

Top electroweak couplings at 500 GeV ILC

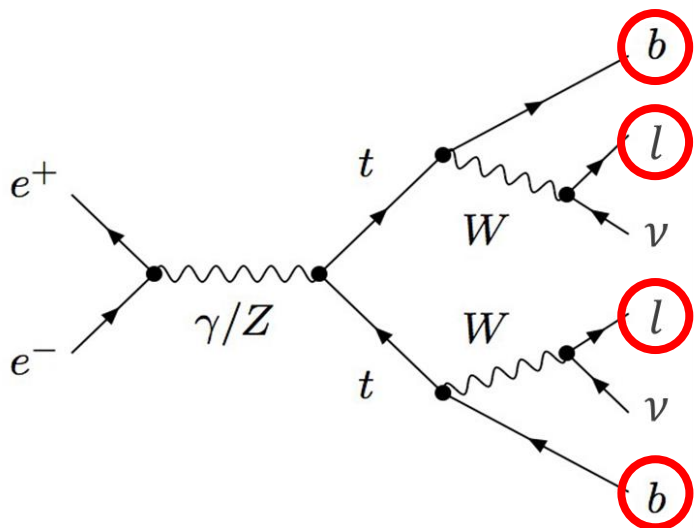
Physics Meeting 0618

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□ Kinematical reconstruction

As first trial of the di-leptonic ($2j+2\text{leptons}$) analysis, reproducing the kinematical reconstruction.



We can obtain these information;

*Directions of isolated leptons and b quarks

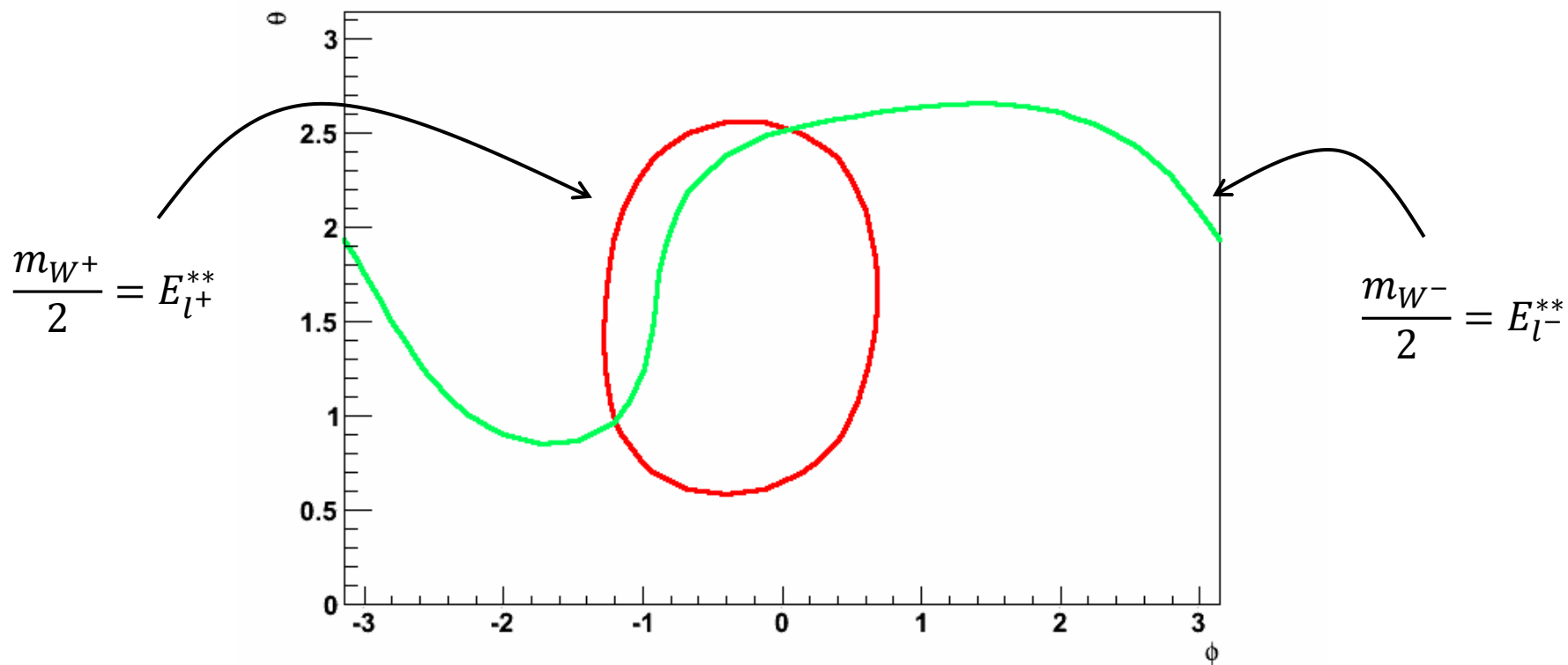
*Energy of isolated leptons

*(Energy of b quarks)

From the kinematical constraints we can reconstruct the direction of top quarks

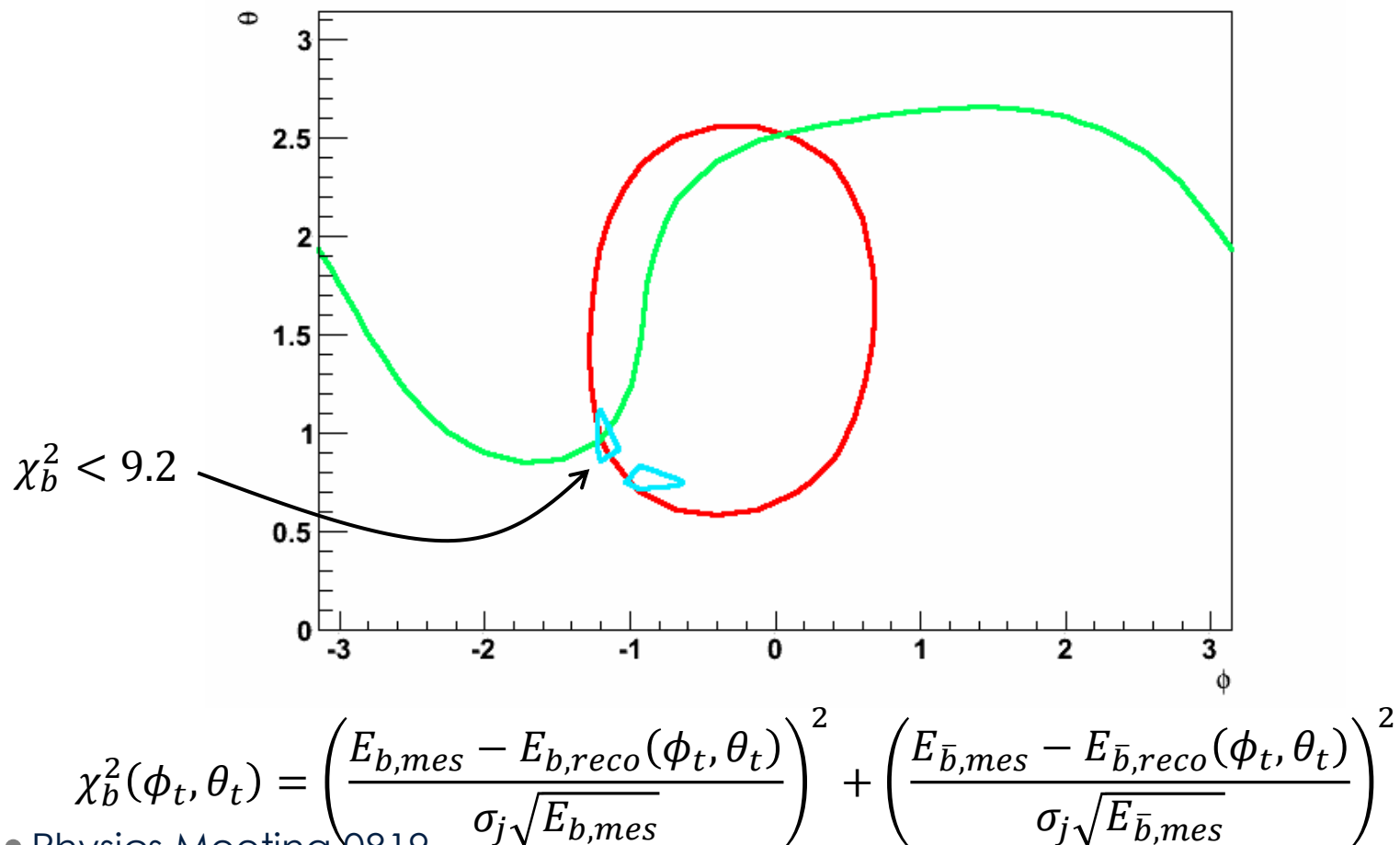
□ Kinematical constraints

In the W rest frame, the energy of isolated lepton is equal to $m_W/2$ (without considering ISR and bremsstrahlung)



□ Measurements of b-quark energies

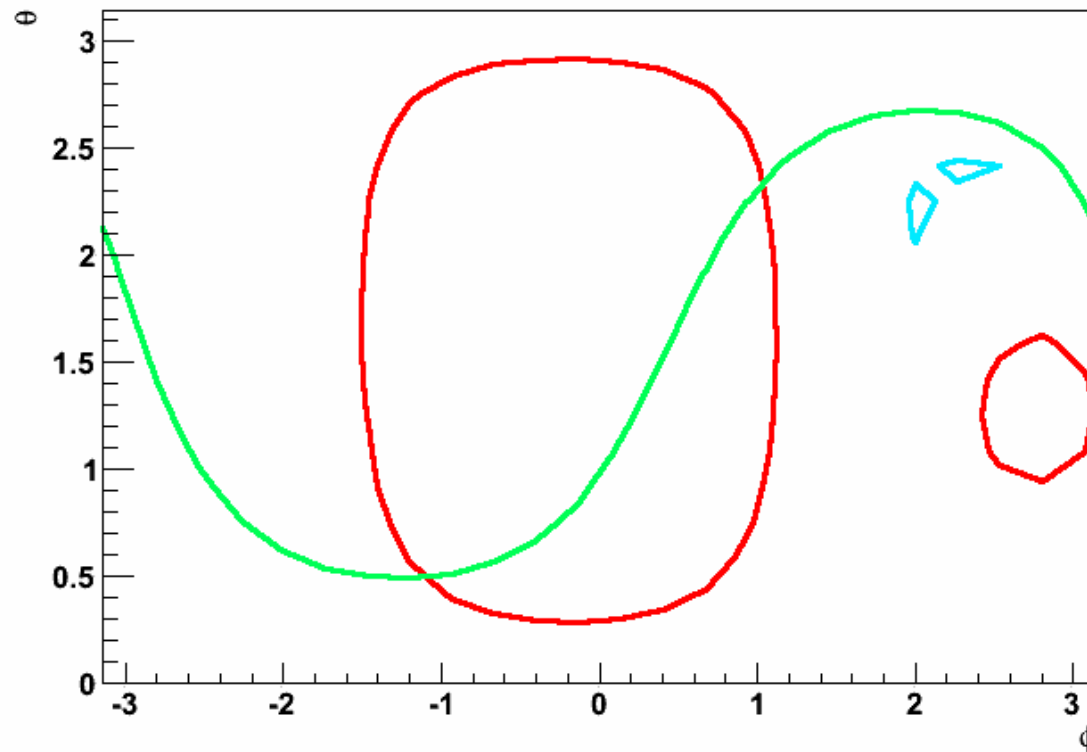
To select the right solution, we can use the measurements of b-quarks energies.



$$\chi_b^2(\phi_t, \theta_t) = \left(\frac{E_{b,mes} - E_{b,reco}(\phi_t, \theta_t)}{\sigma_j \sqrt{E_{b,mes}}} \right)^2 + \left(\frac{E_{\bar{b},mes} - E_{\bar{b},reco}(\phi_t, \theta_t)}{\sigma_j \sqrt{E_{\bar{b},mes}}} \right)^2$$

□ Miss combination of b-quarks

When we use the anti-b direction for the top reconstruction, the measurements of b-quarks excludes this combination.



□ Plan

- Stay at the LAL (in France) between 23rd Aug and 1st Oct.
- Study the measurement of the b-jet directions considering the hadronization