SUSY Particles Search

Results of the Team B meeting

- Chargino : $\widetilde{\chi}^{+}\widetilde{\chi}^{-}$
  T. Alderweireld, I. Gil, P. Rebecchi.

- Neutralino : $\widetilde{\chi}_1^0\widetilde{\chi}_2^0$
  P. Andersson, A. Lipniacka.

- Squarks :

  - Sbottom : $\widetilde{b}_1\widetilde{b}_1$(with DLA).
    P. Gris.

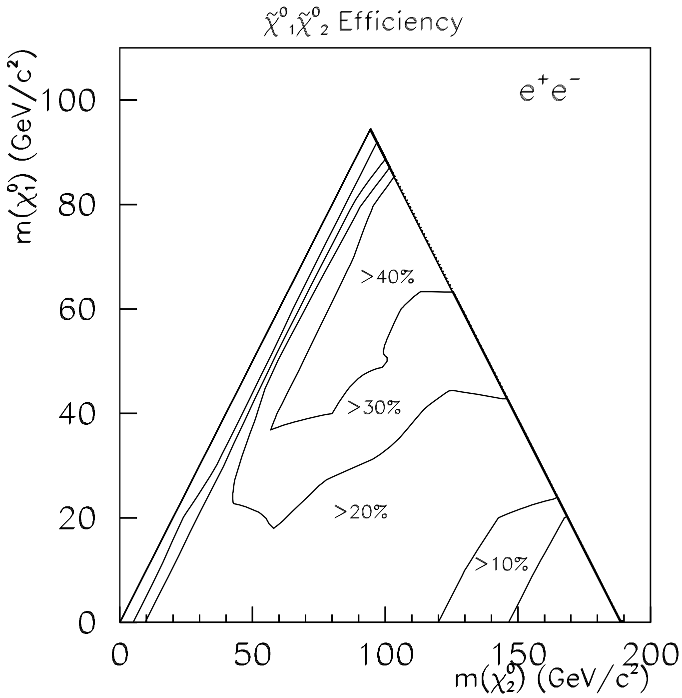
  - Sbottom and Stop: $\widetilde{b}_1\widetilde{b}_1$, $\tilde{t}_1\tilde{t}_1$(with NN)
    P. Verdier.

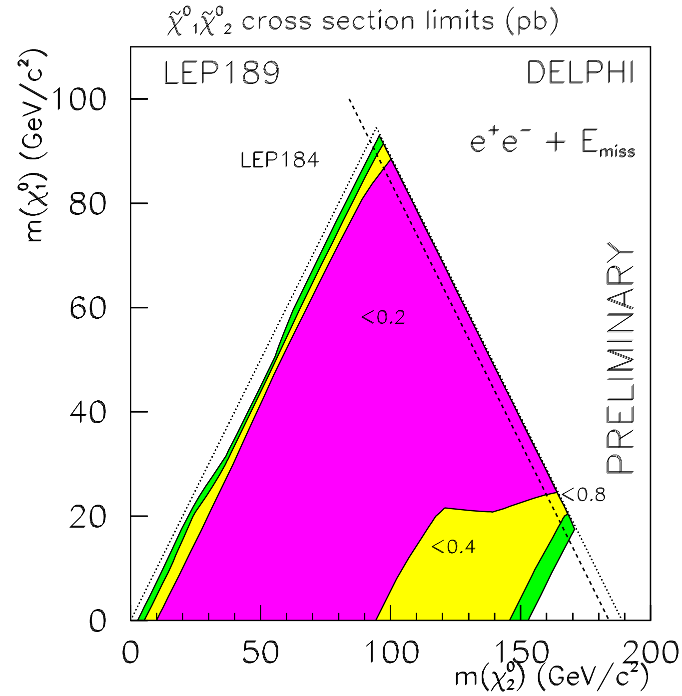
- Gaugino with Rp violation : λ' couplings
  C.Mulet-Marquis.

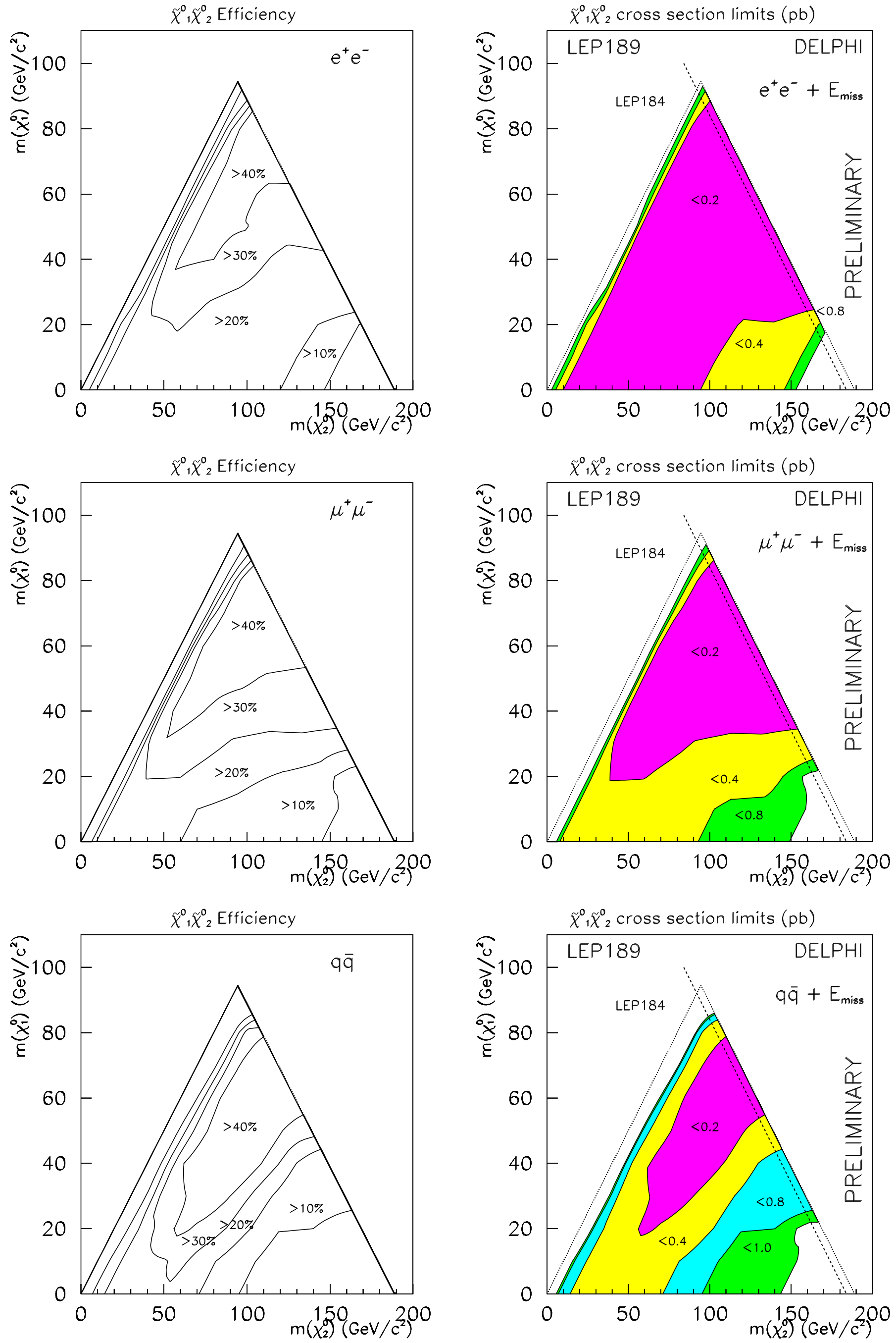
Neutralino Search

	$e^+e^-\ E^{miss}$	$\mu^+\mu^-\ E^{miss}$	$q\bar{q}\ E^{miss}$
DATA	9	10	25
Monte-Carlo	15.5 ± 3.1	11.9 ± 2.9	27.8 ± 2.9

Neutralino results







$\tilde{\chi}^0{}_1\tilde{\chi}^0{}_2$ Efficiency
e+e−
>40%
>30%
>20%
>10%
$\tilde{\chi}^0{}_1\tilde{\chi}^0{}_2$ cross section limits (pb)
LEP189
DELPHI
LEP184
e+e− + Emiss
PRELIMINARY
<0.2
<0.4
<0.8
$\tilde{\chi}^0{}_1\tilde{\chi}^0{}_2$ Efficiency
μ+μ−
>40%
>30%
>20%
>10%
$\tilde{\chi}^0{}_1\tilde{\chi}^0{}_2$ cross section limits (pb)
LEP189
DELPHI
LEP184
μ+μ− + Emiss
PRELIMINARY
<0.2
<0.4
<0.8
$\tilde{\chi}^0{}_1\tilde{\chi}^0{}_2$ Efficiency
qq̄
>40%
>30%
>20%
>10%
$\tilde{\chi}^0{}_1\tilde{\chi}^0{}_2$ cross section limits (pb)
LEP189
DELPHI
LEP184
qq̄ + Emiss
PRELIMINARY
<0.2
<0.4
<0.8
<1.0
m(χ^0_1) (GeV/c²)
m(χ^0_2) (GeV/c²)

Conclusion

Chargino Results				
mSUGRA			GMSB	
$m_{\tilde{\nu}} > 300$		$m_{\tilde{\nu}} > 41$	$m_{\tilde{\nu}} > 300$	$m_{\tilde{\nu}} > 41$
$\Delta M > 20$	$\Delta M > 10$	$\Delta M = 5$	$\Delta M > 10$	$\Delta M = 1$
93.6	92.	89.7	94.33	94.38
0.42	0.83	1.25	0.11	0.08

Neutralino Results

- Web page : **http://www.physto.se/ per/neut/**
- The traditional exclusion in the plane (μ , M_2).

Squarks Results		
	No mixing	Z^o decoupling
$\tilde{b}_1\tilde{b}_1$: DLA	88.	62.
$\tilde{b}_1\tilde{b}_1$: NN	89.5	65.5
$\tilde{t}_1\tilde{t}_1$: NN	86.5	80.
Previous Delphi Week		
$\tilde{t}_1\tilde{t}_1$: DLA	85.	79.