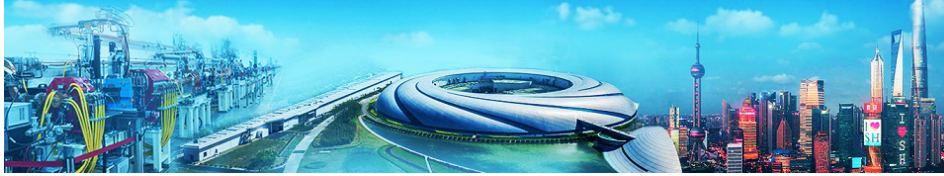


# International Workshop on Breakdown Science and High Gradient Technology (HG2018)



Contribution ID: 54

Type: **not specified**

## The test of RF breakdowns of CPHS RFQ and RFQ RF parameters measurement

*Wednesday 6 June 2018 15:15 (25 minutes)*

This report includes two sections. Section I focuses on RF breakdowns of Compact Pulsed Hadron Source (CPHS) RFQ. The conditioning history curve of CPHS RFQ has been recorded. After the post-processing of experiment data, the normalized curve of the conditioning history turned into a relatively smooth curve, which indicated that the empirical formula proposed by CERN for the high gradient electron accelerating structures maybe expand to RFQs with much lower frequency. Section II focuses on the RFQ RF parameters measurement. According to the reflected waveforms from the directional coupler and the signal from pickup recorded by an oscilloscope, the RFQ RF parameters ( $Q_L$ ,  $f_0$ ,  $\beta$ ) can be measured in the high power condition.

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**Session Classification:** High power test