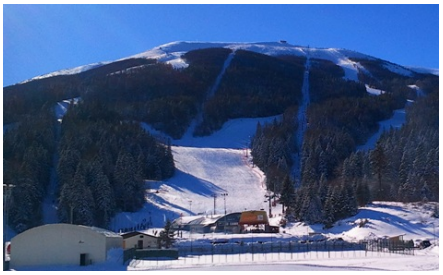

Contribution ID: **81** Type: **not specified**

Recent KLOE results on hadronic physics

Monday 3 February 2014 10:00 (30 minutes)

KLOE collected most of the data in 2004-2006, whit 2.5 fb-1 of integrated luminosity at the peak of the ϕ resonance, and about 250 pb-1 off-peak, at 1 GeV center of mass energy.
Recent results obtained in light hadron physics concern the coupling of $\pi 0$ and η mesons to photons, that are interesting for the effective theories based on Chiral Perturbation Theory, and for their extensions to the transition region from low energy non perturbative QCD to high energies where the perturbative QCD can be used.
We measured the time-like Transition Form Factors by detecting the Dalitz decays $\phi \longrightarrow \eta$ e+e− and $\phi \longrightarrow \pi 0$ e+e− , while the coupling of the η meson to space-like photon has been obtained from γ-γ interactions (e+e− → e+e− η).
These quantities are also interesting for the evaluation of the Light-by-Light scattering contribution to the anomalous magnetic moment of the muon.
With gamma-gamma interactions we detected also the $\pi 0$ $\pi 0$ final state to study the production of the $\sigma(500)$ scalar meson.
Also a new measurement of $\eta \longrightarrow \pi + \pi - \pi 0$ Dalitz plot will be presented, of interest for the determination of fundamental parameters like the light quark masses.
The prospects for the new KLOE-2 data-taking aiming to collect 5 fb-1 in the next three years will be reviewed

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