



Figure 1: The velocity parameter $\beta = v/c$ as a function of momentum for pions, kaons, and protons. The dashed lines correspond to the experimental setup described in Section 15.9 of the book.

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The β values were generated with the following ROOT C++ macro:

```
void plot(Double_t m) {
  for(int ip=0;ip<100;ip++) {
    Double_t pgev = ip/100.0*5;
    Double_t e=sqrt(pgev*pgev+m*m);
    Double_t beta = pgev/e;
    printf("(%g,%g)", pgev,beta);
  }
  printf("\n");
};

void betavsp()
{
  printf("———pion———\n");
  Double_t m=0.13957;    // rest mass in GeV
  plot(m);

  printf("———proton———\n");
  m=0.93827;
  plot(m);

  printf("———kaon———\n");
  m=0.493677;
  plot(m);
};
```