

MM 01.12.2020

- **FoS:**
 - production of rf-coupling loop
 - preparation of hprf-testing: cabling
 - FoS-plating: distance ring plated on 19.11. (-> evaluation)
 - DT-plating: one tube re-welded -> to be re-coppered

- **Alvarez 2.0:**
 - EVGF for cavity series production almost finished
 - components for early procurement identified (390 k€)
 - enter logistics procedure
 - exploit available Cu-plating vacancies
 - EVGF finished
 - prepare entering into CDB & “CID” procedure
 - prepare collaboration with CERN on Cu-plating

- **pulsed stripper:**
 - prepare valve tests at consultant through tests at GSI with N₂
 - prepare “EX-Schutz” document
 - cabinet to be delivered Dec. 22nd

- **accelerator seminar this Thursday:**
A. Peters (HIT), “Spill structure enhancements at therapy facilities”



ACCELERATOR SEMINAR

Andreas Peters
Heidelberger Ionenstrahl-Therapiezentrum (HIT)

Thursday, 3rd December 2020 at 4 pm

Seminarraum Theorie & via Zoom
(ID: 922 0810 9528/ PW: 288786)

Review of spill structure enhancements at HIT and other ion therapy facilities

Ion beam therapy facilities are mostly based on synchrotrons and different slow extraction methods are used to produce a “DC-like” beam feeding the raster scan systems to apply the pre-planned dose distributions to the patients. At HIT the RF knockout method developed by HIMAC in Japan was installed and continuously enhanced since the patient treatment started in 2009. Several steps like the “Dynamic Intensity Control” based on feedback mechanism will be reviewed. In addition, the developments at other ion beam facilities - CNAO in Italy, MIT in Marburg and MedAustron in Austria - will be described, partly based on the Betatron method proposed in the PIMMS study twenty years ago. The experiences after more than ten years of operation as well as the next development steps planned within the EU funded IFAST initiative will be reported.

Coordinator: Anja Seibel, Janet Schmidt
Secretary: Larissa Birli
<https://indico.gsi.de/categoryDisplay.py?categid=359>

GSI

item	number	price / piece [€]	tot. price [€]	provider
plate for service hole	7	5100	35700	VA-TEC, PINK, NTG
plate for rf-power adapter	7	5400	37800	VA-TEC, PINK, NTG
static tuner body	115	1500	172500	VA-TEC, PINK, NTG
stem seal bellows	380	350	133000	Pfeiffer, Oerlikon, Leybold
rf pick-up DN 40	15	500	7500	CeramTec, VACOM, Leybold
Sum			386500	

	V12	cavity A-I	cavity A-IIa	cavity A-IIb	cavity A-III	cavity A-IV
# full DTs	54	25	38	32	27	
# sections	4	3	6	5	5	
needed on	13.09.24	14.01.25	24.06.25	20.11.26	27.05.27	
Component	Sum					
stem & DTs unit	176	54	25	38	32	27
service flange	7	2	1	2	1	1
RF-adapter	7	2	1	2	1	1
dyn. tuner	15	3	3	3	3	3
stat. tuner	155	27	20	40	34	34
bellow CF 63	425	130	61	92	77	65
half-DT	12	2	2	4	2	2