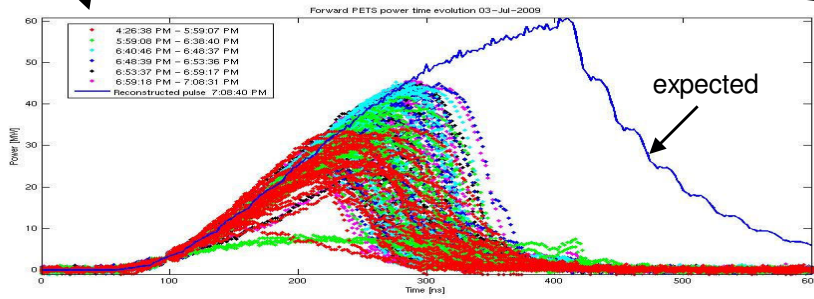
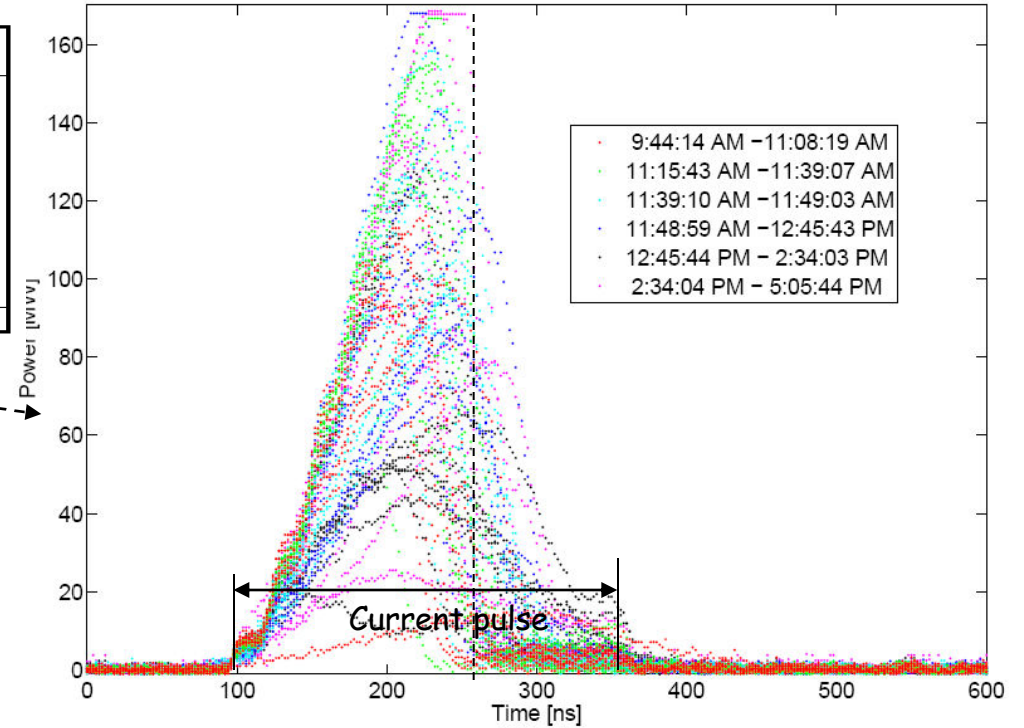


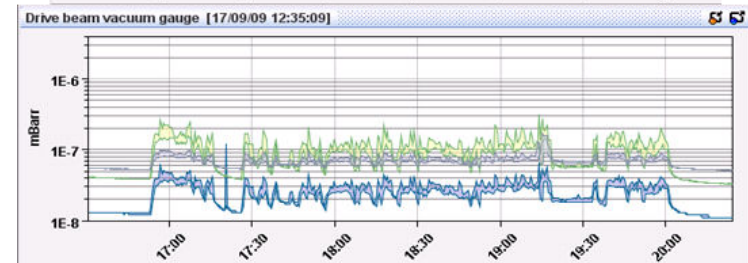
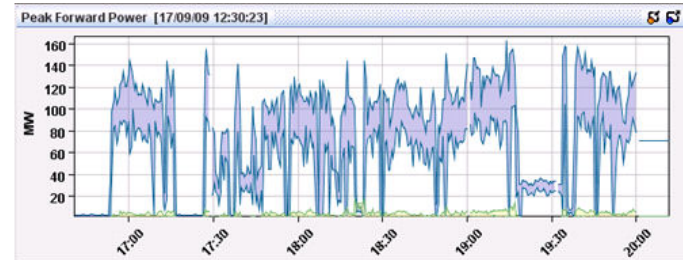
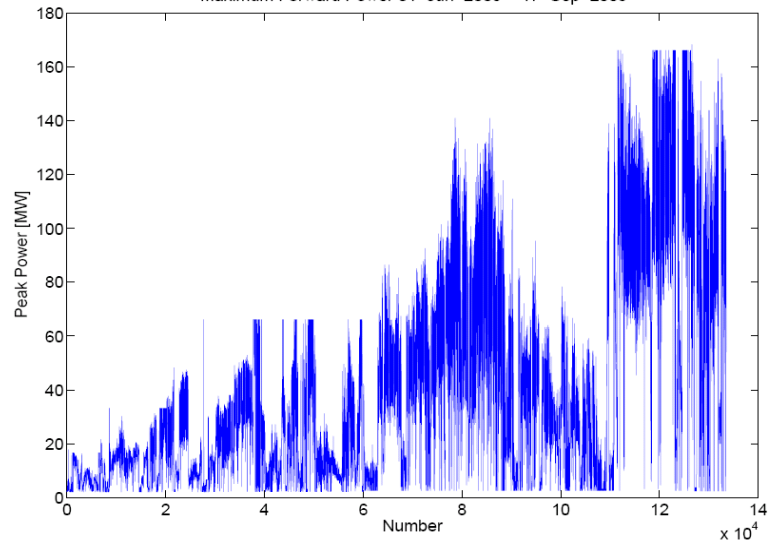
# PETS processing history

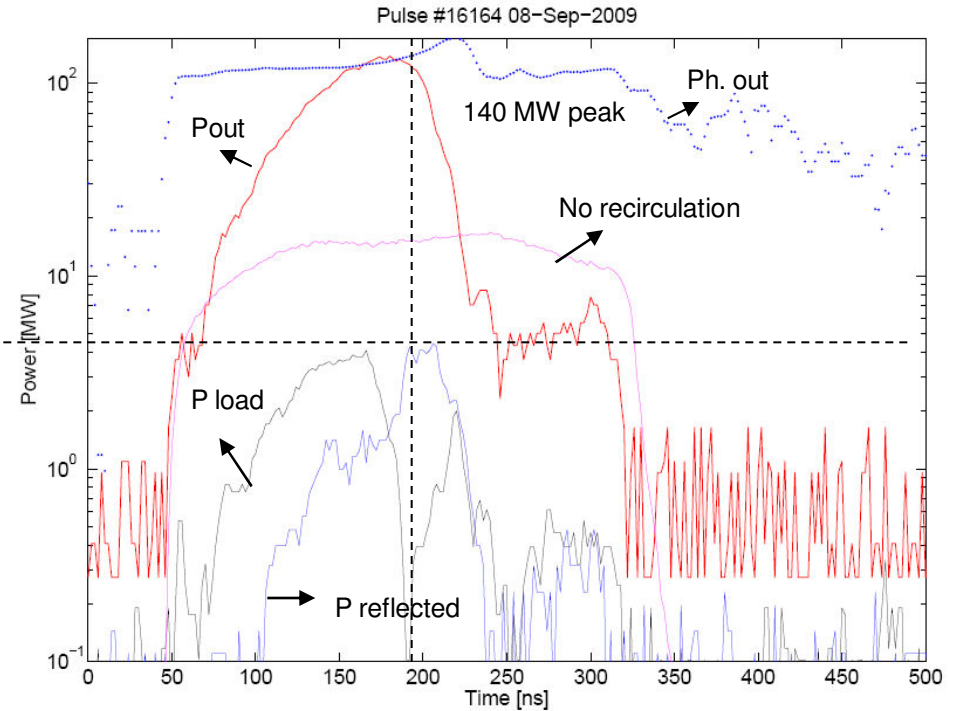
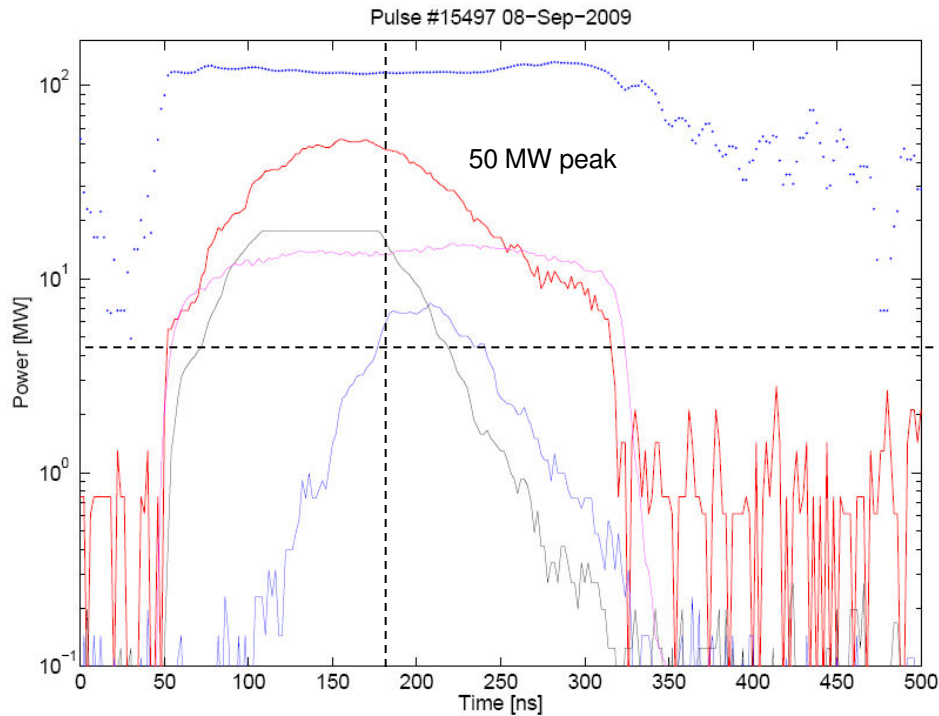
	Start1	End1	Start2	End2	Logged Beam Time	Number of pulses
Jul 3 <sup>rd</sup>	9:10 AM	7:08 PM			9:58	29900
Jul 6 <sup>th</sup>	3:55 PM	5:44 PM			1:49	5450
Jul 7 <sup>th</sup>	6:36 PM	8:11 PM			1:35	4750
Jul 16 <sup>th</sup>	9:53 AM*	12:10 PM*	2:23 PM	6:23 PM	6:17	18850
Jul 23 <sup>rd</sup>	10:55 AM	7:20 PM			8:25	30300
Aug 20 <sup>th</sup>	11:47 AM	12:27 PM	2:47 PM	9:42 PM	7:35	22750
Aug 21 <sup>st</sup>	9:58 AM	10:59 AM	3:06 PM	6:56 PM	4:51	14550
Aug 24 <sup>th</sup>	12:17 PM	6:03 PM			5:46	17300
Sep 7 <sup>th</sup>	4:52 PM	7:27 PM			2:35	7750
Sep 8 <sup>th</sup>	9:35 AM	2:09 PM	2:14 PM**	7:55 PM**	10:15	30750
Total					59:06	182350

Forward PETS power time evolution 08-Sep-2009



Maximum Forward Power 01-Jun-2009 - 17-Sep-2009





## Observations:

- processing is rather aggressive, practically every pulse is shortened.
- The reflection (shape and amplitude) is not well correlated with incident power. Normally the pulses start to collapse when reflected power reaches  $\sim 5$  MW. Also the reflection build up is rather delayed.
- When pulse is shortened the shape of diverted signal can vary significantly.
- We are steadily improving the peak power, not the pulse length.
- There is significant changes in RF pulse (up to  $40^\circ$ ) during pulse shortening.

## Discussion:

-Processing strategy. There is clear quench in a power production when the pulse is shortened. This effect can be considered as a self-protection – soon after the event had started, there is no power available to support it. Facing the limited time available for the experiment, we will continue the same way.

-What do we processing? Most likely the attenuator!

## Action:

- We will replace attenuator with straight waveguide section and continue in full recirculation mode, manipulating the power by phase shifter.