

CERN/ISR/EXP/7

March 1974

EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

PROGRAMME OF ACCEPTED EXPERIMENTS

CERN INTERSECTING STORAGE RINGS

MARCH 1974

Table 1 : ISR Experiments running or accepted

Table 2 : ISR Experiments completed at March 1974

Figures 1: General Layout of Experiments at the ISR

2: Layout of Intersection 1

3: Layout of Intersection 2

4: Layout of Intersection 4 with the SFM facility

5: Elevation view of the SFM facility

6: Layout of Intersection 6

7: Layout of Intersection 7

8: Layout of Intersection 8

9: Details of Experiment R-802.

M.G. Albrow
ISR Co-ordinator.

Table 1
ACCEPTED CERN ISR EXPERIMENTS

Area	Expt. Code	ISRC Reference Number	Description of Experiment	Composition of Group	NPRC Acceptance	Status
I-1	R-105	CERN/ISRC/72-13; Add.1-3	To measure high transverse momentum charged particles and neutral pions	CERN-Columbia-Rockefeller-Saclay Collaboration: <u>Banner</u> , <u>Blumenfeld</u> , <u>Büsser</u> , <u>Camilleri</u> , <u>Cool</u> , <u>Di Lella</u> , <u>Hamel</u> , <u>Lederman</u> , <u>Pansart</u> , <u>Pope</u> , <u>Rothenberg</u> , <u>Segler</u> , <u>Smith A.M.</u> , <u>Tannenbaum</u> , <u>Teiger</u> , <u>White</u> , <u>Zaccone</u>	NPRC 85 5.11.69	Taking data till July 1974
I-1	R-106	CERN/ISRC/73-19; Add.1-2 CERN/ISRC/74-11	Search for magnetic monopoles with the plastic detector technique	Bologna-CERN/Saclay-Rome Collaboration: <u>Capiluppi</u> , <u>Giacomelli</u> , <u>Rossi</u> , <u>Vannini</u> , <u>Bussière</u> , <u>Baroni</u> , <u>Diliberto</u> , <u>Petrera</u> , <u>Romano</u>	NPRC 120 5.9.73	In Production
I-1	R-107	CERN/ISRC/73-7; Add.1-2	Search for Multigamma Events	Adelphi-Brookhaven-Rome Collaboration: <u>Doohar</u> ; <u>Yuan</u> , <u>Dell</u> , <u>Uto</u> ; <u>Amaldi Ed.</u> , <u>Beneventano</u> , <u>Borgia</u> , <u>Dore</u> , <u>de Nofaristefano</u> , <u>Pistilli</u> , <u>Sestili</u>	NPRC 122 14.11.73	Installation 2nd half '74

Table 1 (cont'd)

ACCEPTED CERN ISR EXPERIMENTS

Area	Expt. Code	ISRC Reference Number	Description of Experiment	Composition of Group	NPRC Acceptance	Status
1-2	R-205	CERN/ISRC/73-27; Add.1	Correlations associated with high transverse momentum particles	Daresbury-Liverpool-RHEL Collaboration: Alper, Aston, Booth, Carroll, Clark, Duke, Evans, Groves, Holloway, Jackson, Morris, Ott, Rock, Shah, Thresher, Wenzel, Gee	NPRC 123 5.12.73	Setting up
1-2	R-206	CERN/ISRC/73-34	Multiplicity and Rapidity distributions of diffractive collisions	CERN-Holland-Lancaster-Manchester Collaboration: Albrow, Barber, Brooks, Bošnjaković, Chang, Clegg, Erné, Kooyman, Loebinger, McCubben, Murphy, Rudge, Sens, Sessoms, Singh, Timmer	NPRC 124 9.1.74	Setting up

Table 1 (cont'd)
ACCEPTED CERN ISR EXPERIMENTS

Area	Expt. Code	ISRC Reference Number	Description of Experiment	Composition of Group	NPRC Acceptance	Status
1-4	R-401	CERN/ISRC/69-14; Add.1-5	Isobar production at ISR energies (with the forward part of the SFM detector and additional n-, trigger-and monitor counters). Special MWPC's for the compensator magnet are added	CERN-Hamburg-Orsay-Vienna Collaboration: Bartl, Brandt, Broll, Coignet, Dibon, Favier, <u>Flügge</u> , Gottfried, Lohrmann, Massonet, Nagy, <u>Neuhofer</u> , Niebergall, <u>Regler</u> , Schmidt-Parzefall, Schubert K.R., Schuhmacher, Vivargent, Winter	NPRC 83 4.7.69	Taking data
1-4	R-403T	CERN/ISRC/70-5	Split Field Magnet detector studies	S.F.M. detector group: Charpak, Drijard, Fischer, Heck, <u>Innocenti</u> , <u>Minten</u> , Piuz, Maurin	NPRC 95 3.2.71	In Production
1-4	R-406	CERN/ISRC/70-31; Add.1-3	Search for new particles (using Split Field Magnet)	CERN-Bologna Collaboration: Basile, Bollini, Brunini, Giusti, Massam, Monari, Palmonari, Rimondi, Valenti, Zichichi	NPRC 110 30.8.72	First run expected June 1974
1-4	R-407 } R-408 }	CERN/ISRC/71-30; Add.1 CERN/ISRC/71-34 CERN/ISRC/73-29 CERN/ISRC/74-4	Two-particle correlations in the fragmentation region using the SFM.	CERN-Coll.de France-Heidelberg-Karlsruhe Coll.: Charpak, Drijard, Fischer H., <u>Innocenti</u> , <u>Minten</u> , Morrison, Schwille, Sotiriou, Stroynowski, Szeptycka (Warsaw), Wahl, Dellanegra, Frenkiel, Ghesquiere, Fontaine, Frehse, Kluge, Schneider, Hanke, Isenbeck, Köbberling, Schmidt, Schopper (DESY), <u>Wegener</u> , Zeller	NPRC 110 30.8.72	Taking data

Table 1 (cont'd)

ACCEPTED CERN ISR EXPERIMENTS

Area	Expt. Code	ISRC Reference Number	Description of Experiment	Composition of Group	NPRC Acceptance	Status
1-4	R-410	CERN/ISRC/71-37; 71-38+Add.1; CERN/ISRC/72-7; Add.1-2	Study of particle correlations at large angles	MIT-Orsay-Scandinavian Collaboration: Bjggild, Burger, Chen, von Dardel, <u>De Bouard</u> , Jarlskog, Klovning, Lillethun, Little, Lörstad, Lu, Overgaard-Pedersen, Almehed, Smith D., Ting, Villeneuve	NPRC 110 30.8.72	No time allocation yet
1-4	R-411	CERN/ISRC/72-23	Double isobar production at the ISR to study $p + p \rightarrow (p\pi^+\pi^-) + (p\pi^+\pi^-)$	Pavia-Princeton Collaboration: Conta, Cavalli-Sforza, Coyne, Dolfini, <u>Goggi</u> , Impellizzeri, Mantovani, O'Neil, Pastore, Piazzoli, Ratti, Rossini, Scannicchio	NPRC 112 1.11.72	First run expected April '74
1-4	R-412	CERN/ISRC/72-30; Add.1-2	Study of large transverse momentum events using the S.F.M. and lead glass Čerenkov counters	Aachen-CERN-Munich Collaboration: Darriulat, Derado, Dittman, Eckardt, Eggert, Gebauer, Holder, McDonald, Meinke, Modis, Navarria, Pugh, Sanders, Schmitz, Schneider, Steinberger, Thomé, Tittel, <u>Williams E.G.</u> , Seyboth	NPRC 119 4.7.1973	No time allocation yet
1-4	R-413	CERN/ISRC/72-7; Add.3-5 CERN/ISRC/74-10	Selective large p_T trigger for the S.F.M.	The R-410 (MIT-Scandinavian) participants and Liverpool: Booth, <u>Carroll</u> , Jackson	NPRC 120 5.9.1973	No time allocation yet

Table 1 (cont'd)

ACCEPTED CERN ISR EXPERIMENTS

Area	Expt. Code	ISRC Reference Number	Description of Experiment	Composition of Group	NPRC Acceptance	Status
1-6	R-602 Phase II	CERN/ISRC/69-19; Add.1-12	Measurement of elastic scattering cross section and σ_T	CERN-Aachen-Genova-Harvard-Munich-NorthWestern-Riverside Coll.: Baum, Böhm, De Zorzi, Ellis, Foeth, Hilscher, Kernan, Layter, Müller F., Naroska, Rubbia, Schinzel, Sette, Staude, Strolin, Telegdi, Trilling, Von Baksay	NPRC 83 4.7.69	Taking data
1-6	R-603	CERN/ISRC/71-45; Add.1-2 CERN/ISRC/74-8	Inclusive measurement of multiparticle hadron systems (Δ^{*+})	Aachen-CERN-UCLA Coll.: V. Baksay, Boehm, Foeth, Staude, Ellis, Naroska, Strolin, Lockman, Medinnis, Meyer T., Rander, <u>Schlein</u> , Webb	NPRC 104 2.2.72	Re-installation expected Aug. '74
1-6	R-604	CERN/ISRC/74-3 CERN/ISRC/74-14	Elastic scattering at large angles	CERN-Harvard-Genova-Munich-North-Western-Riverside Coll.: Baum, Block, De Zorzi, Ellis, Glauber, Gobbi, Hilscher, Layter, Lecourtois, Lobkowitz, Kernan, Miller, Müller, Naroska, Rubbia, Sette, Schinzel, Staude, Tamopolski, Trilling	NPRC 126 13.3.'74	No time allocation yet

Table 1 (cont'd)

ACCEPTED CERN ISR EXPERIMENTS

Area	Expt. Code	ISRC Reference Number	Description of Experiment	Composition of Group	NPRC Acceptance	Status
I-7	R-701	CERN/ISRC/72-17; Add.1 CERN/ISRC/72-30/Add.1	Observation of p-p collisions with streamer chambers, with inclusive trigger and with high transverse momentum π^0 trigger	CERN-Aachen-Heidelberg-Munich Coll.: Albrecht, Darriulat, Derado, Dittman, Eckardt, Eggert, Gebauer, Holder, McDonald, Meinke, Modis, Pugh, Sanders, Schmitz, Schneider, Seyboth, Thomé, Tittel	NPRC 110 30.8.'72	Taking data till July '74

Table 1 (cont'd)

ACCEPTED CERN ISR EXPERIMENTS

Area	Expt. Code	ISRC Reference Number	Description of Experiment	Composition of Group	NPRC Acceptance	Status
1-8	R-801	CERN/ISRC/69-12; Add.1-6 CERN/ISRC/73-14 CERN/ISRC/74-12	Measurement of σ_{tot} and correlations with counter hodoscopes and lead glass Cerenkov counters	Pisa-Stony Brook Collaboration: Amendolia, Bellettini, Braccini, Del Prete, Foà, Laurelli, Menzione, Ristori, Sanguinetti, Valdata, <u>Finocchiaro</u> , Grannis, Kephart, <u>Thun</u>	NPRC 83 4.7. ' 69	Taking data
1-8	R-802	CERN/ISRC/71-41; Add.1-4	Particle production in the forward direction using a magnetic spectrometer, multi-wire proportional chambers and neutron counter	CERN-Rome Collaboration: Amaldi U., Allaby, Cocconi, Diddens, Dimčovski, Dobinson, Duinker, <u>Wetherell</u> ; Thorndike; Amaldi U., Baroncelli, Bosio, <u>Matthiae</u>	NPRC 107 3.5. ' 72	Taking data
1-8	R-803	CERN/ISRC/73-11; Add.1-2	Study of inclusive particle production at very low p_t and $X \neq 0$	British-Scandinavian-Mit Coll.: <u>Bjggild</u> , Duane, Duff, <u>Güttler</u> , Gibson, Henning, <u>Jarlskog</u> , Korder, Leistam, Little, Newman, Ogren, Prentice, Sanford, <u>Sharrock</u> , Sau-Lan Wu	NPRC 120 5.9. ' 73	Setting up
1-8	R-804	CERN/ISRC/73-28; Add.1	Study of electromagnetic properties of protons in the time-like region and search for the neutral boson Z^0 . (Muon pair production)	Genova-Harvard-MIT-Pisa Collaboration: Diambrini-Palazzi, Becker, Biggs, Cook, Everhart, Goldhagen, Little, Strauch, <u>Ting</u> , <u>Bellettini</u> , Braccini, Castaldi, Cavasinni, Del Prete, Laurelli, Sanguinetti, Valdata	NPRC 123 5.12. ' 73	Installation some time in 1975

Table 2

ISR EXPERIMENTS COMPLETED March 1974

Area	Expt. Code	Description of Experiment	Authors	Completion of Data-taking	Status
1-1	R-101	Emulsion exposures giving angular distribution of charged and stopping particles between 35° and 90°	CERN-Cracow-Bucharest-Tata Emulsion Collaboration: Annoni, Cordailat, Czyzewski, Friedländer, Gierula, Gurtu, Haiduc, Herz, Marin, Vicky, Wolter	September 1971	Published
1-1	R-102	a) Study of interactions in which γ rays and electrons with large transverse momentum are emitted. b) Search for "Quarks" at large angles	Saclay-Strasbourg Collaboration: Banner, Cheze, Hamel, Stirling, Teiger, Zaccone, Pansart; Bassompierre, Croissiau, Gresser, Morand, Schneegans, Riedinger	April 1972	Published
1-1	R-103	Search for massive dileptons	CERN-Columbia-Rockefeller Collaboration: Büsser, Camilleri, Di Lella, Placci, Pope, Smith A., Yoh, Zavattini; Blumenfeld, Lederman; Cool, Litt L., Segler	December 1972	Published
1-1	R-104T	An exploratory experiment on the search for multigamma events	Brookhaven-Grumman-Rome Collaboration: Yuan, Uto, Dell, Doohar, Amaldi Ed., Beneventano, Borgia, Pistilli	December 1972	Published
1-2	R-201	Particle production at small angles	CERN-Holland-Lancaster-Manchester Collaboration: Albrow, Barber, Brooks, Bogaerts, Bosnjakovic, Chang, Clegg, Erné, Kooyman, Loebinger, McCubben, Murphy, Rudge, Sens, Sessoms, Timmer	March 1974	Published, Analysis

Table 2 (cont'd)

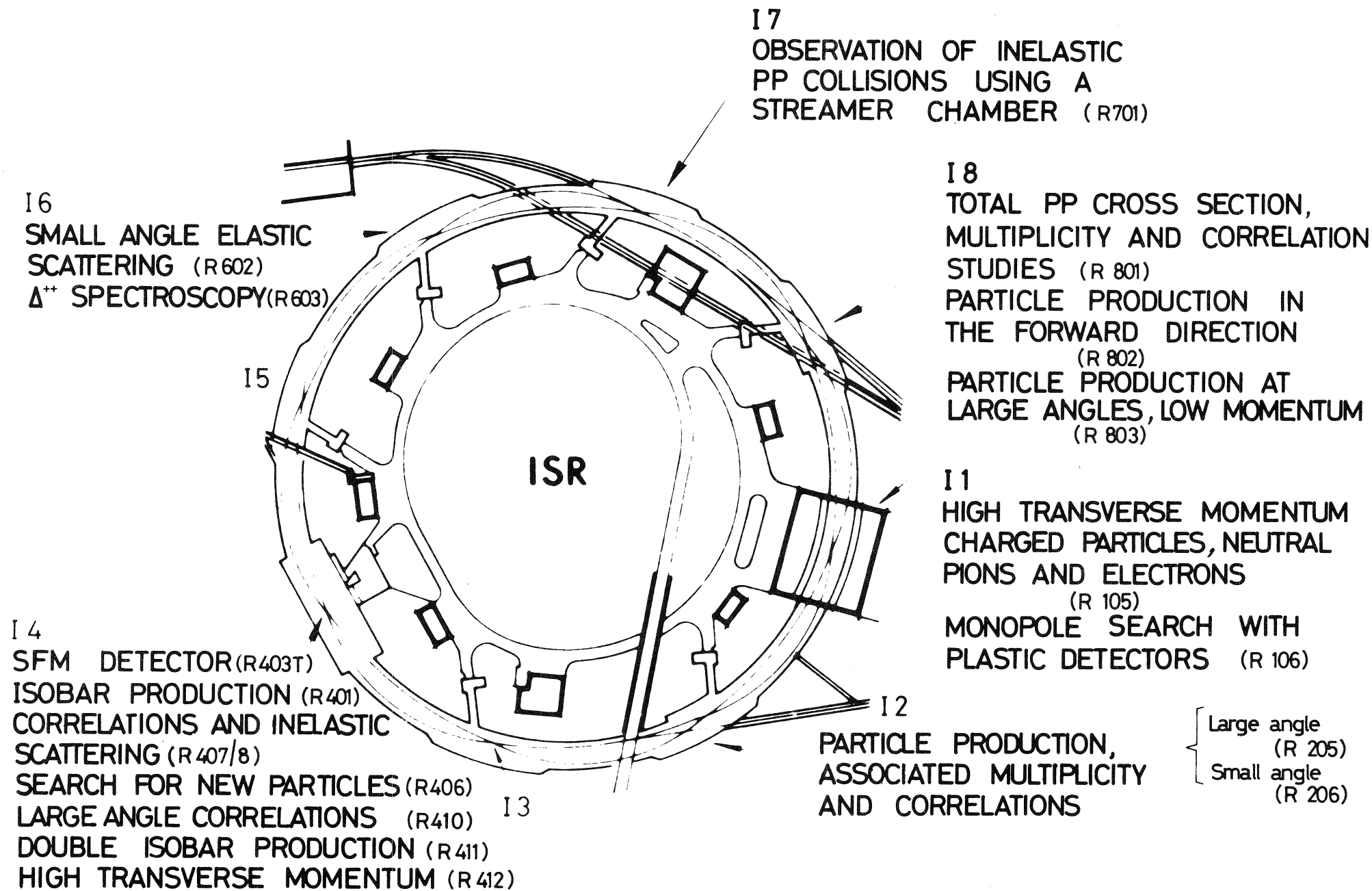
ISR EXPERIMENTS COMPLETED March 1974

Area	Expt. Code	Description of Experiment	Authors	Completion of Data-taking	Status
1-2	R-202	Study of positive and negative particle production in high energy proton-proton collisions at intermediate angles	Argonne-Bologna-Michigan Collaboration: Antinucci, Babcock, Bertin, Bussière, Cappeluppi, D'Agostino-Bruno, Ellis, Giacomelli, Krisch, Maroni, Ratner, Roberts, Rossi, Vannini	September 1971 (Positive particles) May 1973 (Negative particles)	Published
1-2	R-203	Inclusive production of high momentum particles in proton-proton collisions at large angles	The British Universities (R-204) and the Scandinavian Coll.: Alper, Bøggild, Booth, Carroll, Damgaard, Von Dardel, Groves, Jackson, Jarlskog, Klovning, Leistam, Lillethun, Ølgaard-Nielsen, Prentice, Quarrie, Weiss	December 1973	Published, Analysis
1-2	R-204	Measurement of muons with large transverse momentum as a search for the intermediate vector boson	The British Universities: Jeffs, Leechikwong, Lintern, Pitts, Sharp, Sharrock, Gibson, Manning, Smith W.	December 1973	Data Analysis
1-4	R-402	Search for fractionally charged particles	CERN-Munich Coll.: Caldwell, Fabjan, Gruhn, Hyams, Sauli, Zahniser, Bott-Bodenhausen, Stierlin, Rochester, Winstein, Tirlor	August 1972	Published
1-4	R-404T	Test to search for heavy baryon isomers	CERN-Hamburg-Vienna Collaboration: Dibon, Flügge, Gottfried, Nefkens, Neuhofer, Niebergall, Regler, Schmidt-Parzefall, Schubert, Schumacher, Winter	May 1973	Published
1-4	R-405	Neutron production at small angles	CERN-Karlsruhe Collaboration: Engler, Flauger, Gibbard, Monnig, Schopper, Bartel, Schmidt	October 1972	To be published

Table 2 (cont'd)

ISR EXPERIMENTS COMPLETED March 1974

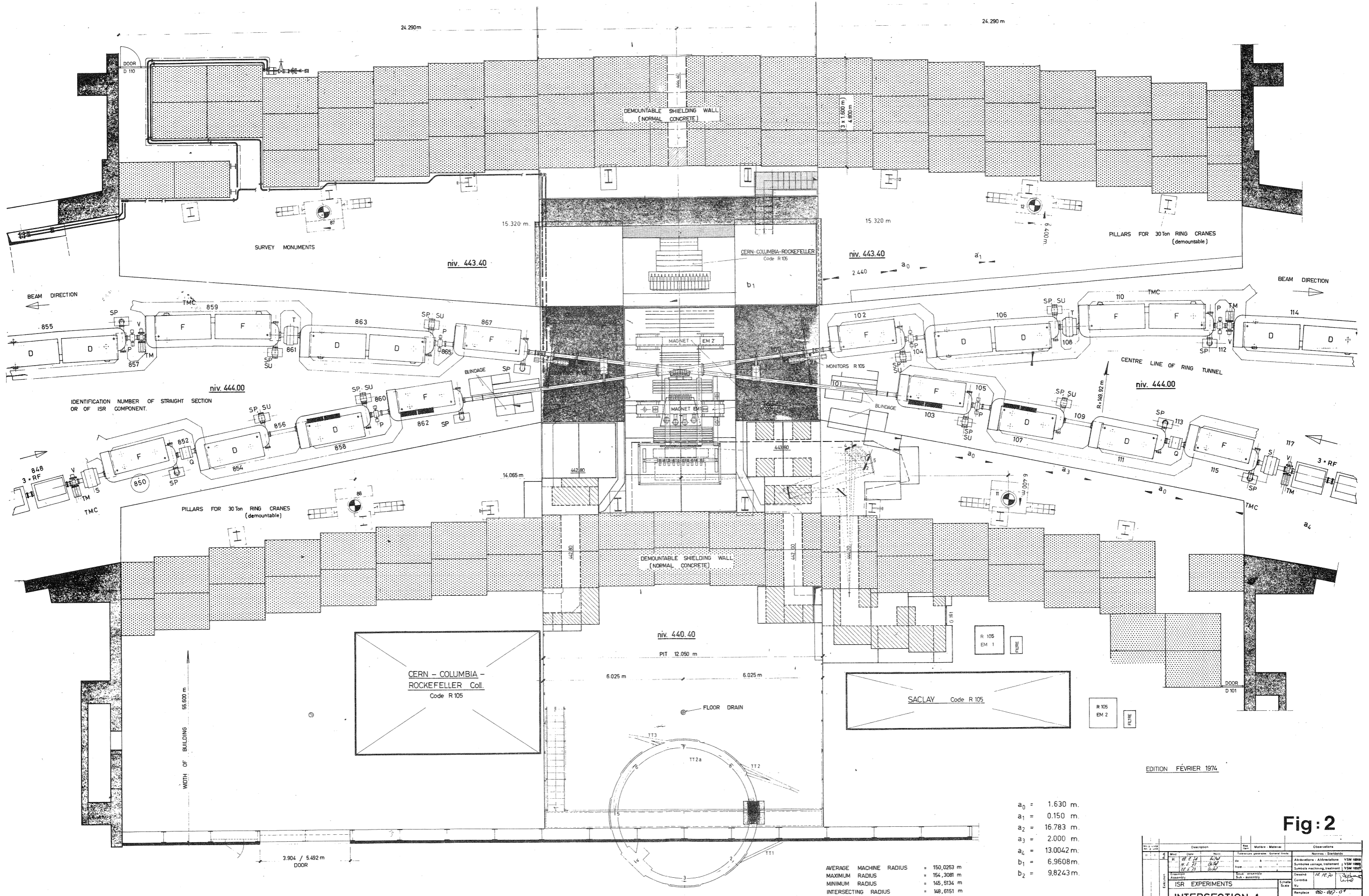
Area	Expt. Code	Description of Experiment	Authors	Completion of Data-taking	Status
1-6	R-601	p-p small angle scattering and total cross section	CERN-Rome Collaboration: Allaby, Amaldi, Bartel, Biancastelli, Bosio, Cocconi, Diddens, Dobinson, Matthiae, Wetherell	December 1972	Published
1-6	R-602	Measurement of the elastic scattering cross section beyond the Coulomb interference region. Search for "Quarks" at small angles	CERN-Aachen-Univ. Calif.-Genova-Harvard-Torino Collaboration: Baksay, Boehm, Bozzo, Di Zorzi, Ellis, Ferrero, Foeth, Maderni, Meyer, Naroska, Pilcher, Rubbia, Schlein, Sette, Staude, Strclin, Sulak, Trippe, Webb	Phase I. For Phase II see page 5	Published



ISR EXPERIMENTS

FEBRUARY 1974

Fig: 1



IDENTIFICATION NUMBER OF STRAIGHT SECTION OR OF ISR COMPONENT.

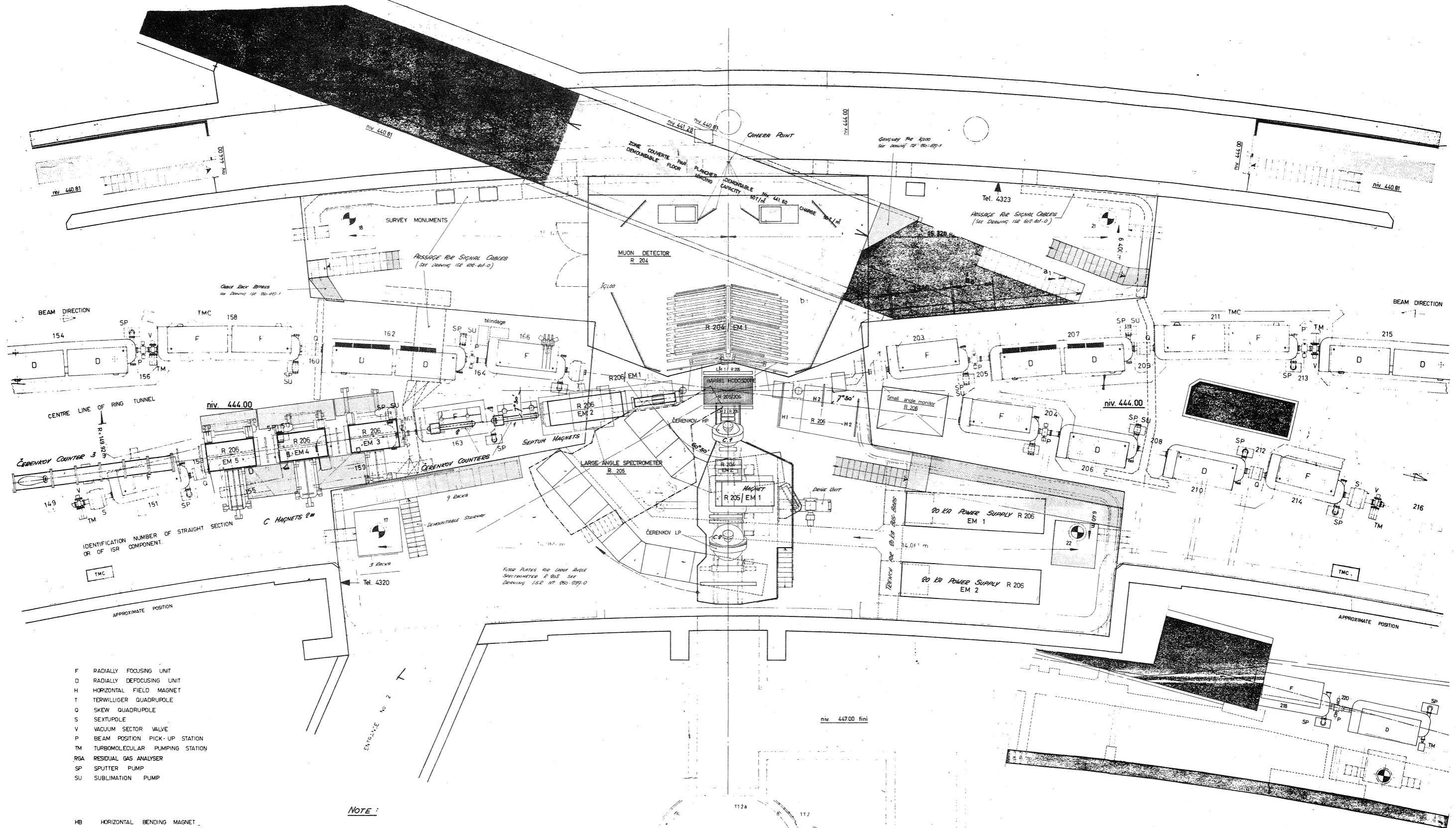
AVERAGE MACHINE RADIUS = 150,0253 m
 MAXIMUM RADIUS = 154,3081 m
 MINIMUM RADIUS = 145,5134 m
 INTERSECTING RADIUS = 148,6151 m

- $a_0 = 1.630$ m.
- $a_1 = 0.150$ m.
- $a_2 = 16.783$ m.
- $a_3 = 2.000$ m.
- $a_4 = 13.0042$ m.
- $b_1 = 6.9608$ m.
- $b_2 = 9.8243$ m.

EDITION FÉVRIER 1974

Fig: 2

Designation	Description	Etat	Matière - Matière	Observations
R 105	EM 1	EM 1	FERRE	
R 105	EM 2	EM 2	FERRE	
ISR EXPERIMENTS				
INTERSECTION 1				
ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH				
CERN CH - 1211 GENEVE 23 DIVISION ISR				260-247

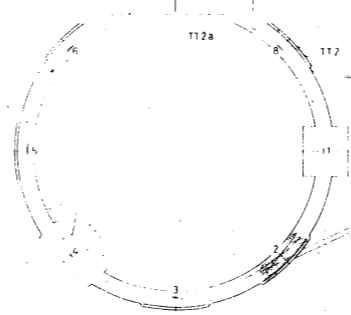


- F RADIALLY FOCUSING UNIT
- D RADIALLY DEFOCUSING UNIT
- H HORIZONTAL FIELD MAGNET
- T TERWILIGER QUADRUPOLE
- Q SKEW QUADRUPOLE
- S SEXTUPOLE
- V VACUUM SECTOR VALVE
- P BEAM POSITION PICK-UP STATION
- TM TURBOMOLECULAR PUMPING STATION
- RGA RESIDUAL GAS ANALYSER
- SP SPUTTER PUMP
- SU SUBLIMATION PUMP

- HB HORIZONTAL BENDING MAGNET
- VB VERTICAL BENDING MAGNET
- QD DEFOCALIZING QUADRUPOLE
- QF FOCALIZING QUADRUPOLE
- ST BEAM STOPPER
- D BEAM DUMP
- RP ROUGHING PUMP
- VK VERTICAL KICKER
- TMC TURBOMOLECULAR PUMPING STATION CONTROLS
- x SPECIAL DESIGN
- SEM SECONDARY EMISSION GRID FOR FIRST TURN OBSERVATION
- HK HORIZONTAL KICKER

NOTE :

- MUON DETECTOR R 204
- LARGE ANGLE SPECTROMETER R 205
- SMALL ANGLE SPECTROMETER R 206



AVERAGE MACHINE RADIUS = 150,0253 m
 MAXIMUM RADIUS = 154,3091 m
 MINIMUM RADIUS = 145,5134 m
 INTERSECTING RADIUS = 148,6151 m

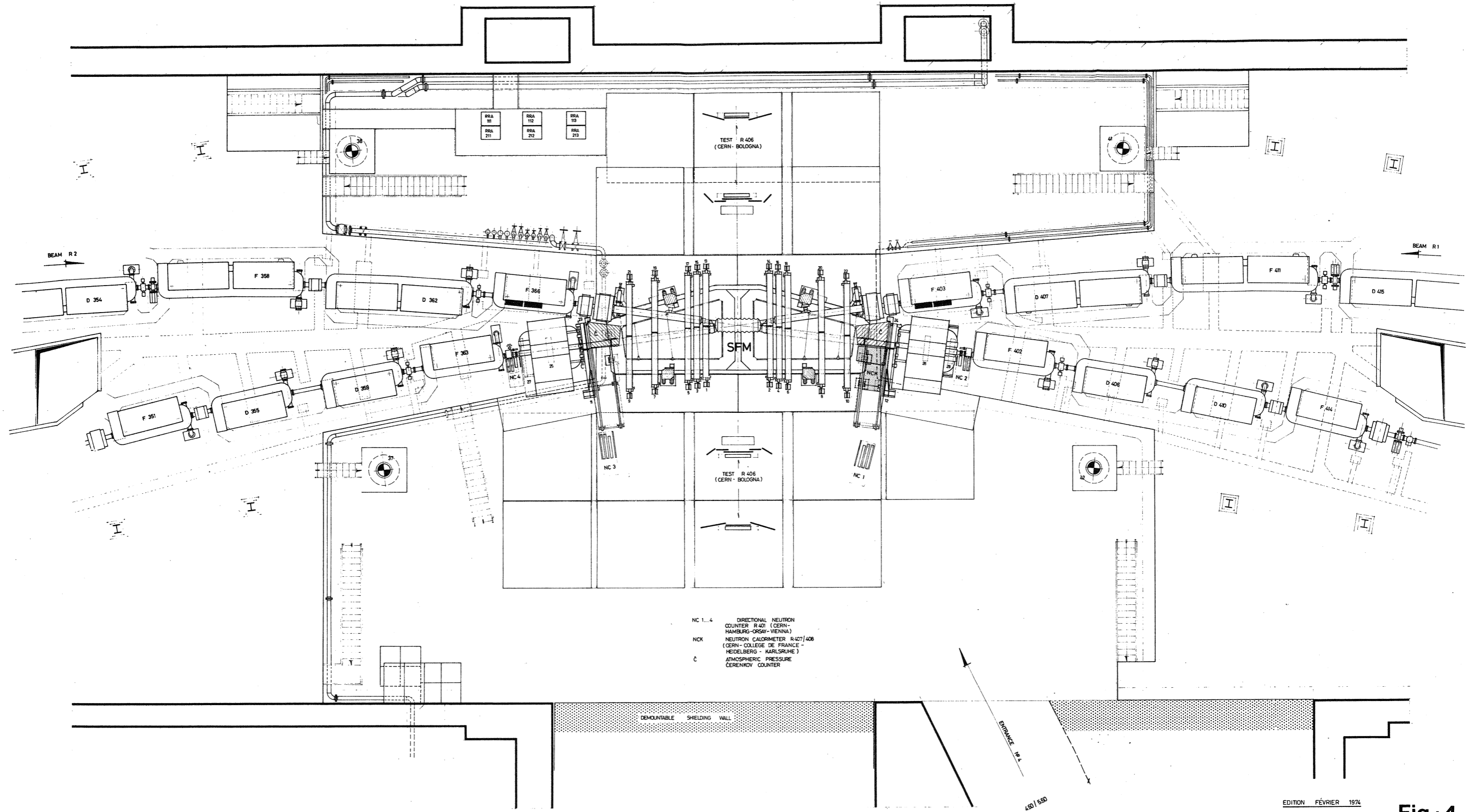
$a_0 = 1.630$ m
 $a_1 = 0.150$ m
 $a_2 = 16.783$ m
 $a_3 = 2.000$ m
 $a_4 = 13.0042$ m
 $b_1 = 6.9608$ m
 $b_2 = 9.8243$ m

EDITION FÉVRIER 1974

Fig : 3

Rev.	Date	Author	Checked	Approved	Description
1	07.74	...	...	...	...
2	08.74	...	...	...	...
3	08.74	...	...	...	...

ISR EXPERIMENTS INTERSECTION 2		Révisé par Approuvé par Date
INSTITUT EUROPEEN DE RECHERCHE NUCLEAIRE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH CERN CH-1211 GENEVE 23 DIVISION ISR		260-217-



NC 1...4 DIRECTIONAL NEUTRON COUNTER R 401 (CERN - HAMBURG - OSKA - VIENNA)
 NCK NEUTRON CALORIMETER R 407/408 (CERN - COLLEGE DE FRANCE - HEIDELBERG - KARLSRUHE)
 C ATMOSPHERIC PRESSURE CERENKOV COUNTER

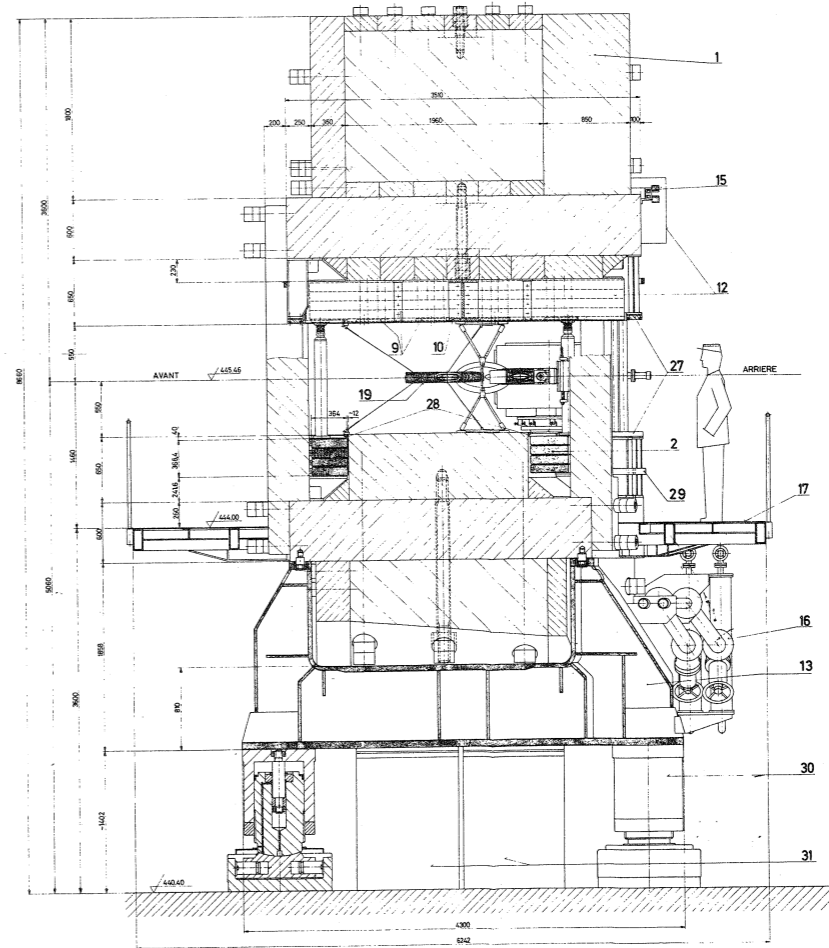
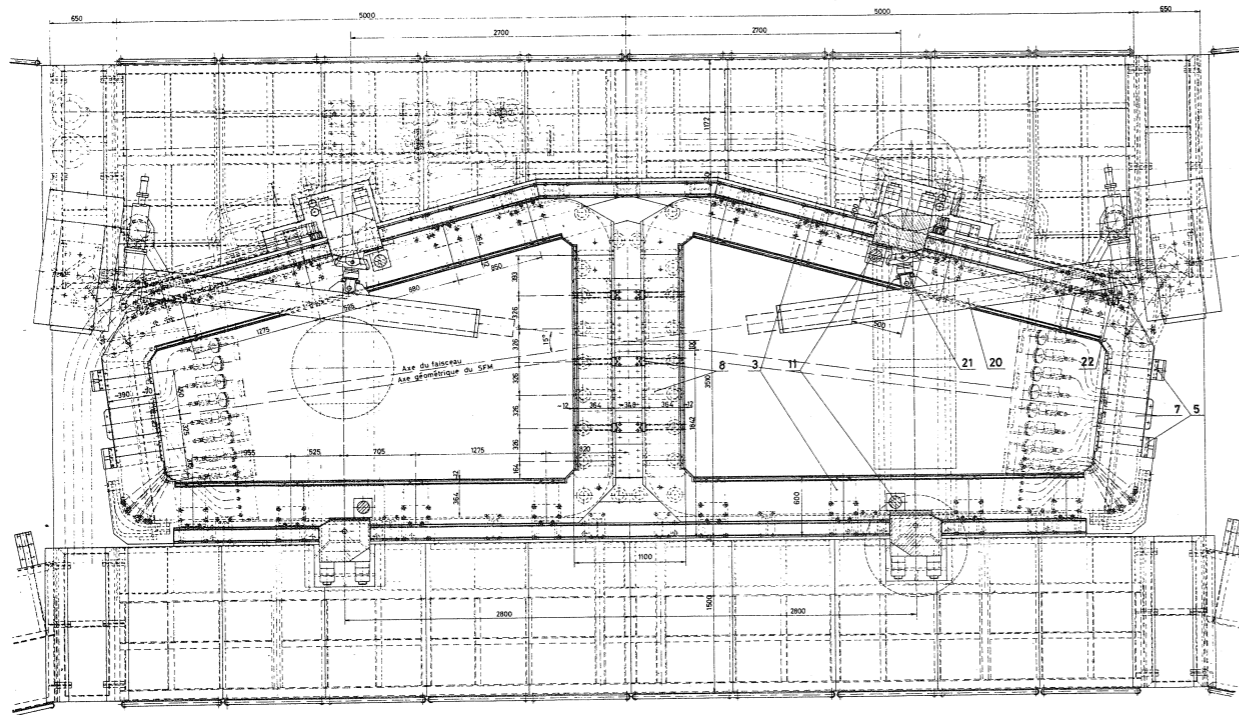
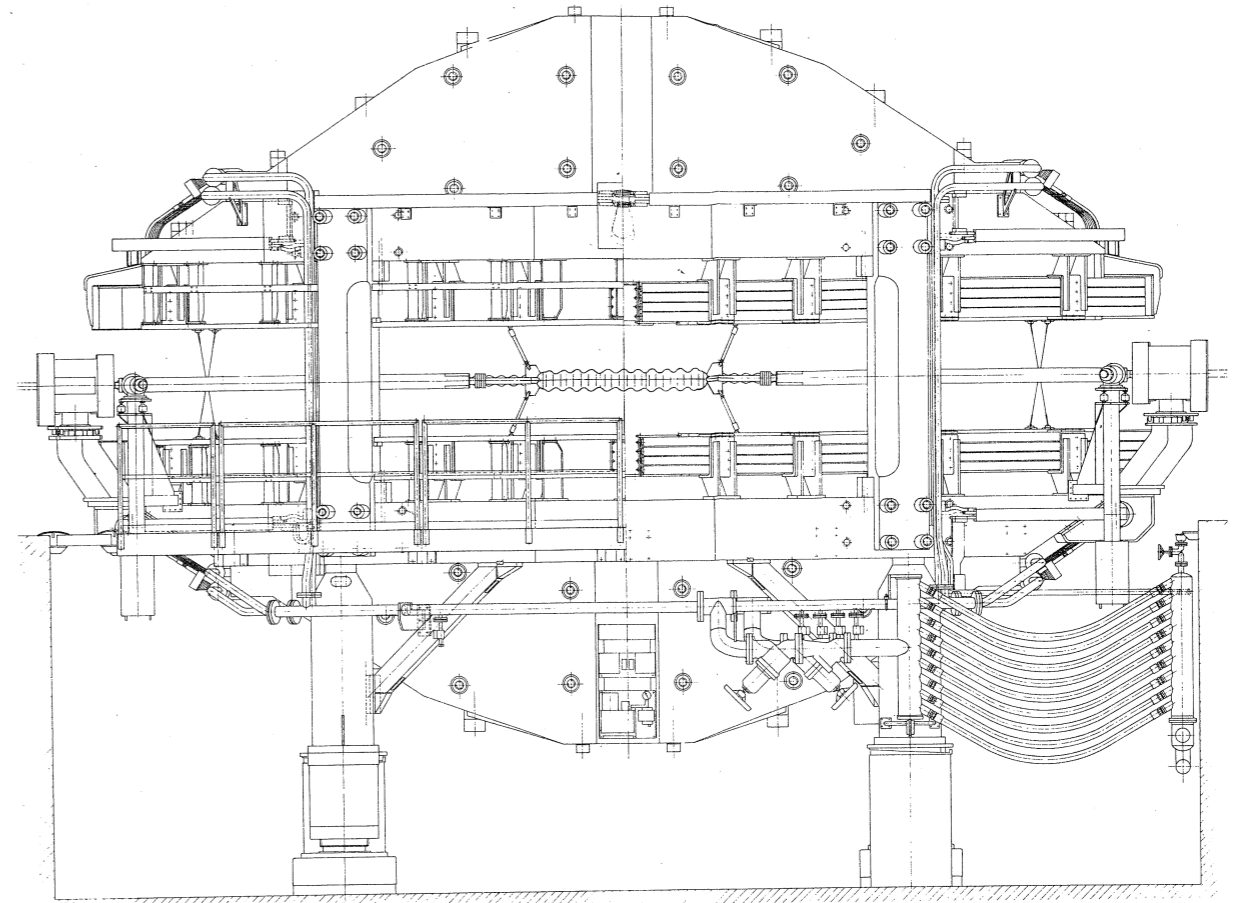
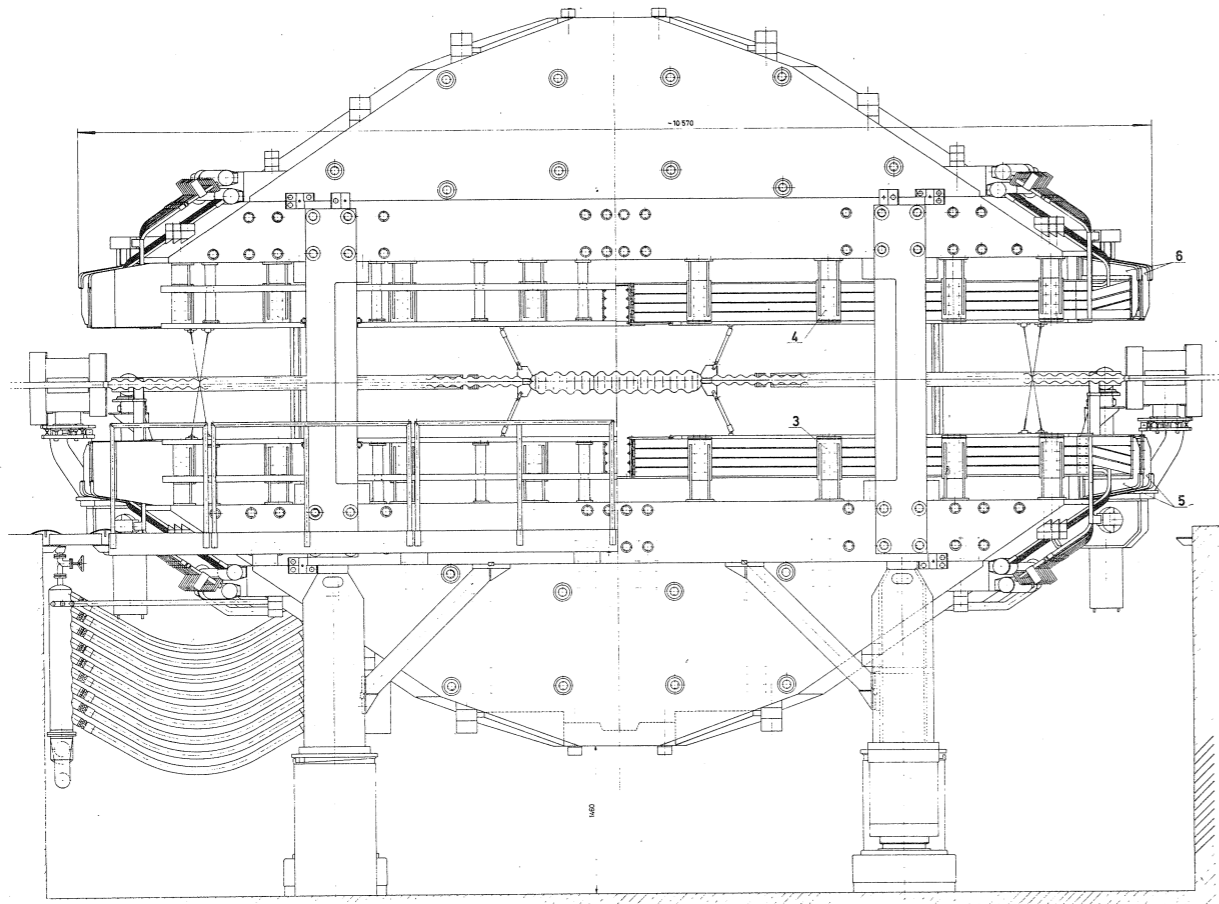
SFM DETAILS VOIR PLAN CERN ISR 271-104-0^B

EDITION FÉVRIER 1974

Fig:4

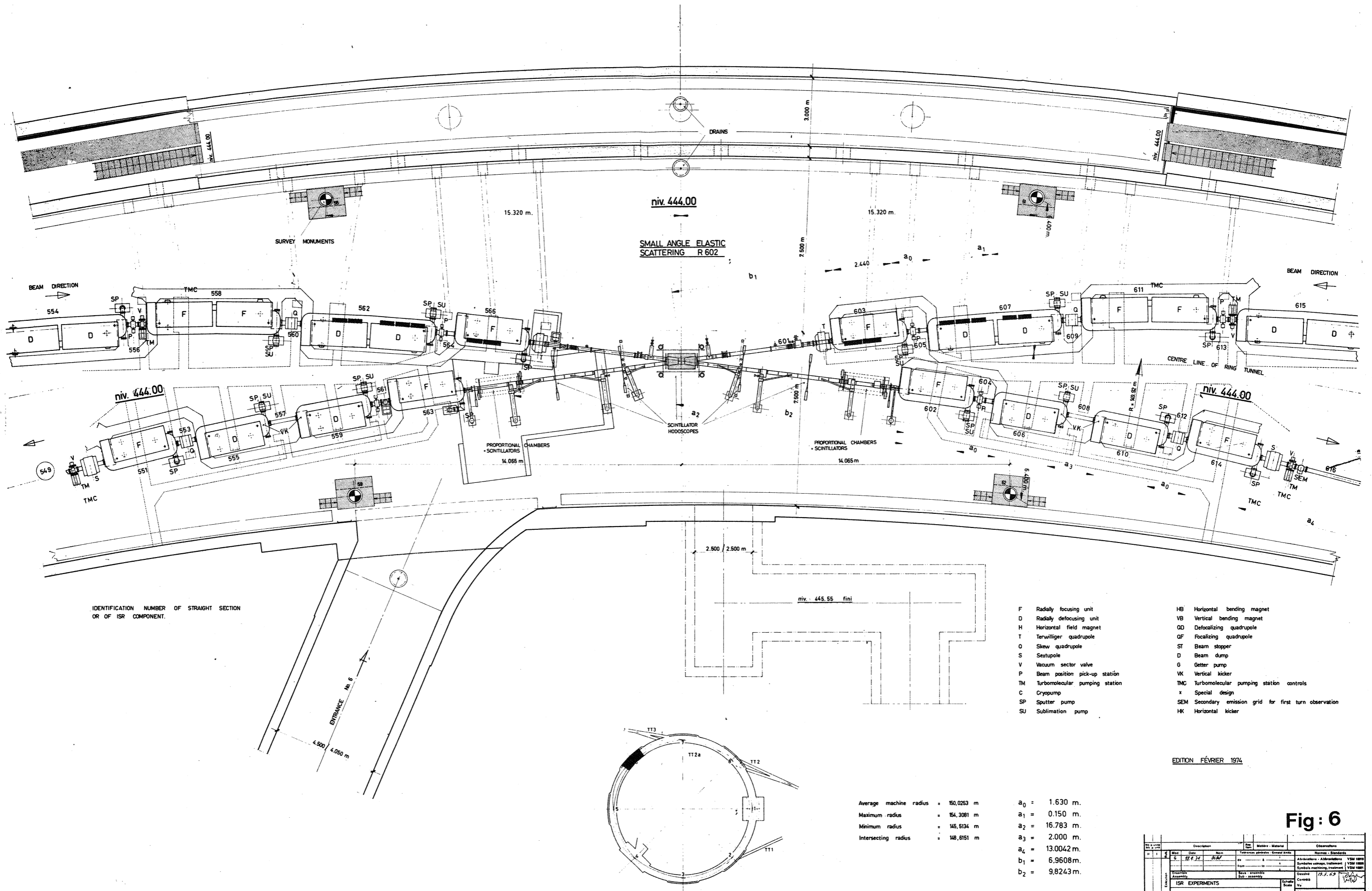
Description		Matériau	Caractéristiques	Préparation	Préparation
Description		Matériau	Caractéristiques	Préparation	Préparation
1	2	3	4	5	6
<p>ISRA EXPERIMENTS</p> <p>INTERSECTION 4</p> <p>ORGANISATION INTERNATIONALE POUR LA RECHERCHE NUCLEAIRE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH CERN LAB. J. CH-1211 GENEVE 23</p>					

260-432-0^E



Liste des pièces	
N°	Description
1	Boîtier supérieur
2	Boîtier inférieur
3	Support central
4	Support latéral
5	Support de base
6	Support de montage
7	Support de fixation
8	Support de réglage
9	Support de guidage
10	Support de tension
11	Support de lubrification
12	Support de ventilation
13	Support de refroidissement
14	Support de chauffage
15	Support de protection
16	Support de signalisation
17	Support de commande
18	Support de mesure
19	Support de pesage
20	Support de comptage
21	Support de stockage
22	Support de transport
23	Support de maintenance
24	Support de réparation
25	Support de remplacement
26	Support de recyclage
27	Support de traitement
28	Support de distribution
29	Support de collecte
30	Support de gestion
31	Support de supervision

Fig: 5



IDENTIFICATION NUMBER OF STRAIGHT SECTION OR OF ISR COMPONENT.

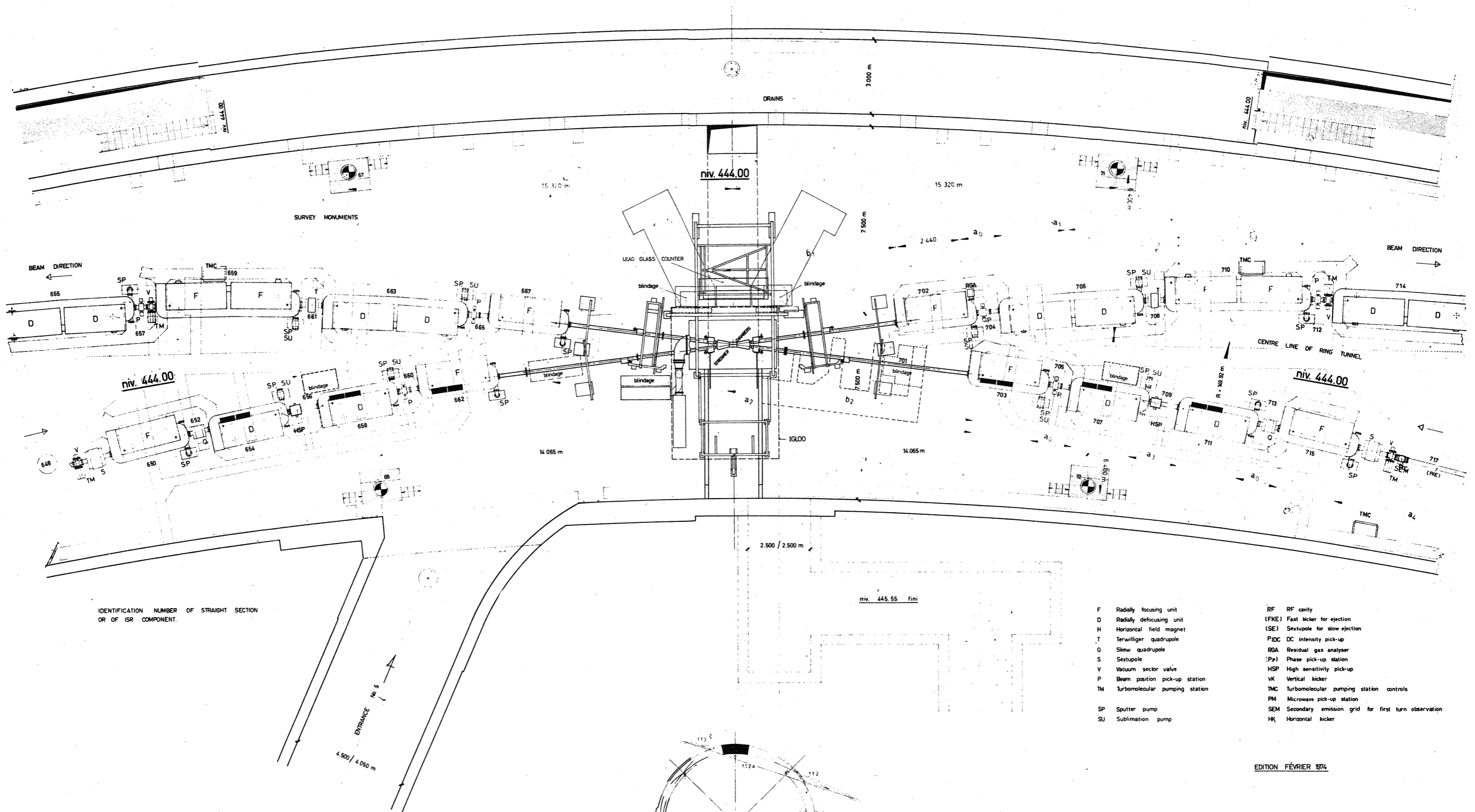
- F Radially focusing unit
- D Radially defocusing unit
- H Horizontal field magnet
- T Terwilliger quadrupole
- O Skew quadrupole
- S Sextupole
- V Vacuum sector valve
- P Beam position pick-up station
- TM Turbomolecular pumping station
- C Cryopump
- SP Sputter pump
- SU Sublimation pump
- HB Horizontal bending magnet
- VB Vertical bending magnet
- QD Defocalizing quadrupole
- QF Focalizing quadrupole
- ST Beam stopper
- D Beam dump
- VK Vertical kicker
- G Getter pump
- TK Turbomolecular pumping station controls
- x Special design
- SEM Secondary emission grid for first turn observation
- HK Horizontal kicker

- Average machine radius = 150,0263 m
- Maximum radius = 154,3081 m
- Minimum radius = 145,5134 m
- Intersecting radius = 148,6151 m
- $a_0 = 1.630$ m.
- $a_1 = 0.150$ m.
- $a_2 = 16.783$ m.
- $a_3 = 2.000$ m.
- $a_4 = 13.0042$ m.
- $b_1 = 6.9608$ m.
- $b_2 = 9.8243$ m.

EDITION FÉVRIER 1974

Fig: 6

Mat.	Date	Mod.	Échelle	Matériau	Observations
5	11/8/74	BAV	1:100		Abstractions - Abstraktionen V2M 1980 Symbole unique, traitement V2M 1980 Symbole matching, traitement V2M 1980
ISR EXPERIMENTS INTERSECTION 6 ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLEAIRE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH CERN - 1211 GENÈVE 23 DIVISION ISR					
Rampart par					260-251-6

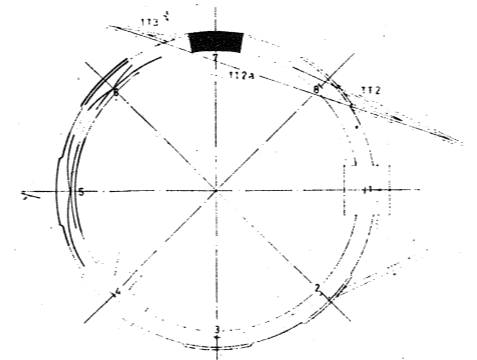


IDENTIFICATION NUMBER OF STRAIGHT SECTION OR OF ISR COMPONENT.

- F Radially focusing unit
- D Radially defocusing unit
- H Horizontal field magnet
- T Terwilliger quadrupole
- O Skew quadrupole
- S Sextupole
- V Vacuum sector valve
- P Beam position pick-up station
- TM Turbomolecular pumping station
- SP Sputter pump
- SU Sublimation pump
- RF RF cavity
- (FKE) Fast kicker for ejection
- (SE) Sextupole for slow ejection
- PIDC DC intensity pick-up
- RGA Residual gas analyser
- (P_r) Phase pick-up station
- HSP High sensitivity pick-up
- VK Vertical kicker
- TMC Turbomolecular pumping station controls
- PM Microwave pick-up station
- SEM Secondary emission grid for first turn observation
- HK Horizontal kicker

Average machine radius = 150,0253 m
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 Minimum radius = 145,5134 m
 Intersecting radius = 148,6151 m

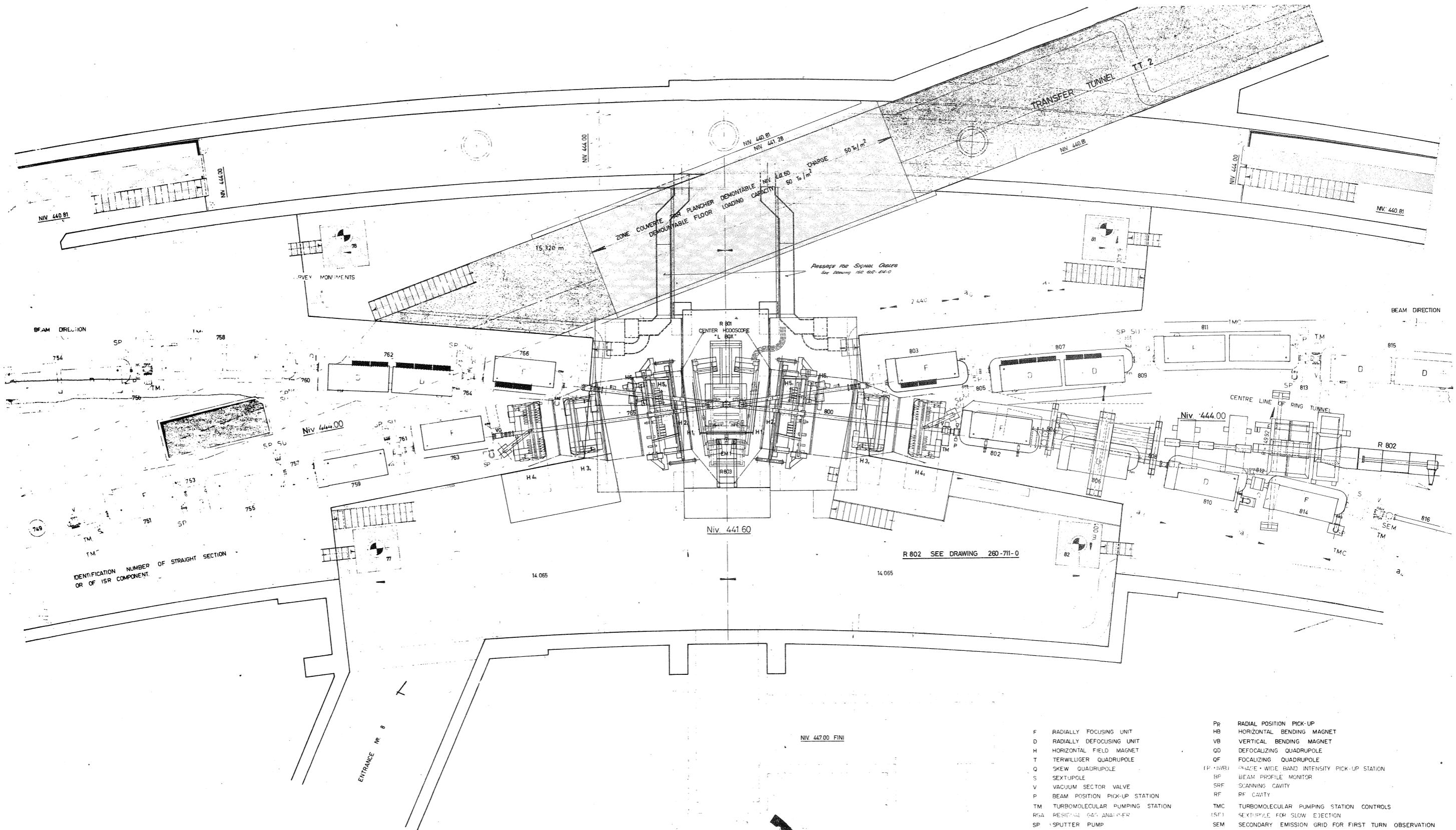
$a_0 = 1.630$ m
 $a_1 = 0.150$ m
 $a_2 = 16.783$ m
 $a_3 = 2.000$ m
 $a_4 = 13.0042$ m
 $b_1 = 6.9508$ m
 $b_2 = 9.8243$ m



EDITION FÉVRIER 1974

Fig: 7

ISR EXPERIMENTS		INTERSECTION 7	
CERN		260-978	



- F RADIALLY FOCUSING UNIT
- D RADIALLY DEFOCUSING UNIT
- H HORIZONTAL FIELD MAGNET
- T TERWILLIGER QUADRUPOLE
- Q SKEW QUADRUPOLE
- S SEXTUPOLE
- V VACUUM SECTOR VALVE
- P BEAM POSITION PICK-UP STATION
- TM TURBOMOLECULAR PUMPING STATION
- RSA RESONANT GAS ANALYSER
- SP SPUTTER PUMP
- SU SUBLIMATION PUMP
- QE SPECIAL QUADRUPOLE FOR SLOW INTEGRAL EJECTION
- VG VACUUM GAUGE
- Pp RADIAL POSITION PICK-UP
- HB HORIZONTAL BENDING MAGNET
- VB VERTICAL BENDING MAGNET
- QD DEFOCALIZING QUADRUPOLE
- QF FOCALIZING QUADRUPOLE
- (F-WB) PHASE-WIDE BAND INTENSITY PICK-UP STATION
- BP BEAM PROFILE MONITOR
- SRF SCANNING CAVITY
- RF RF CAVITY
- TMC TURBOMOLECULAR PUMPING STATION CONTROLS
- (SF) SEXTUPOLE FOR SLOW EJECTION
- SEM SECONDARY EMISSION GRID FOR FIRST TURN OBSERVATION
- EM DAMPING MAGNET
- PB SECONDARY EMISSION PROBE SCANNER
- SR SMALL SPUTTER PUMP

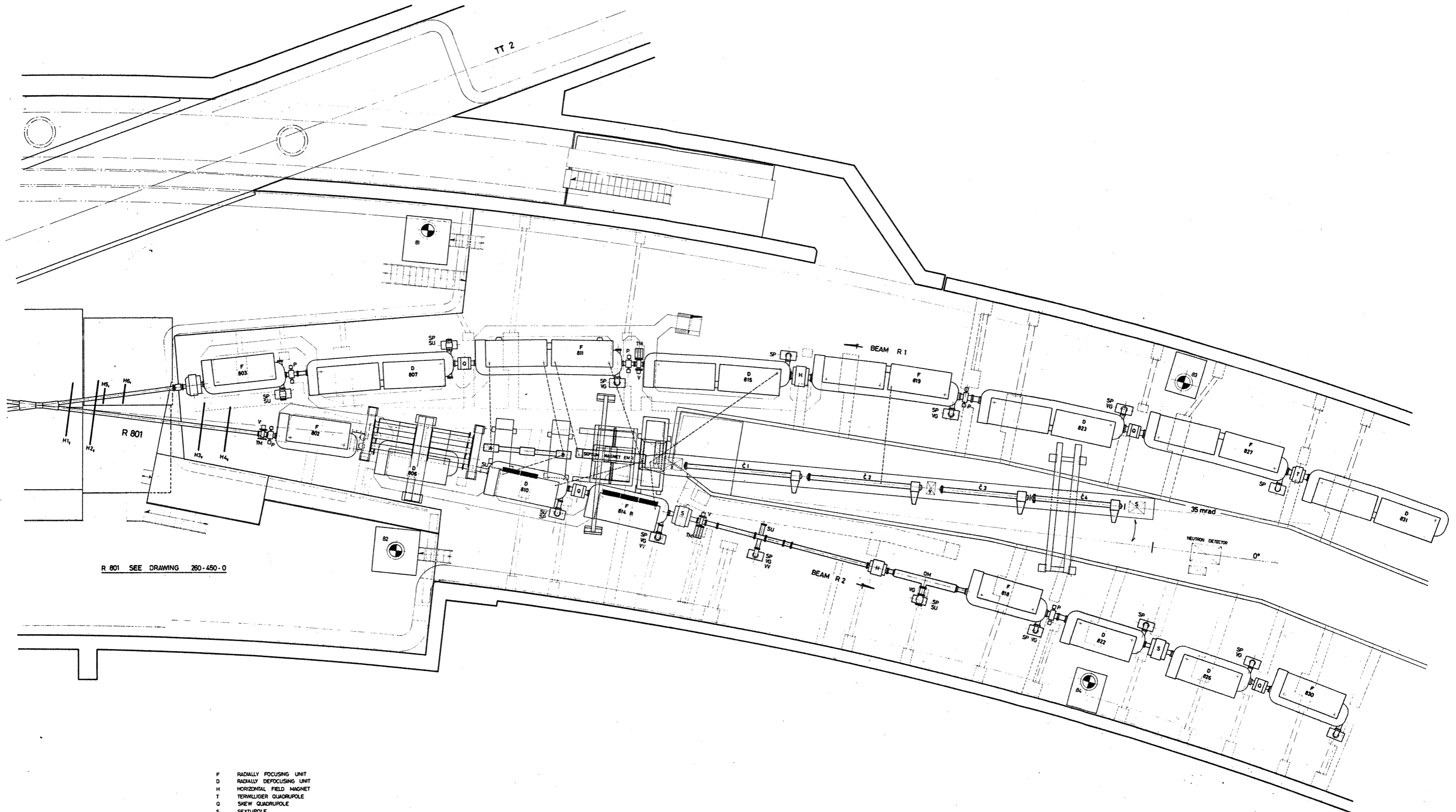
AVERAGE MACHINE RADIUS = 150 023 m
 MAXIMUM RADIUS = 154 3981 m
 MINIMUM RADIUS = 145 5136 m
 INTERSECTING RADIUS = 148 6151 m

a₁ = 1 530 m
 a₂ = 0 150 m
 a₃ = 16 785 m
 a₄ = 2 000 m
 a₅ = 13 0042 m
 b₁ = 6 3608 m
 b₂ = 9 8243 m

EDITION FÉVRIER 1974

Fig : 8

ISR EXPERIMENTS		260-450	
INTERSECTION 8		260-450	
CERN		260-450	



- F RADIALLY FOCUSING UNIT
- D RADIALLY DEFOCUSING UNIT
- H HORIZONTAL FIELD MAGNET
- T TERWILLIGER QUADRUPOLE
- Q SKEW QUADRUPOLE
- S SEXTUPOLE
- V VACUUM SECTOR VALVE
- P BEAM POSITION PICK UP
- TM TURBOMOLECULAIRE PUMP
- SP SPUTTER PUMP
- SU SUBLIMATION PUMP
- VG VACUUM GAUGE
- VV VENTING VALVE
- DM RADIALLY DEFOCUSING UNIT WITH MOTORISED JACKS

EDITION FÉVRIER 1974

Fig: 9

No. d. inv.	Description	Mat.	Matière Matière	Cote (mm)	Longueur (mm)	N° de série	N° de stock	N° de commande	Date	Etat
1	R 802 EXPERIMENT	CERN - ROME							1974	E
LAYOUT IN 18										
ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH CERN LAB. 1. CH-1211 GENEVE 23										