Modeling and Tuning the Beam Lines of the THE SVEDBERG LABORATORY, V. ZIEMANN, The Svedberg Laboratory, Uppsala University, Sweden - We briefly describe efforts to model the TSL beam lines that allow fast representation of the current beta functions, steering and beam sizes on the control computers. The beam matrix of the input beam delivered from the Gustav Werner Cyclotron is measured by quadrupole scans and subsequently matched semi-automatically into the beam lines. Moreover experience with delivering beams to different experiments in an interleaved mode is reported.