

**Feedback Control of 50 Hz Power Supply,**  
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K. IRIE and K. ENDO, KEK - Both pulsed and dc-bias  
power supplies for the fast cycling synchrotron can be  
controlled by the ac and dc magnetic field generated in  
its load magnet. For this the real field strength is  
compared with the excitation data which is compiled in  
the control computer and the reference current signals  
are modified every time when the field is measured. To  
make the magnetic field accurate enough, an averaging  
method for the repetitive field measurements is  
implemented. As the feedback is made at certain  
intervals, the discontinuous feedback control will be  
treated from the view point of current stability.