W-pair cross-section and W Branching ratios at DELPHI
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*** W Physics was one of the main goals at LEP2***

Close to the final DELPHI results!

Selection: Different multidimensional discriminant techniques used in the selection
- W^+W^- \rightarrow qq' q'' \rightarrow Neural Network (Eff~80%, Bg~15%)
- W^+W^- \rightarrow qq' \rightarrow IDA (Eff~75%, Bg~10%)
- W^+W^- \rightarrow l^+ l^- \rightarrow Neural Network (Eff~65%, Bg~10%)

“CC03” diagrams of W-pair production at LEP2

Distribution of the Neural Network output variable for four-jets events at Ecm = 207 GeV

Distribution of the two types of Neural Network used for the selection of fully-leptonic events

Measurements of the WW cross-section compared with the Standard Model

Results in agreement with the Standard Model prediction!

Detailed study of systematic errors:
- Modelling of 4-jet Background from qq
- Background cross-sections
- Fragmentation modelling
- FSI
- Radiative corrections
- Luminosity determination
- Detector effects
- MC statistics

Breakdown of systematic errors on the partial WW cross-sections at Ecm = 200 GeV

Ratios between measured and predicted WW cross-sections with the DELPHI data