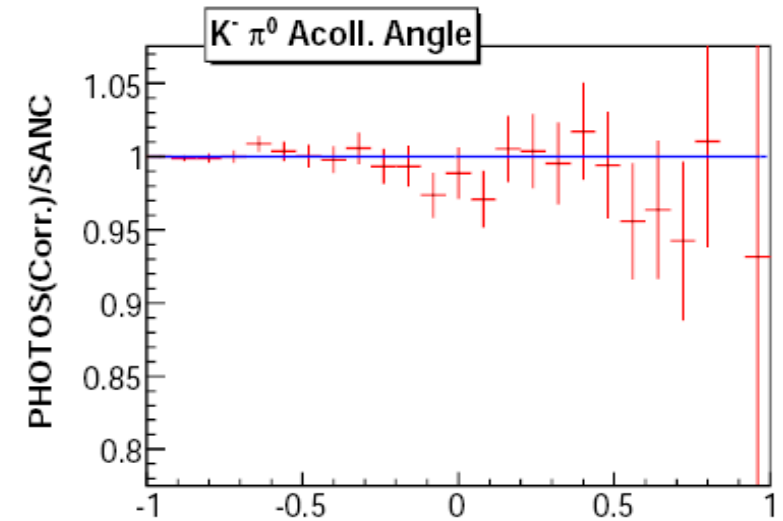
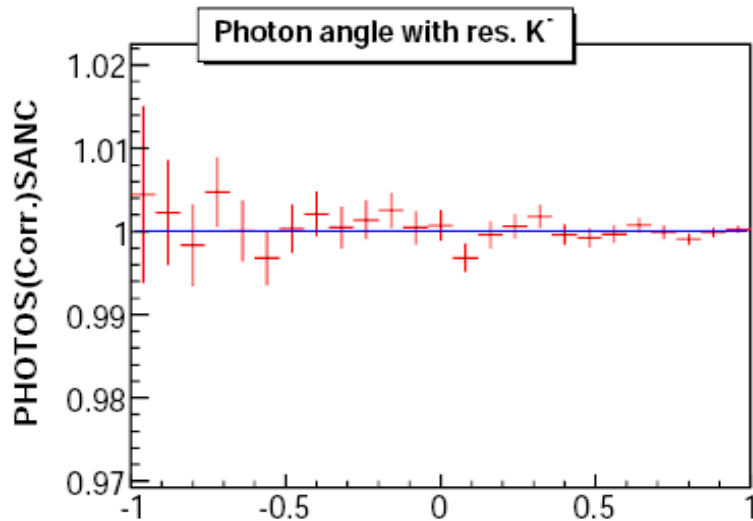
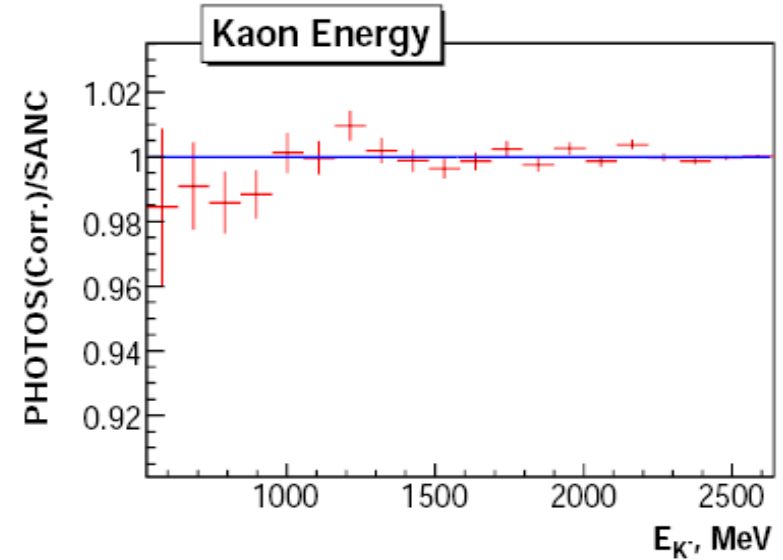
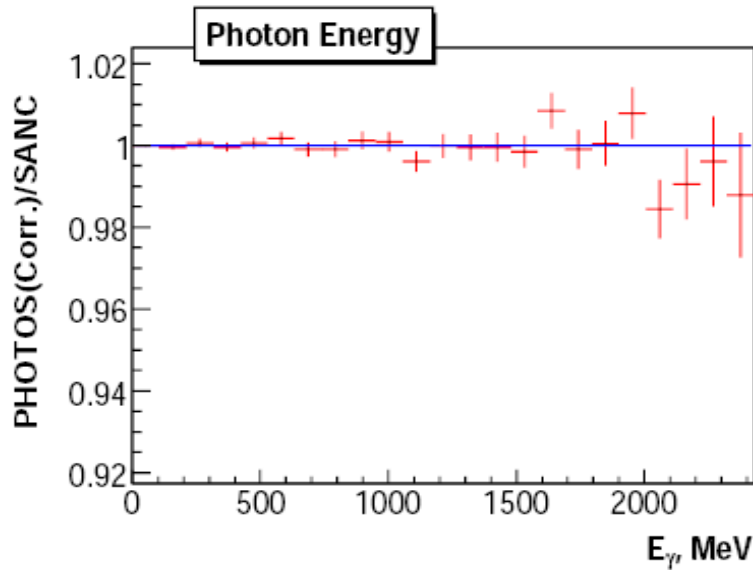
H. CZYŻ, G. Venanzoni

Spin amplitudes and gauge invariance: from PHOTOS Monte Carlo to QCD

Z. WAŚ

Results from: G. Nanava, Z. Was, hep-ph/0607019

$B^- \rightarrow \pi^0 K^-$: NLO improved PHOTOS ... and is good.



II Meeting of the Working Group ..., FRASCATI 25-26 June 2007





BABAYAGA@NLO vs. BHWIDE

A.D., Andreas Hafner

**Sighad07
LNF Frascati
June 25-26, 2007**



Conclusions

- Babayaga@NLO compared with BHWIDE
- nice agreement $O(0.3\%)$ of σ_{tot} between Babayaga@NLO und BHWIDE
- differences in σ_{dif} with very hard photon(s)
- Babayaga@NLO is implemented in the BaBar simulation environment
- new version of Babayaga with $\mu^+\mu^-(\gamma)$, $\gamma\gamma(\gamma)$
→ extremely interesting for BABAR
- **Statistics becomes an issue** due to unweighting procedure

Vacuum polarization calculation in VEPP-2M energy range

G.V.Fedotov
Budker Institute of Nuclear Physics
Novosibirsk

Two-loop Heavy Fermion Corrections to Bhabha Scattering

Janusz Gluza, Katowice

based on work with:

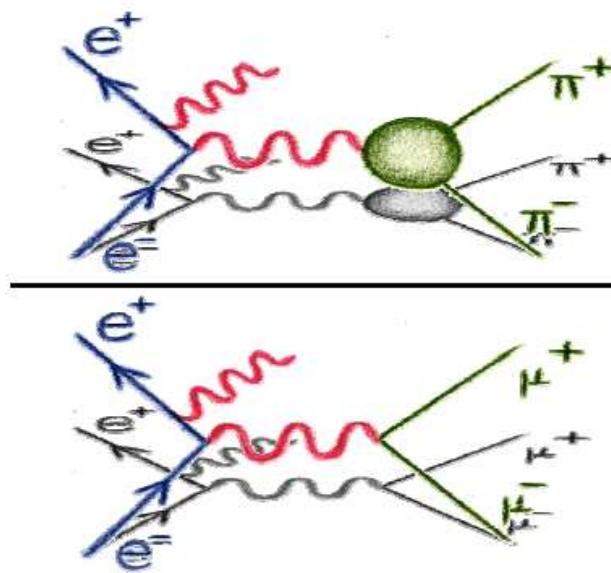
S. Actis, T. Riemann (DESY),

M. Czakon (U. Würzburg)

Flavianet WG meeting, 26 June 2007, INFN, Frascati

- **Introduction: Two-Loop corrections to Bhabha Scattering**
- **The Heavy Fermion Contributions** [[arXiv:0704.2400](https://arxiv.org/abs/0704.2400), hep-ph], → NPB
- **Results**
- **Summary**

Towards an extraction of $|F_\pi|^2$ from the ratio of pions and muons



S. Müller

WG Meeting in Frascati, 25.6.2007

PHOKHARA in BELLE experiment

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Summary

PHOKHARA has been used successively by BELLE in radiative return measurement.

PHOKHARA could be an important tool in the understanding of what $Y(4260)$ is.

For this purpose, it must be used on the charmonium resonances.

FEVA

Simulation of FSR/ ϕ direct decay

*G. Pancheri, O. Shekhovtsova,
G. Venanzoni*