Annex 2 to the Convention

TARGET SPECIFICATIONS FOR PHASE I

1. A positron or electron storage ring of 845 m circumference including 32 straight sections each with more than 6 m space between quadrupoles.

2. An experimental hall encompassing the total circumference and accommodating beam lines up to 75 m in length.

3. At 6 GeV a current of approximately 100 mA in the multibunch mode and 5 mA in the single bunch mode.

4. A time of approximately 8 hours (or more) for the stored beam to fall smoothly to $^{1}/_{e}$ of an initial value of about 100 mA, to permit uninterrupted use of the machine for about one shift. Time for preparing for and establishing a beam and adequate working conditions should usually be a short part of one shift.

5. A brilliance from an undulator of at least 1×10^{17} photons sec^{-1} $mrad^{-2}$ mm^{-2} per 0.1 % bandwidth and per metre of undulator at a photon energy around 14 keV.

6. A flux from the bending magnets at least 8×10^{12} photons sec^{-1} $mrad^{-1}$ per 0.1 % bandwith at the characteristic energy of the bending magnets, which should be about 19 keV in the main part of the magnets, and about 9.5 keV in the "soft ends".

7. An x-ray beam whose position is reproducible from fill to fill and stable during one shift to about one tenth of its dimensions with respect to the beam lines.

8. A first set of at least seven beam lines completed to the extent that the experiments for calibration of optical elements and detectors have been performed.