I
TANDEM

Tandem Operation

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During the year under review the tandem accelerator worked reliably. Operating statistics are shown in fig. 1 and table 1. The unscheduled tank openings were necessary mainly due to idler wheel failures of the pelletron charging system. In 1999 we replaced many idler wheels preventively to avoid failures of the bearings, but the new assemblies tend to disintegrate because the fits of the bearings are not tight enough.

One of the beam lines in the second target room was extended for the new CRESST scattering experiment [1]. See also the plan page V, position 16.

The conversion of the application programs for the accelerator control system from Windows 3.11 to Windows NT is still in progress. A redesign of the standard 8 channel DAC board used in the local crates was necessary because the ADC chips on the old board were obsolete. Test and digital adjustment of the new device is performed in a test crate under computer control. Some more experimental equipment and also the new polarized ion source [2] were connected to the accelerator control system.

Our 30 years old radiation monitor system was replaced. Monitors for neutron and gamma radiation located in the tandem room, the target rooms, and in the control room are connected by a local net (RS485) to a central station with various display and storage features.

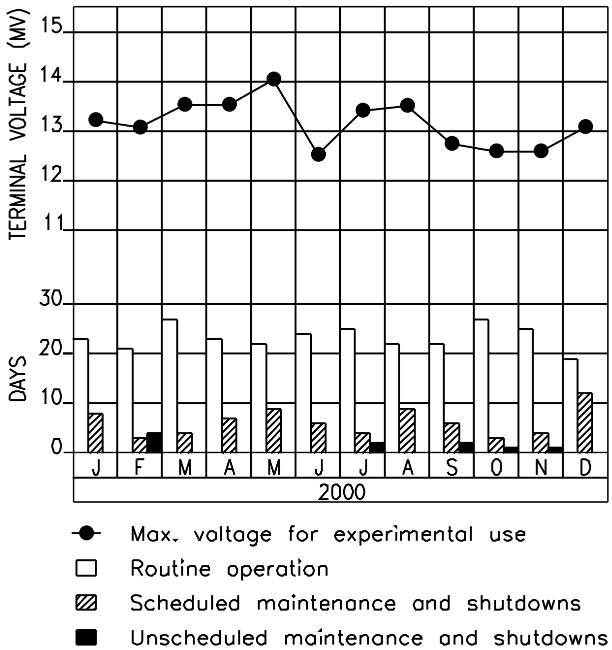

Fig. 1: Operating statistics

ION	^{1}H	^{2}H	^{4}He	^{11}B	^{12}C	^{16}O	^{26}Al	^{27}Al	^{32}S
PERCENT	9.0	15.3	9.0	2.2	6.0	4.1	3.7	3.4	2.2
ION	^{36}Cl	^{58}Ni	^{60}Fe	^{63}Ni	^{79}Br	^{89}Y	^{127}J	^{197}Au	Others
PERCENT	6.0	5.2	2.6	2.6	2.2	1.5	4.5	9.3	11.2

Table 1: 2000 ion beam time

References

[1] T. Jagemann *et al.*, 40
[2] R. Hertenberger *et al.*, 70