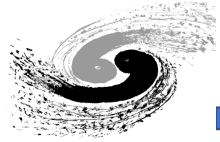


# Response to IDRC Recommendations



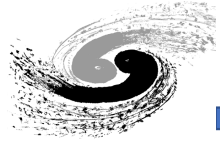
- **Optimize the collimators with simulations including secondary particles.**
  - It's hard to do so. Since all these collimators are far away from IP (~2000m), it would be hard to put all the lattice in this range into the geometry.
  - Back to CDR time, an initial study shows that the collimator has no huge impact on it.
  - Tip-scattering has not been studied yet.
  - We'll try to implement it using the last collimator upstream to further mitigate the BGB (~31m).
- **Optimize the SR masks for the ref-TDR configuration including the tip scatterings and bounces inside the beam pipe as well as the SR from the halo of the beam in quadrupoles.**
  - Lack of SR is a problem on current simulations, we are working on it.



# Response to IDRC Recommendations



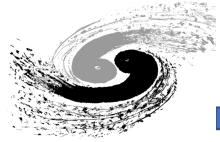
- **Study the possibility to use heavy metal masks near the IP to absorb particle showers.**
  - We are plan to do so. Though space is very limited. Therefore, we are thinking about using W beampipe, however it seems to make things worse.
- **Photon dumps**
  - The work has just begun. Joint effort with acc. people. Design could be finished with in one month.



# Response to IDRC Recommendations



- For the LumiCal detector, we encourage continuation of the design optimization based on simulation including more detailed mechanical design, and to perform beam tests with detector prototypes, at a later stage.
  - We had a discussion during the Hangzhou workshop, the design are fixed with the latest updates, and the work is ongoing in both simulation and mechanical design. Could be finished together with writing before end of this year.
  - The prototype and beam tests won't be included at Ref-TDR and will be performed at a later stage.



# Response to IDRC Recommendations



- A dedicated review on the MDI, inviting members from both detector and accelerator groups with sufficient expertise and experience to cover all the relevant aspects, would be very beneficial.
  - Sure.
- Vibration study with acc components.
  - Needs to be done with the design fixed.
- Consider the possibility to run Z-pole at 3T using Higgs machine.
  - Current Z lattice or Higgs lattice with lower energy or New dedicated lattice?
  - Needs more discussion with acc.