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Designing a matching device for positron sources — •Niclas Hamann[1], Manuel Formela[2], Gudrid Moortgat-Pick[3], and Klaus Flöttman[4] — [1]Uni Hamburg — [2]Uni Hamburg — [3]Uni Hamburg / DESY Hamburg — [4]DESY Hamburg

To realise a planned e+e- accelerators, as ILC, the accelerated particles have to be captured and matched according to the luminosity requirements. There exist several technical possibilities. In this talk a new promising alternative will be presented, the application of the plasma lense as an optical matching device. It will be compared with the current matching device namely the quarter wave transformer. An advantage of the plasma lense is a different magnetic field component which focuses the divergent beam in a more effective manner. Therefore we will show in this talk that the yield requirements could be achieved more easily. The plasma lense can actually be a promising alternative for focussing beams as soon as the technical feasibility has been approved.

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