

SUMMARY RECORD OF THE 12th MEETING OF TICTAC HELD ON 15.11.1984

Present: B. Autin, G. Benincasa, G. Carron, V. Chohan, D. Cornuet, D. Dekkers, M. Harold (RAL), H. Horisberger (Chairman), R. Horne, F. James, C.D. Johnson, E. Jones, H. Jones (RAL), F. Malthouse, S. Maury, S. Milner, F. Pedersen, P.L. Riboni, L. Rinolfi, J. Schmitt, T.R. Sherwood, A. Sullivan, F. Volker, B. Williams (Secretary), E.J.N. Wilson.

Agenda

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1. Record of the Previous Meeting

1.1 Correctness

No corrections to the record were registered.

Action

1.2 Matters Arising

1.2.1 P.R.1.2.1. A. Sullivan explained that as all power supplies would be now installed in the service building, the pompiers had not objected to the target zone emergency escape scheme that called for no door between the zone entrance and the hall. H. Horisberger agreed but felt that during the installation phase, total access should be maintained.

On the question of corrosive air in the zone\*, A. Sullivan noted that it would be difficult to change the status quo. C.D. Johnson felt that it would be advisable to add a heat exchanger to the target zone ventilation system. This is to be further studied.

C.D. Johnson  
A. Sullivan

1.2.2 P.R.1.2.9. He Compressors: H. Ullrich had agreed that adequate space was available under the pump room for compressors.

1.2.3 P.R.3.2. Demin Water-Plant Financing: ACOL budget will be used until estimated cost limit reached. At this point other divisional funds will be requested.

Demin Water Requirements: F. James was asked to indicate RF needs to H. Ullrich

F. James

1.2.4 P.R.4.2. Multipole Sections: B. Autin and F. Malthouse had discussed the chamber requirements. Pending further information, round section vacuum chambers of Ø 500/250 will be designed.

1.2.5 P.R.4.4. Feeder Line Pumping: F. James noted that the long feeder line design was best avoided by having amplifiers above the nearby quadrupole, they would not interfere with survey lines of sight, but such an arrangement would preclude the idea of vacuum pumping via the feeder line.

S. Talas will be asked to confirm the cavity dimensions with a detail drawing sent to B. Williams.

S. Talas\*

Space problems near the cavities led to a general discussion on access to the quadrupole shims. L. Rinolfi will check that hand access to the quad. shim zones is adequate.

L. Rinolfi

1.2.6 P.R.6.3. The schedule of more frequent TICTAC meetings had not yet been established. This will be done for the next TICTAC.

B. Williams  
M. Martini

2. Controls Status

2.1 V. Chohan explained that a spare cable was available for a CAMAC serial highway, and outlined the new cable runs foreseen. E.J.N. Wilson advised that the cables noted as spare should have V. Chohan's name added to them quickly. It was expected that a total of 15 new CAMAC crates would be required.

2.2. V. Chohan raised the question of a covered walkway that would join 193 to the service buildings. It was seen that further discussion was required on this.

H. Horisberger

2.3 Rack Positions: Easily accessible and sufficient space for new racks in the hall could probably be found best in zone A - this zone will be liberated when the Li lens pulsers are moved to the new service building.

Small racks could be placed under the false floor of the ACR. A. Sullivan felt that they would see no more radiation than in the ACR.

2.4 On the question of controls for the cooling pick-ups, E. Jones noted that much depended on the actuating system (hydraulic or otherwise) - a decision is imminent.

2.5 G. Benincasa listed the equipment requiring CAMAC control. A comprehensive report is summarized by the attached notes.

Cost estimates for the CAMAC controls worked out at 1.1 MFS.

F. Pedersen was informed that a meeting on RF control systems would be held soon.

- 2.6 Discussion on the Hardware Test Terminal led to the idea that it should be portable. G. Benincasa felt that although the existing unit was already portable, further miniaturisation could be studied if necessary.
- 2.7 For the planning of Camac crates and modules, the possibility of doing some cabling in the summer of 1985 will be investigated.

### 3. Quadrupole Vac. Chambers

- 3.1 H. Jones explained that position pick-up progress had accelerated chamber detail design. CERN standard flanges were being used and blanks would be ordered.
- 3.2 Special quad. vac. chamber design would be started when all other quad. chambers have been detailed i.e. January 85.
- 3.3 H. Jones noted that his understanding was that CERN would supply all vac. chamber materials. He had a draft specification for the chamber manufacture. This would be discussed in a meeting the following day.
- 3.4 B. Autin re-affirmed that the off-set quads will not be moved.  
He also emphasized the need to keep the in-quad bellows non-magnetic.

### 4. Shielding

- 4.1 Having been asked to study beam losses, etc. A. Sullivan presented an optimum shield to satisfy site levels.  
It was shown that for a straight-through injection system, the shielding as drawn held no reserve factor.  
A dog-leg injection would introduce a factor 6 less in unwanted radiation, meaning that the side shielding as drawn would be marginally sufficient with one layer less of roof shielding. This would also apply to the problematic area at "3 o'clock" in which a drawing had been prepared to show a 40 cm thick steel shield placed against the wall.
- 4.2 H. Horisberger outlined the external shielding problems. An external wedge as proposed originally plus moving of cable trays and ventilation ducts would cost approximately 1 million FS.
- 4.3 The ex-ISR beams it had been learned could not support the proposed load. They would be replaced by T beams.
- 4.4 Committee appraisal led to the conclusion that a dog-leg injection line is highly recommended. E. Jones stressed that it should be aimed for in the present time scale.

### 7. Next Meeting

The next meeting of TICTAC will be held at 14.30 h on Thursday 29.11.1984 in the Large PS Conference Room.

### Action

G. Benincasa  
V. Chohan