/lmg

PS/RF/Note 89-10
8.11. 1989

COST ESTIMATE FOR PS CONTRIBUTION TO RFQ FOR PS 189

A. Fiebig, R. Garoby, F. Nitsch

1. SPECIFICATION

3 cavities have to be powered with pulsed RF.

Frequency 202,56 MHz

Pulse length : 500 **us**

For "Buncher' and "Debuncher" cavities.

P_{out} 1 kw.

For RFQ

P_{out} 250 *kW.*

2. *HARDWARE DESCRIPTION*

2.1 For 'Buncher" and "Debuncher" : 2 standard LINAC amplifier chains.

Max. P_{out} 5 IcW.

1 such chain is already available (recuperated from the LINAC 1 Proton buncher, which is not in service).

2.2 For RFQ : existing SIEMENS amplifier (recuperated from the LINAC 1 Proton buncher chain and upgraded to required output).

Max. P_{out} *350 kW,*

This amplifier needs reconditioning. The 20 kW driver (copy of LINAC 2 system), and a modulator as HV supply have to be **built.**

After termination of PS 189 this amplifier chain will be available for future developments (RFQ for heavy ions).

3. COST ESTIMATE

1 Predriver chain	40	kSF
1 RFQ amplifier chain	49	kSF
1 HV Modulator	35	kSF
Miscellaneous low level RF and cables/connectors	12	kSF
Temporary labour (1 man year)	60	kSF
Total	196	kSF

The cost of the pulse transformer to be used in the HV modulator (26 kSF) is proposed to be charged to the PS budget, considering that it represents a justified long term investment for the division.

170 kSF remains to be financed as requested in PS/DL/Memo 89-143.