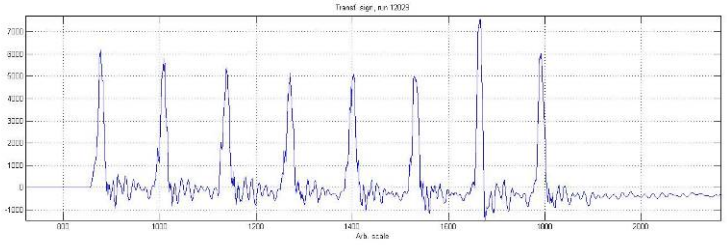
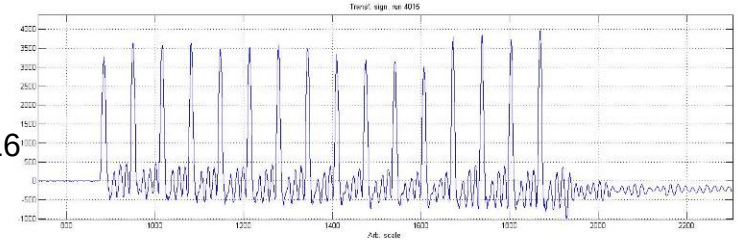
Beam Transformer Pulse Shapes

M. Palm AB/ATB

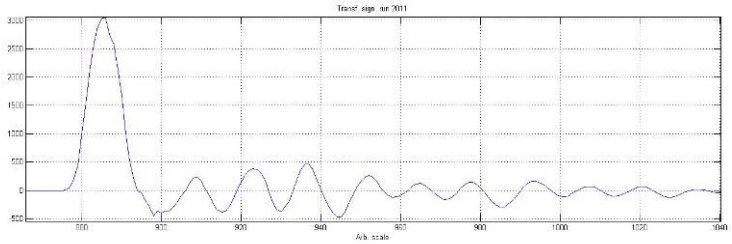
Sample curves



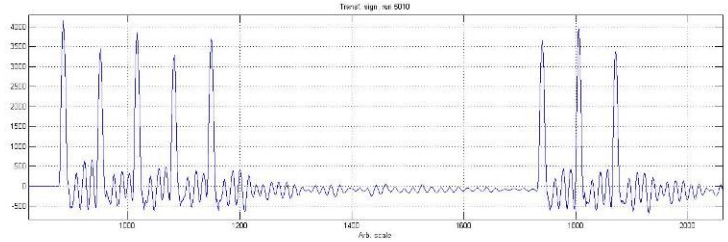
#12009, h8



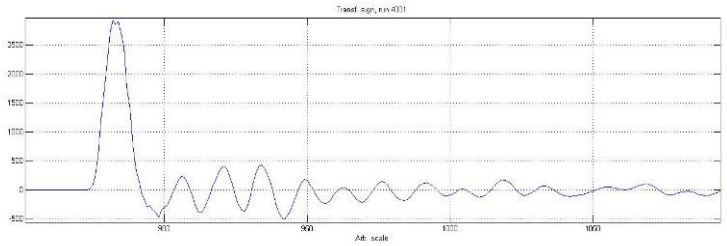
#4015, h16



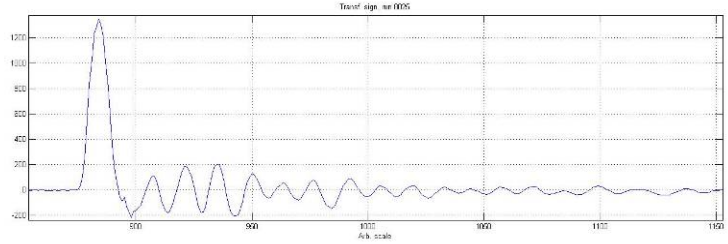
#2011, h16



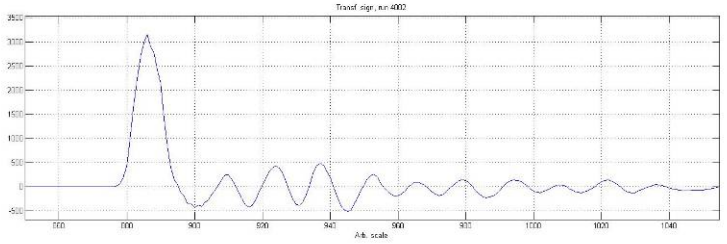
#5010, h16



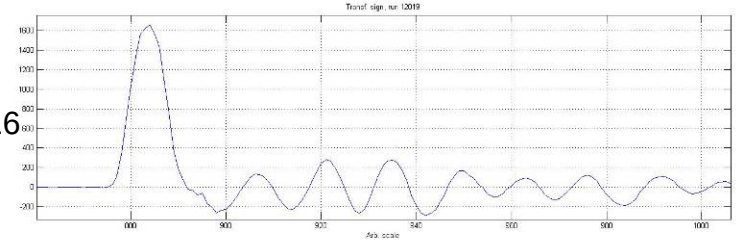
#4001, h16(?)



#8025, h16

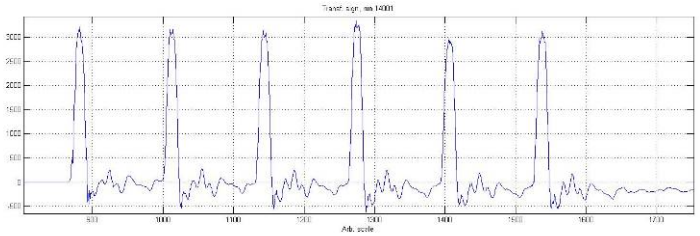


#4002, h16

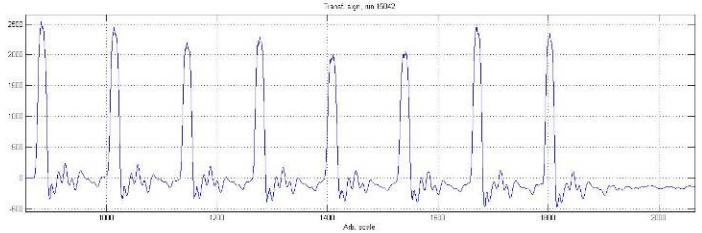


#12019, h16

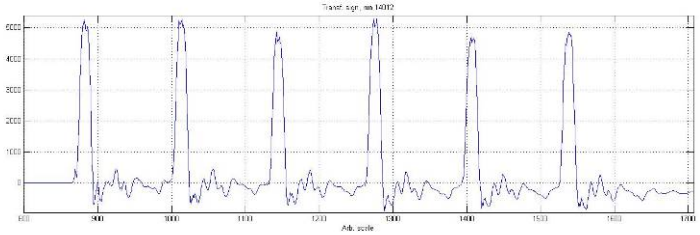
Sample curves



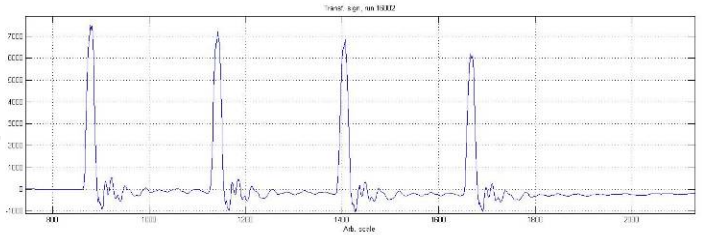
#14001, h8



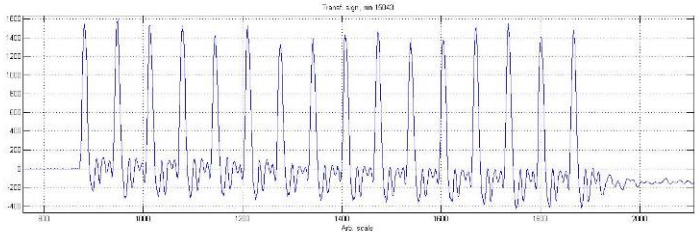
#15042, h8



#14012, h8



#16002, “h4”

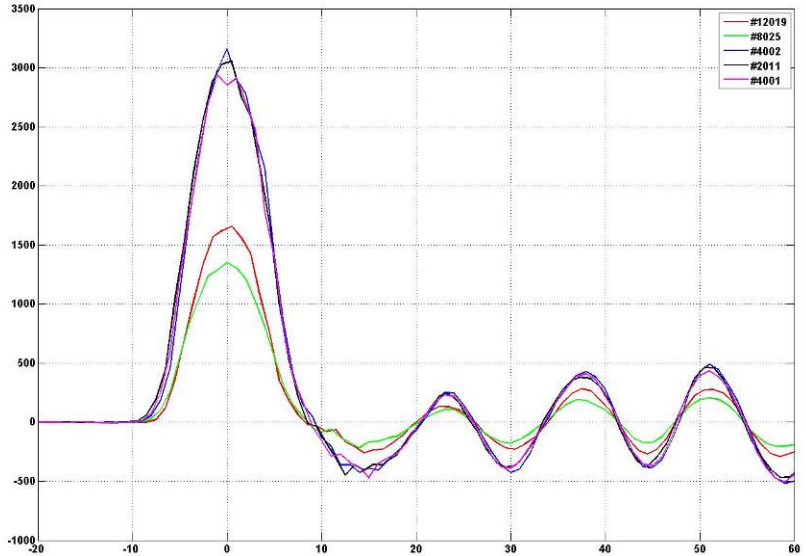


#15043, h16

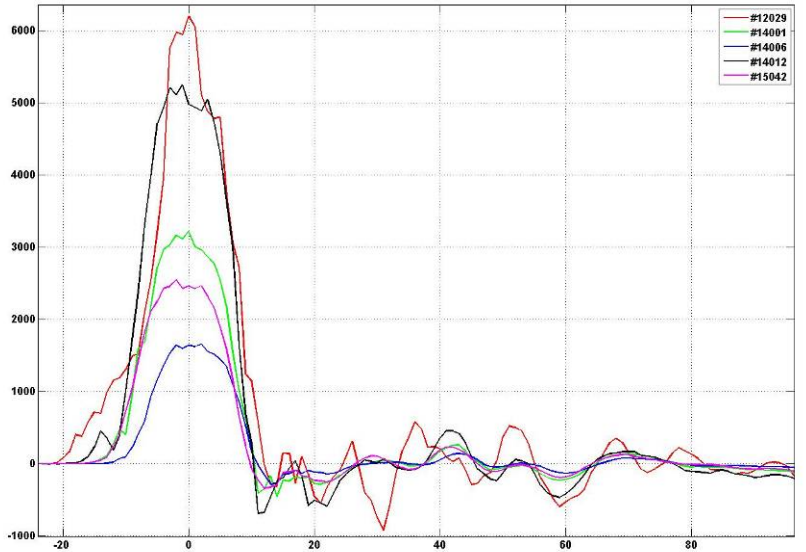
- Clear differences in inter-bunch “ringing” between h8 and h16.
- Oscillation amplitude between bunches as high as 1/3 of main pulse! (e.g. #2011)

1st peak synchronized signals

- Reasonable matching for different signals in harmonic 16-mode.



- Worse at harmonic 8.



Particle detectors

- Detector response for 1-8 proton bunches
- Plot: Total flat integration of detector divided by PS-beam log intensity (not the current transformer!)
- Response does not seem linear (at a first glance)