Warning System in Operation of the PLS-ll

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We aim to recover the machine faults as quickly as possible to provide a stable beam of good quality. But preventing the machine faults is more important. To do that, we had to make 'warning signal' about getting out of the stable range. And when the operator's direct action is needed immediately, the appropriate range and logic are made to generate a warning signal for each device by using software like that CSS, Labview, etc. It is very important that the warning signal is generated at the right time by specifying the appropriate range. Because at the moment before the machine fault, it is difficult to expect a preventive effect. And operators can be dull about the operation status if alarms occur from time to time with a very small range setting. Also, because all devices of PLS-ll works differently, it is necessary to have an understanding of all devices in order to make 'Warning System'.

We have made 'PSI(Personal Secure Interlock), MIS(Machine Interlock System), PLS-ll SR Operation Alarm System, PLS-ll Orbit Interlock System, PLS-ll MPS Control System, PLS-ll Linac Automation System'. And these programs are always used to prevent the machine faults. In the event of the machine fault, interlock systems of software and hardware prevent human damage, minimize machine damage, and show the cause of the fault in a detailed graphic to do quick recovery action of operator. We will introduce in detail our 'Warning System' to prevent and recovery the machine fault of PLS-ll.

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