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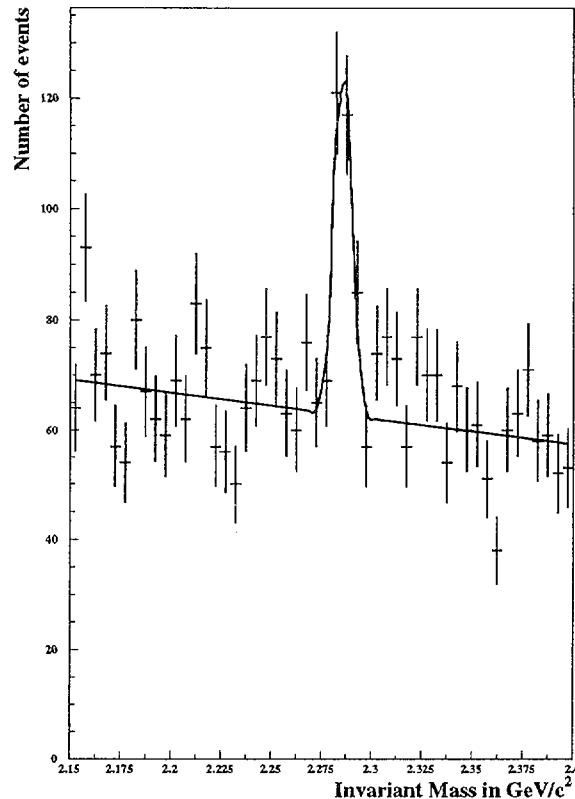
## REPORTS ON RESEARCH:

## The BELLE Experiment at the KEK B-Factory

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The BELLE experiment is dedicated to make precision tests of the Standard Model, in particular to measure CP-violation in  $B$  meson decays. The experiment runs on the KEK-B  $e^+e^-$  asymmetric collider with the design luminosity of  $10^{34} \text{ cm}^{-2}\text{s}^{-1}$ ; in 1999 the luminosity of  $6 \times 10^{32} \text{ cm}^{-2}\text{s}^{-1}$  was reached.

The experiment is equipped with an universal detector capable to register a big variety of decay channels with high efficiency and excellent accuracy. At the beginning of 1999 the BELLE detector has been completed and started data taking. The integrated luminosity reached  $\approx 250 \text{ pb}^{-1}$ . The first runs have shown that all elements of the detector system are operating and are approaching expected performance. Also the software chains work well and first physics results have already been obtained. As an example of the analysis performed in Kraków we show in the figure the invariant mass distribution of the  $pK\pi$  system. A clean maximum corresponding to the  $\Lambda_c$  hyperon demonstrates the quality of our tracking, vertexing and particle identification at the early stage of this experiment.



In addition to running shifts, the Kraków group participated in the preparation of the silicon vertex detector (SVD) including readout system, background studies and internal alignment. The SVD resolution evaluated from Bhabha events and cosmic tracks is  $20 \mu\text{m}$  for  $r\phi$  and  $39 \mu\text{m}$  for  $z$ .

<sup>1</sup>The BELLE collaboration consists of about 330 physicists and students from 53 laboratories.