

Beam Distribution MD

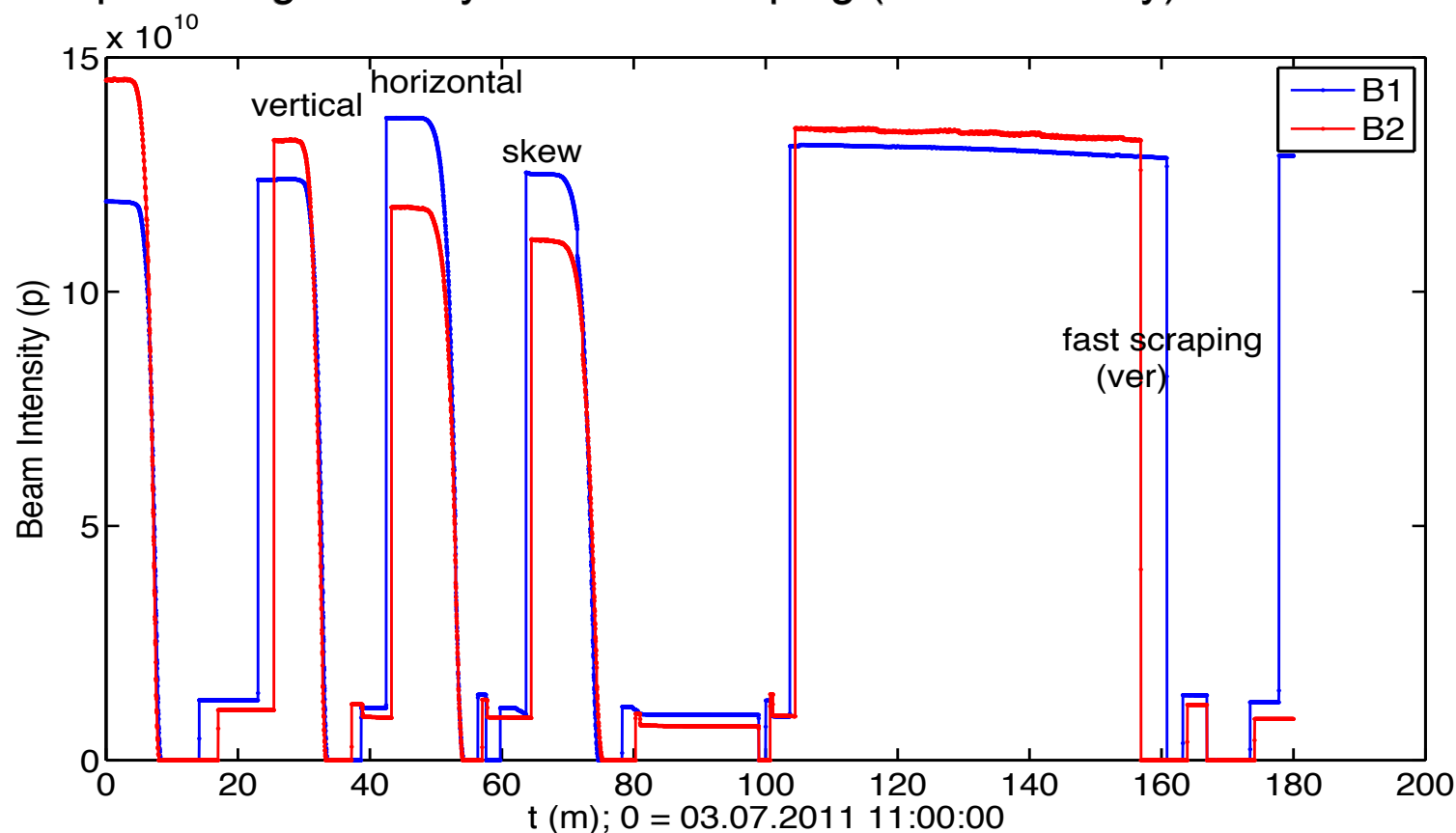
Sun, 03.07.2011 10:00 to 14:00

F. Burkart

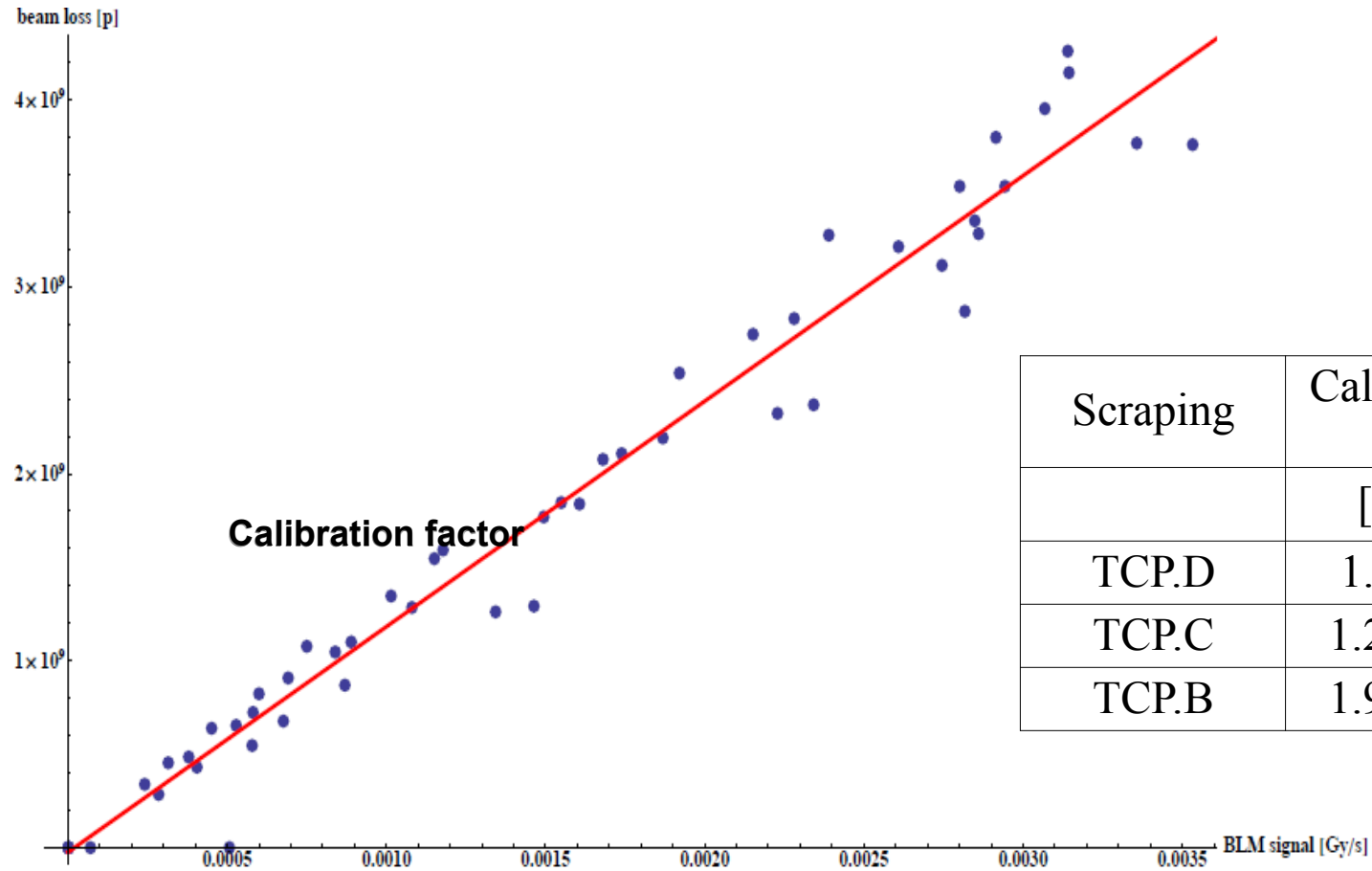
R. Assmann, R. Bruce, M. Cauchi,
D. Deboy, C. Derrez, L. Lari, J. Lendaro,
A. Masi, S. Redaelli, A. Rossi, G. Valentino,
D. Wollmann

What we did:

- 1h 45 min out of 4h
- 1 full scraping on both beams (hor., ver., skew)
- fast scraping (ver.) on both beams
- Microphone signal analysis of the scraping (Daniel Deboy)

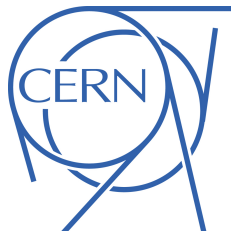


What we did:

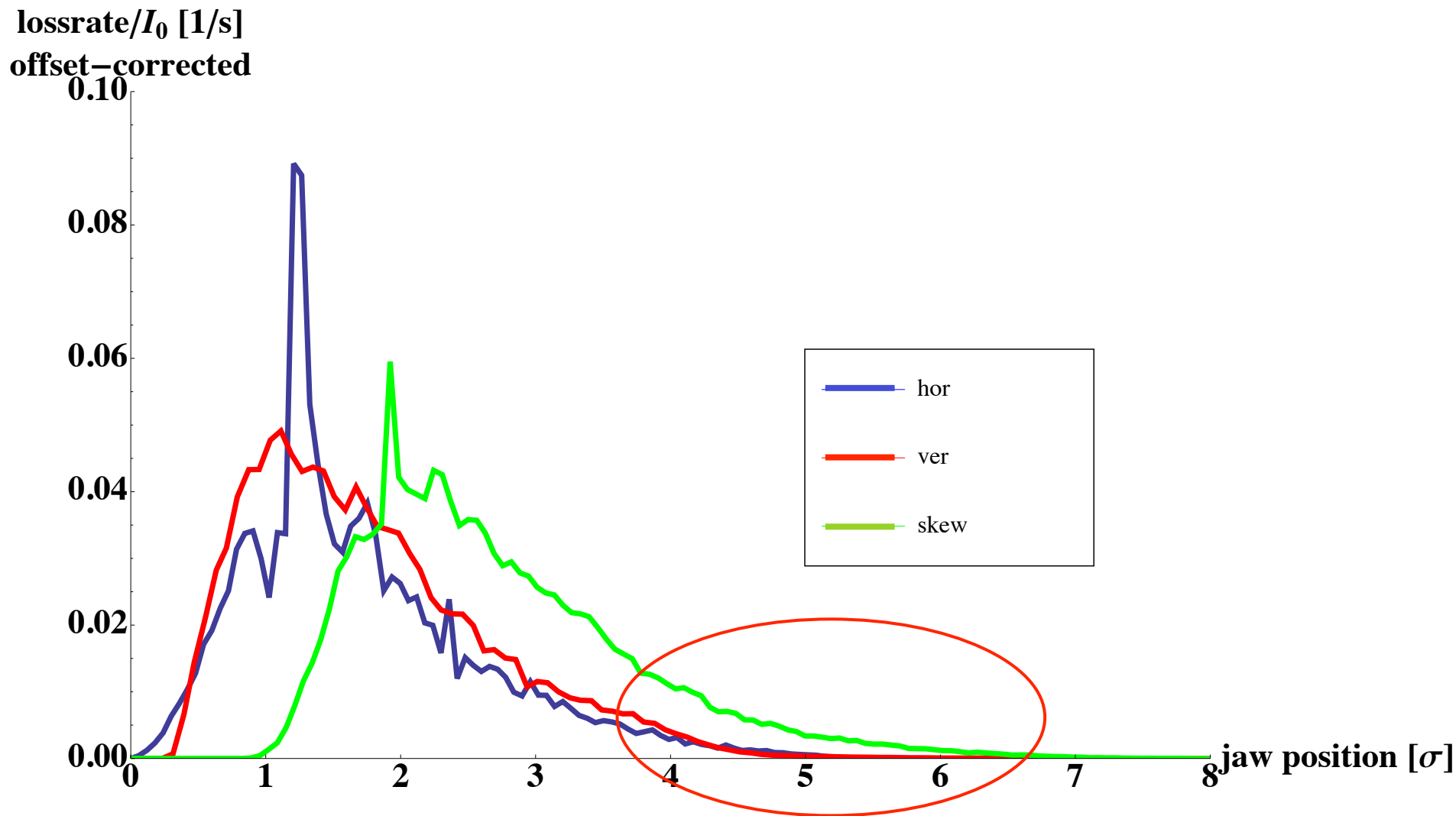
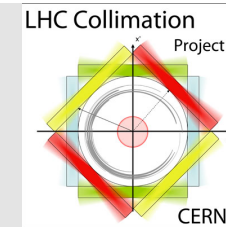


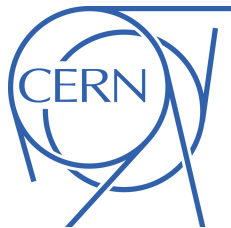
Scraping	Calib.factor B1	Calib.factor B2
	[p/Gy]	[p/Gy]
TCP.D	1.2E+12	1.13E+12
TCP.C	1.25E+12	1.26E+12
TCP.B	1.94E+12	1.75E+12

**Compared to 1.85E+12 p/Gy
for physics fills**

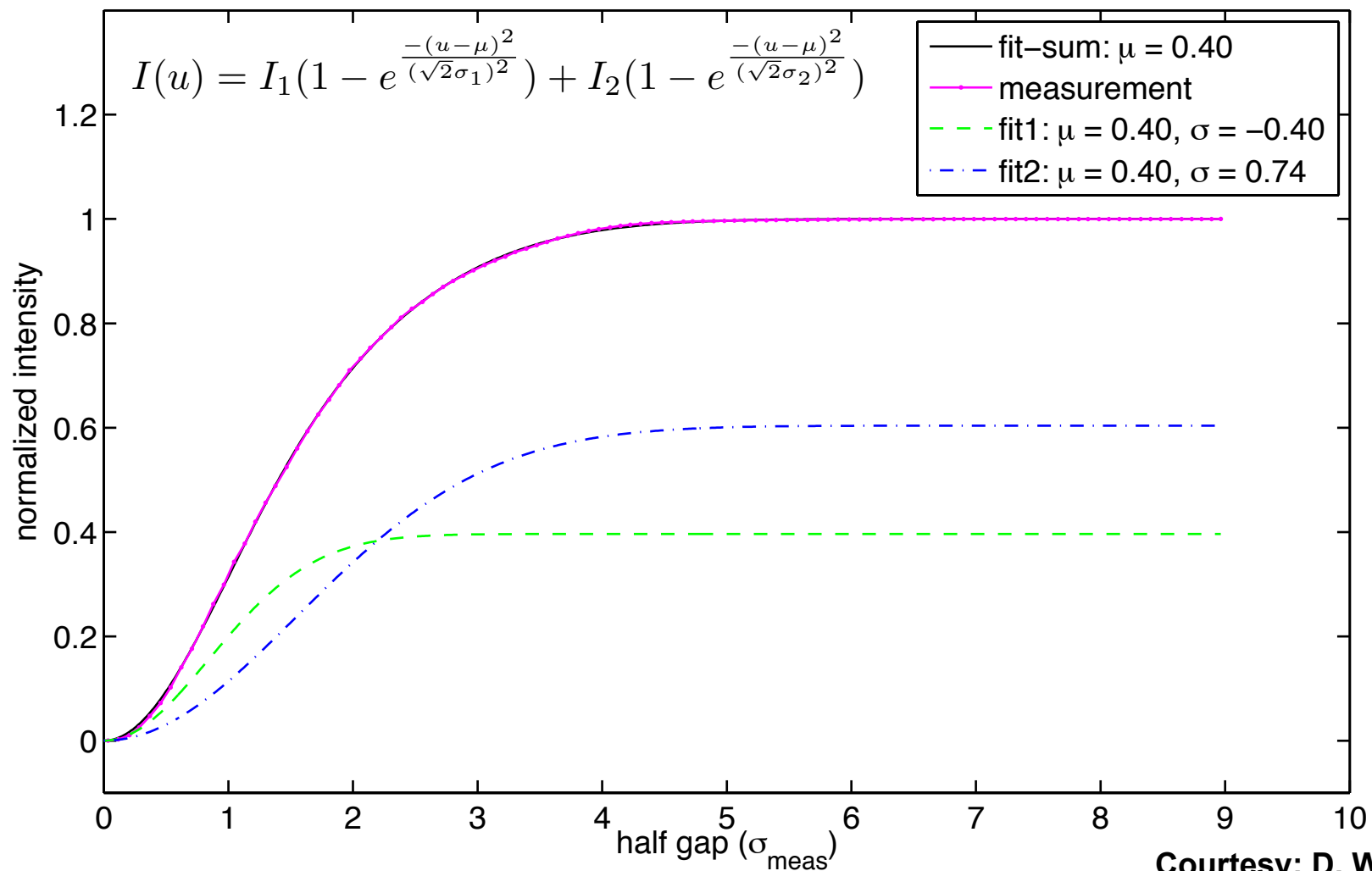
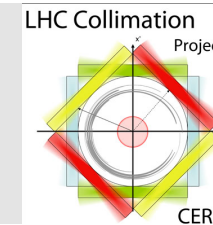


Preliminary Results (1/3): Comparison hor/ver/skew scrapings





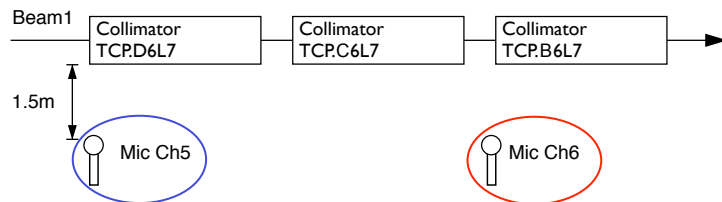
Preliminary Results (2/3): Ver. Scraping B1



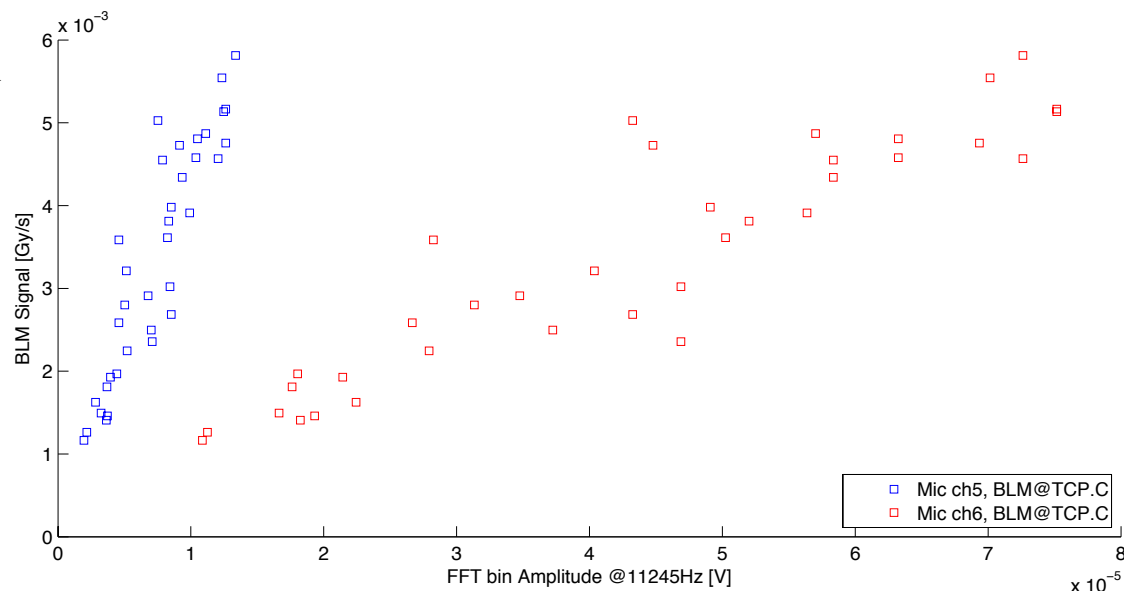
Courtesy: D. Wollmann

Preliminary Results(3/3): Microphone Signal Analysis

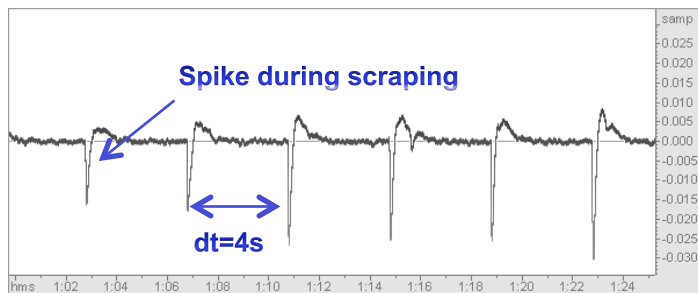
Location of Microphones in IP7 (left)



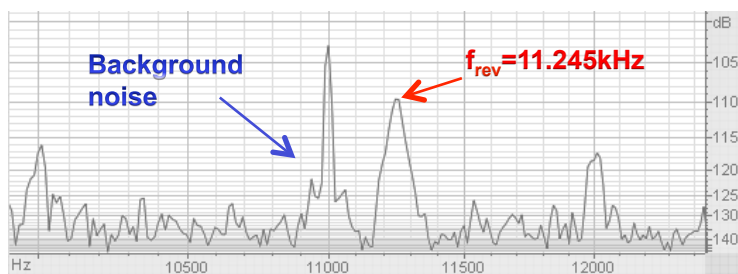
BLM vs. Mic Amplitude (@ f_{rev})



Microphone Signal



Spectrum of Signal during Scraping



- Spikes are induced by radiation
- stronger downstream
- Mic Amplitudes linear to BLM signal
- No beam induced sound during scrapings
- High sample rates allow spectral analysis up to 100kHz
- Compare to high sample rate BLM data