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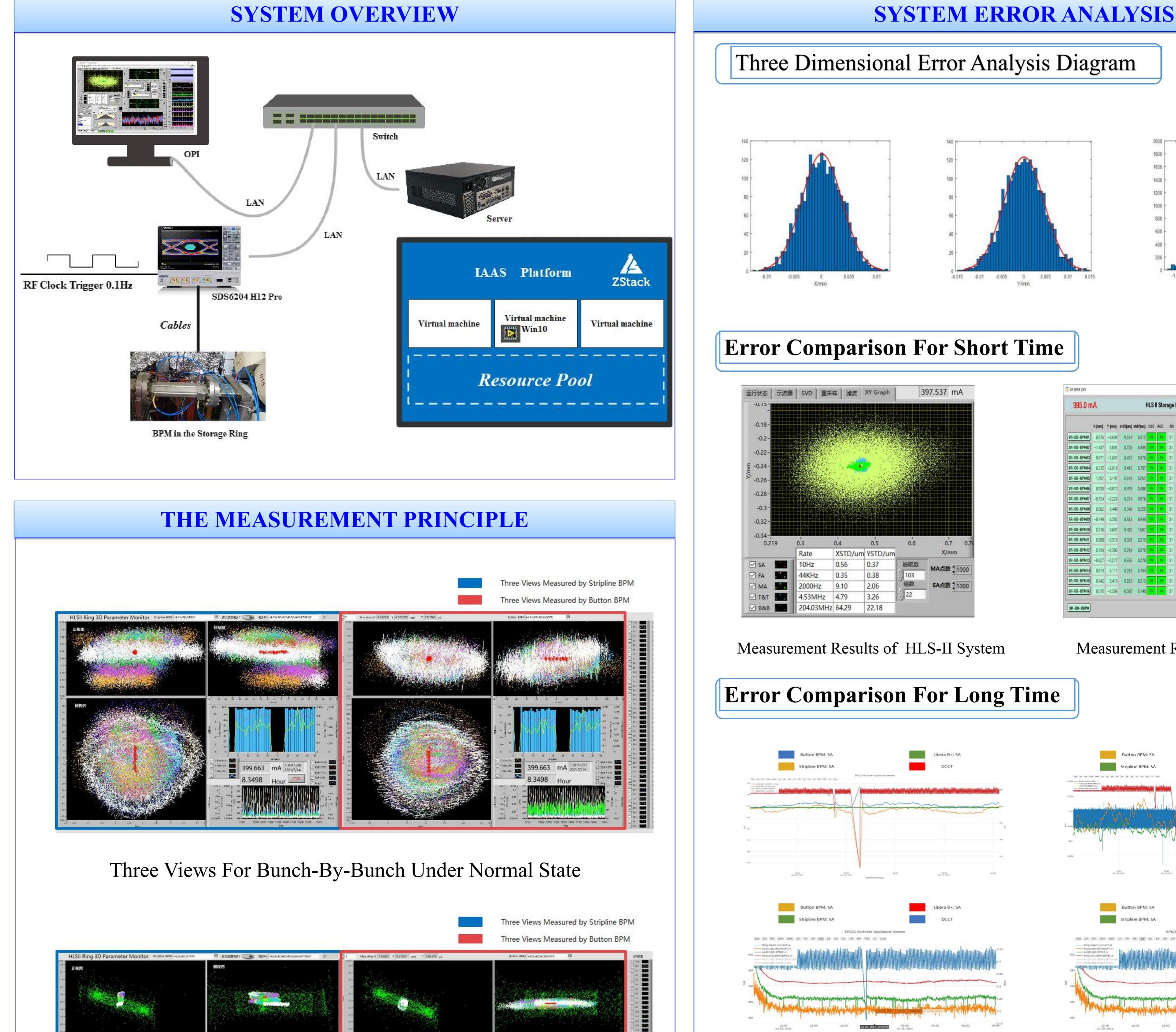


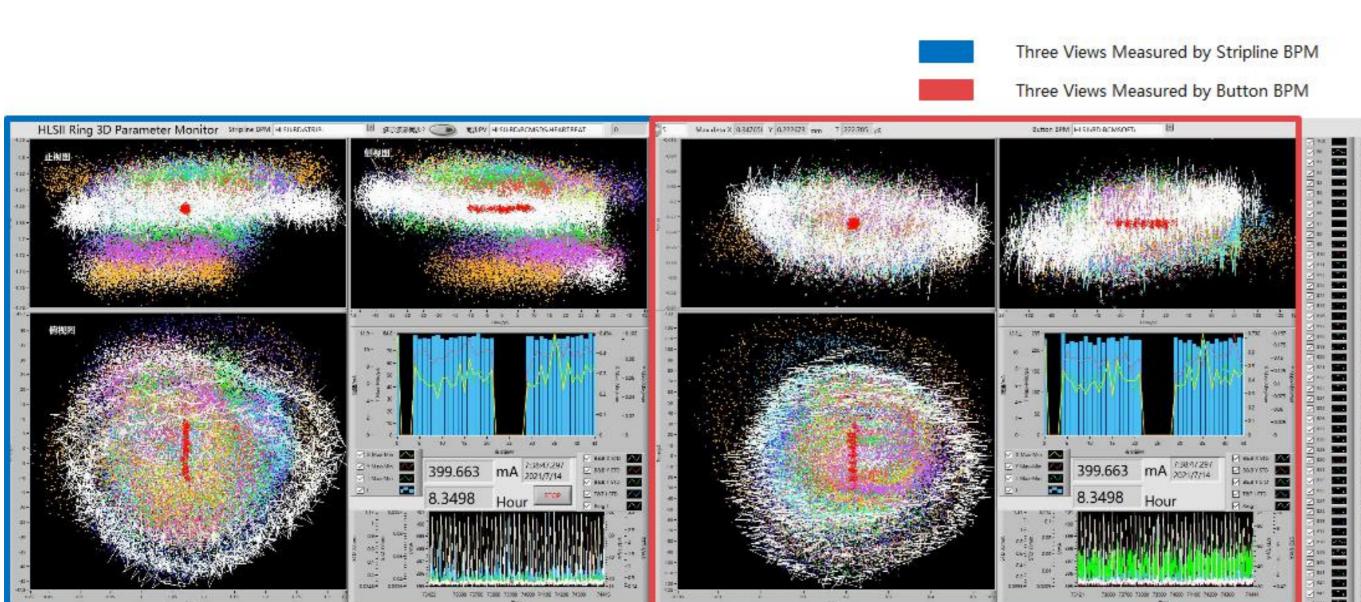
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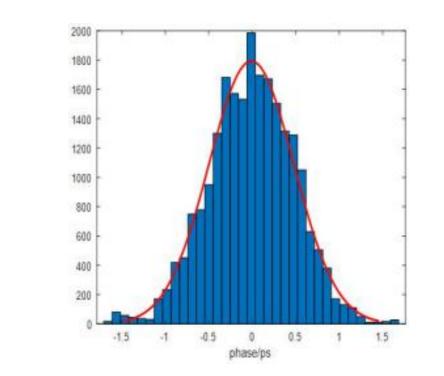


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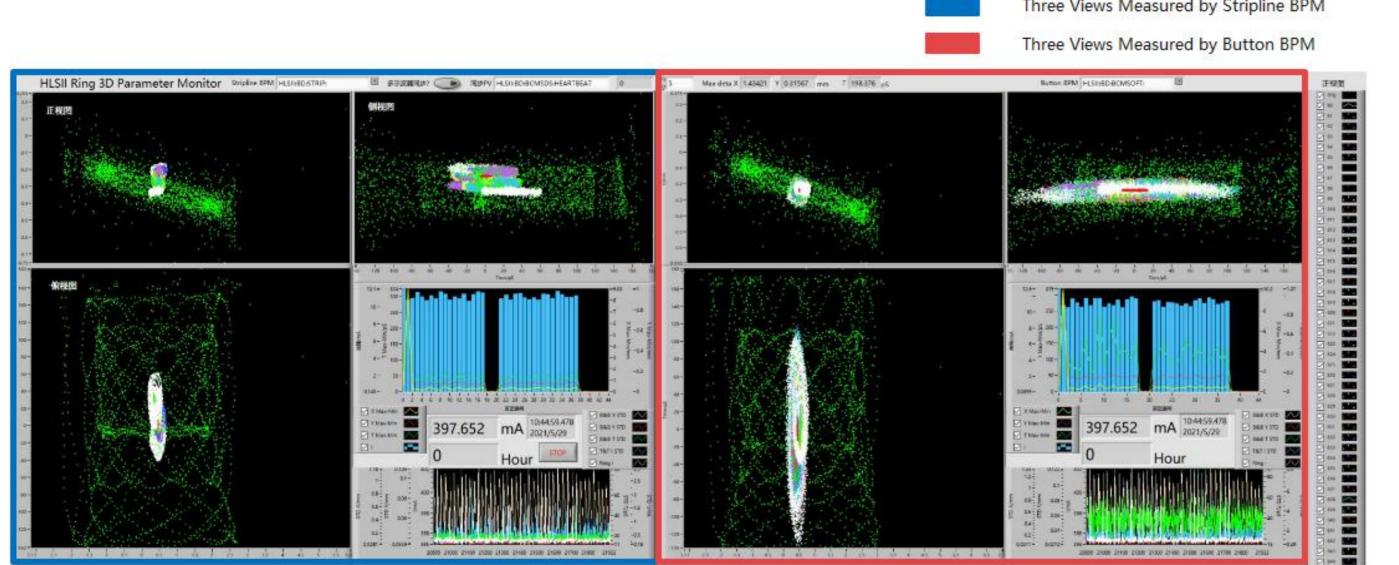
Abstract: In order to improve the performance of Hefei Light Source (HLS-II), it is necessary to study various problems of nonlinear beam dynamics in the storage ring, so as to optimize the beam filling mode and injection mode, and then improve the intensity and brightness of HLS-II. In beam dynamics, bunch-by-bunch can provide detailed information of beam bunches and help beam researchers to study the problems of beam bunches deeper. Therefore, HLS-II diagnostics group has developed an on-line bunch-by-bunch three-dimensional measurement system based on high bandwidth and high speed oscilloscope.

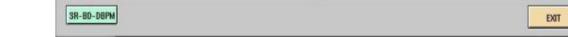






395.0 m		HLS II Storage Ring BPM Manager										8.37 Hour				
	X (mm)	Y (mm)	stdX[um]	stdYjum)	DSC	AGC	Att		X (mm)	Y (mm)	stdX[um]	stdY]um]	DSC	AGC	A	
SR-BD-BPM01	0.576	-0.609	0.624	0.312	ÖN	ΰŇ	31	SR-BD-BPM17	0.221	0.490	0.408	0.254	QN	ON	3	
SR-BD-BPM02	-1.437	0.801	0.729	0.485	ON	UN	31	SR-BD-BPM18	1.242	0.091	0.555	0.380	ON	ON	3	
SR-BD-BPM03	0.871	-1.687	0.473	0.576	0N	ON.	31	SR-BD-BPM19	0.458	-0.240	0.311	0.611	ON	ON	3	
SR-BD-BPM04	0.315	-2.018	0.415	0.787	ON	DN	31	SR-BD-BPM20	-0.071	0.454	0.183	0.410	ON	ON	3	
SR-BD-BPM05	1.282	0,147	0.643	0,262	ON.	ON	31	SR-BD-BPM21	0.466	-0.031	0.237	0.206	ON	09	3	
SR-BD-BPM06	0.530	-0.010	0.479	0.486	ØN	DN-	31	SR-BD-BPMZZ	1.461	-0.050	0.578	0.202	ØN	OŇ	3	
SR-BD-BPM07	-0.724	-0.229	0.204	0.576	0X	-ON	31	SR-BD-BPM23	1.729	0.182	0.453	0.333	ON	ON	3	
SR-BD-BPM08	0.062	0.449	0.348	0.255	ON	ON	31	SR-BD-BPM24	-0.463	0.458	0.373	0.298	QN	ON	3	
SR-BD-BPM09	-0.148	0.302	0.593	0.549	ON.	ON	31	SR-BD-BPM25	0.051	0.056	0.184	0.343	ON	ON	3	
SR-BD-BPM10	0.316	0.687	0.435	1.687	0N	ON	31	SR-BD-BPM26	0.477	0,051	0.186	0.236	ON	QN	3	
SR-BD-BPM11	0.269	-0.319	0.328	0.213	(IN	-DN	31	SR-BD-BPM27	0.396	0.121	0.307	0.354	QN	ØN	3	
SR-BD-BPM12	0.139	-0.396	0.769	0.278	ON	ON	31	SR-BD-BPM28	0.837	0.072	0.816	0.615	đN	ON	3	
SR-BD-BPM13	-0.627	-0.277	0.556	0.279	08	BN	31	SR-BD-BPM29	0.301	0.115	0.565	0.199	QN	01	3	
SR-BD-BPM14	0.573	0.111	0.253	0.194	0N	UN	31	SR-BD-BPM30	1.054	-0.074	0.515	0.276	QN	ON	3	
SR-BD-BPM15	0.442	0.419	0.263	0.213	0N-	ON	31	SR-BD-BPM31	0.135	0.581	0.473	0.336	QN	ON	3	
SR-BD-BPM16	0.015	-0.299	0.398	0.140	ON	UN.	31	SR-BD-BPM32	-0.337	0.458	0.328	0.716	ON	ON	3	



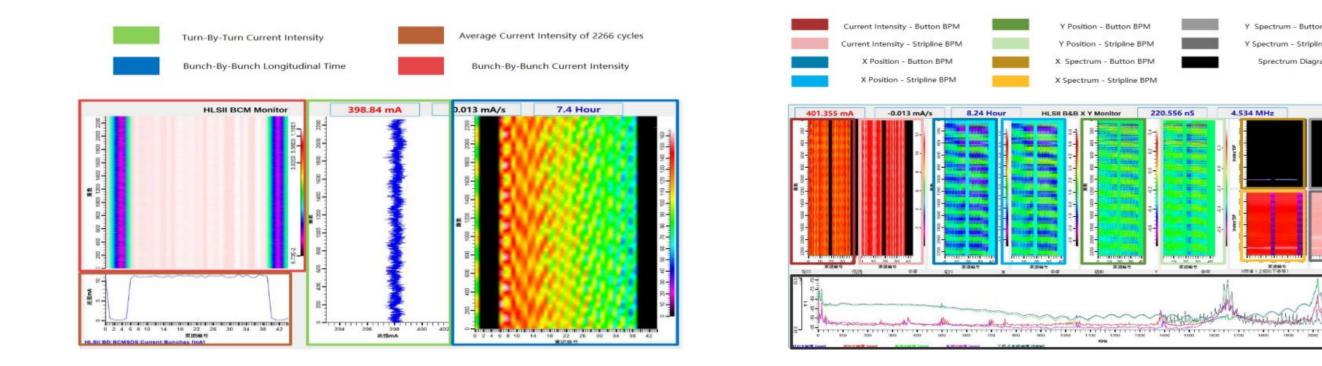


Measurement Results of Libera B+



CONCLUSION

Three Views For Bunch-By-Bunch Under Injection State



Bucnh-By-Bunch Tracking Interface

The bunch-by-bunch three-dimensional system has been working online in HLS-II. Based on the data generated by this system, a variety of bunch-bybunch information can be easily obtained. Further, the version 1.0.X of this bunch x0002 by-bunch three-dimensional system, now is open source on gitee, can easily set parameters to fit all light sources. And the next version system in plan will focus on the six dimensional bunch-by-bunch centroid.

REFERENCES

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