



## **Chapter 4**

# **The Short Baseline Near Detector and The Booster Neutrino Beam**

Chapter 4 Opening

## **4.1 The Short-Baseline Near Detector Physics Program**

## **4.2 The Short-Baseline Near Detector**

### **4.2.1 Time Projection Chamber**

### **4.2.2 Photon Detection System**

#### **Photomultiplier Tubes**

is coated on foils placed on the cathode , which reflect the incident photon back towards the PDS located behind the anode. This also shifts the wavelength of the photon which

#### **X-ARAPUCAs**

### **4.2.3 Cosmic Ray Taggers**

### **4.2.4 Data Acquisition**

### **4.2.5 Trigger**

## **4.3 The Booster Neutrino Beam**

## **4.4 Concluding Remarks**

