

Each working group should address the following questions and either give an answer or make recommendations about the best strategy for future research work as well as for the planning of beam-beam machine experiments.

### General Questions

- GQ1** Is the present choice of the LHC working point (63.31, 59.32) the best choice?
- GQ2** Do we anticipate problems when bringing the beams in collision?
- GQ3** Do we expect luminosity or beam lifetime degradation from ground motion, dynamic effects (e.g. tune ripple) and chromaticity?
- GQ4** What procedures shall be followed to validate beam-beam design choices?
- GQ5** What are the implications of beam-beam effects for linear optics, machine instrumentation and operation?

## Questions for the working group on Weak-Strong effects

**QWS1** Given the triplet errors, can we recommend an optimum crossing angle?

**QWS2** Can we give a recommendation for the minimum beam separation?

**QWS3** How can we measure and control the head-on collision of the bunches?

**QWS4** Are missing head-on collisions harmful?

**QWS5** How much dispersion can we expect and tolerate at the crossing points?

## Questions for the working group on Strong-Strong effects

- QSS1** Do we need a self-consistent treatment of closed orbit effects?  
Are there any alternatives?
- QSS2** Do we have to consider a bunch-to-bunch feedback system for orbit effects (PACMAN)? What would be the specifications?
- QSS3** Is there a possible loss of Landau damping in the strong-strong regime?
- QSS4** Are coherent beam-beam modes damped by the presence of many bunches?
- QSS5** If a feedback system is required in collision, what would be the specifications?