



SLAC

# ATF2 High Availability DC Magnet Power Supplies – Installation Progress

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27 May 2008

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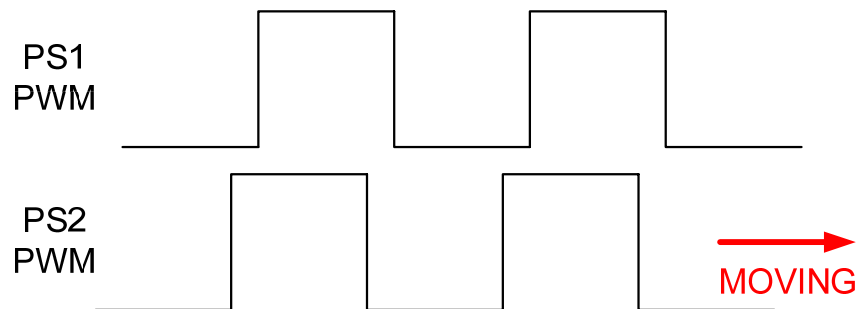
- HAPS at SLAC
  - Testing and Installation
- Delivery to KEK
- Installation at KEK
  - Completed Tasks
  - In Progress
  - Upcoming Tasks



- Testing and Installation
  - All of the parts were received and installed in the racks
  - All systems were tested with one minor problem and solution (more on next slide)
  - Fully assembled racks were packaged and shipped to KEK



- Problem with the Dual 50A PS
  - There is a very minor mismatch in switching frequency between the two power supplies
  - With a scope, we trigger to one switching waveform and see the other moving slowing
  - When the rising/falling edges cross, we see a spike in the output current, which happens every few seconds





- Solution
  - Decreased the switching frequency of the power supply on the right (looking from the front) to 19.8 kHz
  - The noise caused by the crossing of rising/falling edges increases in frequency (~200 Hz) and is filtered out by the output filter
  - Pros: Firmware solution with no hardware changes
  - Cons: The interface boards for the dual 50A PS are unique



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# Delivery to KEK

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KEK



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- Delivery
  - Power supplies arrived on 30 Apr 2008
- Property Transfer
  - Unfortunately, donation paperwork was not successful
  - DOE was ok with the donation, but the MOU expired
  - KEK had to pay 5% duties



- Completed Tasks
  - Racks secured to floor
  - Electrically grounded racks
  - 400V service installed
  - DC cables pulled
  - Interlock cables pulled





- In Progress
  - DC cable termination
  - Interlock cable termination
  - Intra-rack cable connections
  - 100V service Installation



- Upcoming Tasks
  - Connect IOC to ATF network
  - Energize EPSC's and PLC
  - Energize the bulk power supplies
  - Energize HAPS for available magnets
  - Tune power supply system for available magnets