

Supplementary Material to

Send et al: **Application of a pnCCD for energy-dispersive Laue diffraction with ultra-hard X-rays****Table S1** Comparison between experimental and theoretical structure-factor moduli of GaAs.

hkl	E [keV]	2θ [°]	I_{ph}	I_{co}	$ F_{hkl}^{exp} $	$ F_{hkl}^{theo} $	$\Delta F/ F $ [%]	A_{ext} [mm]	A_{abs} [mm]	A_{ext}/A_{abs}
$\bar{8}4\bar{8}$	101.58	15.04	299	1786	51.17	54.53	6.17	0.30	3.48	0.09
$\bar{8}6\bar{6}$	91.67	16.18	532	2327	52.80	56.78	7.02	0.26	2.74	0.09
$\bar{8}8\bar{4}$	92.38	16.44	439	1966	49.30	54.98	10.33	0.27	2.79	0.10
$\bar{8}10\bar{2}$	103.21	16.11	197	1234	46.19	50.42	8.40	0.33	3.60	0.09
$\bar{7}1\bar{1}\bar{1}$	91.47	18.13	136	591	30.10	35.39	14.94	0.41	2.73	0.15
$\bar{7}3\bar{7}$	109.96	12.04	232	1762	49.56	46.05	7.62	0.38	4.15	0.09
$\bar{7}5\bar{5}$	94.55	13.51	626	3012	52.01	48.36	7.55	0.31	2.95	0.11
$\bar{7}7\bar{5}$	58.65	23.91	3495	3859	42.54	43.01	1.10	0.21	0.87	0.24
$\bar{7}7\bar{3}$	95.46	13.79	496	2455	48.30	46.16	4.63	0.33	3.02	0.11
$\bar{7}9\bar{3}$	63.98	22.82	2834	4096	36.14	40.02	9.69	0.25	1.10	0.23
$\bar{7}9\bar{1}$	109.86	13.26	148	1121	42.74	40.93	4.41	0.43	4.14	0.10
$\bar{6}0\bar{1}\bar{0}$	94.84	15.72	424	2053	50.62	56.74	10.79	0.27	2.97	0.09
$\bar{6}2\bar{8}$	68.78	18.77	12472	22555	70.17	66.74	5.14	0.16	1.33	0.12
$\bar{6}4\bar{6}$	55.42	21.24	8360	7707	62.96	74.19	15.14	0.12	0.74	0.16
$\bar{6}6\bar{4}$	53.03	22.35	9240	7420	74.88	74.41	0.63	0.11	0.66	0.17
$\bar{6}8\bar{2}$	59.98	21.46	12413	14675	69.66	67.01	3.95	0.14	0.92	0.15
$\bar{6}100$	75.46	19.08	3870	9326	46.26	57.05	18.91	0.21	1.69	0.12
$\bar{6}122$	98.41	17.58	191	1036	41.16	48.07	14.37	0.32	3.24	0.10
$\bar{5}1\bar{1}\bar{1}$	74.59	20.61	2023	4699	36.60	38.62	5.22	0.30	1.64	0.18
$\bar{5}1\bar{9}$	107.28	12.35	284	2001	50.51	46.06	9.67	0.37	3.93	0.09
$\bar{5}1\bar{7}$	69.86	15.76	15109	28701	66.08	57.51	14.90	0.19	1.38	0.14

$\bar{5}3\bar{5}$	51.35	18.92	9761	7076	72.26	64.23	12.50	0.13	0.60	0.22
$\bar{5}5\bar{3}$	48.27	20.13	5100	3062	69.10	66.74	3.54	0.11	0.51	0.22
$\bar{5}7\bar{1}$	58.05	18.87	14257	15168	66.63	57.81	15.26	0.16	0.84	0.19
$\bar{5}9\bar{1}$	78.51	16.65	4499	12224	48.60	46.36	4.83	0.27	1.87	0.14
$\bar{5}11\bar{3}$	108.35	14.64	126	913	40.46	37.27	8.55	0.46	4.01	0.11
$\bar{4}4\bar{1}\bar{2}$	120.36	13.99	42	418	37.58	48.65	22.76	0.40	5.00	0.08
$\bar{4}2\bar{1}\bar{0}$	78.22	17.76	5679	15252	59.45	61.19	2.85	0.20	1.85	0.11
$\bar{4}0\bar{6}^*$	81.95	11.29	426	1319	11.90	5.88	102.34	2.24	2.08	1.08
$\bar{4}2\bar{4}^*$	50.79	15.04	530	373	13.67	5.94	130.18	1.37	0.58	2.36
$\bar{4}60^*$	60.87	14.98	399	494	8.69	5.93	46.49	1.64	0.96	1.71
$\bar{3}5\bar{1}\bar{5}$	87.33	23.39	185	696	20.33	28.49	28.64	0.48	2.44	0.20
$\bar{3}3\bar{1}\bar{1}$	67.12	22.18	3002	5024	38.76	39.96	3.01	0.26	1.24	0.21
$\bar{3}\bar{3}\bar{9}$	90.26	13.99	825	3443	54.38	48.19	12.84	0.30	2.64	0.11
$\bar{3}\bar{1}\bar{7}$	50.39	19.27	7962	5461	70.29	66.53	5.66	0.12	0.57	0.21
$\bar{3}\bar{1}\bar{3}$	70.41	7.99	178036	345835	115.02	108.68	5.83	0.10	1.41	0.07
$\bar{3}\bar{3}\bar{1}$	55.32	10.14	79818	73170	90.35	109.02	17.12	0.08	0.74	0.11
$\bar{3}5\bar{1}$	84.56	8.99	44039	150603	106.12	86.18	23.13	0.16	2.25	0.07
$\bar{3}7\bar{3}$	138.01	7.54	129	1927	76.28	60.85	25.36	0.37	6.49	0.06
$\bar{3}11\bar{5}$	97.07	16.24	163	849	33.61	37.36	10.03	0.41	3.14	0.13
$\bar{2}6\bar{1}\bar{6}$	84.71	25.75	765	2624	40.39	37.70	7.14	0.35	2.26	0.15
$\bar{2}4\bar{1}\bar{0}$	73.75	18.79	7425	16614	60.82	61.28	0.74	0.19	1.59	0.12
$\bar{2}\bar{2}\bar{6}^*$	60.18	13.99	600	717	10.12	6.22	62.75	1.55	0.93	1.67
$\bar{2}84^*$	76.84	15.03	247	627	9.65	4.36	121.43	2.81	1.77	1.59
$\bar{1}5\bar{1}\bar{1}$	67.89	22.56	2628	4564	36.80	38.86	5.29	0.27	1.28	0.21
$\bar{1}5\bar{9}$	90.01	14.64	675	2788	50.63	46.22	9.55	0.31	2.62	0.12
$\bar{1}\bar{3}\bar{7}$	46.63	20.81	2880	1546	64.32	66.86	3.80	0.11	0.46	0.24
$\bar{1}\bar{3}\bar{5}$	120.16	6.24	1317	13049	92.60	85.91	7.79	0.23	4.99	0.05
$\bar{1}5\bar{3}$	59.99	12.38	67654	79988	93.52	86.58	8.02	0.11	0.92	0.12
$\bar{1}7\bar{5}$	115.06	9.53	477	4151	68.18	56.98	19.66	0.33	4.56	0.07

$\bar{1}117$	96.87	17.06	168	869	35.62	35.42	0.58	0.43	3.12	0.14
$0\bar{8}\bar{1}2$	125.94	14.49	28	319	39.83	44.41	10.30	0.45	5.47	0.08
$0\bar{6}\bar{1}0$	78.98	18.79	3959	10970	52.78	56.98	7.38	0.22	1.90	0.12
$0\bar{4}\bar{8}$	44.42	25.49	956	441	61.27	78.59	22.03	0.09	0.40	0.22
$0\bar{4}\bar{6}^*$	62.97	14.49	692	953	11.21	5.92	89.37	1.70	1.05	1.62
$1\bar{7}\bar{1}1$	75.87	21.89	1564	3831	34.19	35.56	3.86	0.33	1.71	0.19
	102.25	14.21	241	1466	43.32	40.98	5.70	0.40	3.53	0.11
$1\bar{7}\bar{9}$	55.09	19.91	11014	9986	65.15	57.91	12.51	0.15	0.73	0.21
$1\bar{5}\bar{7}$	132.53	6.93	260	3444	78.03	71.14	9.68	0.30	6.02	0.05
$1\bar{5}\bar{5}$	41.18	13.22	2265	827	91.73	109.34	16.10	0.06	0.33	0.18
$1\bar{3}\bar{3}$	67.84	13.12	41974	72570	85.21	71.71	18.83	0.15	1.28	0.12
155	120.27	10.42	139	1381	50.21	48.14	4.31	0.40	5.00	0.08
177	92.57	17.81	301	1357	43.59	50.54	13.75	0.29	2.81	0.10
$2\bar{8}\bar{1}0$	82.36	13.22	182	574	9.09	4.73	92.26	2.79	2.11	1.32
$2\bar{6}\bar{6}^*$	55.92	19.76	370	351	11.70	4.81	143.21	1.83	0.76	2.41
266^*	73.79	17.88	6163	13847	51.50	46.44	10.89	0.25	1.59	0.16
$3\bar{7}\bar{7}$	77.91	10.65	44716	118747	96.65	78.21	23.58	0.16	1.83	0.09
$3\bar{5}\bar{3}$	50.87	16.26	14685	10393	76.63	78.41	2.27	0.10	0.59	0.17
335	90.52	12.61	1002	4211	54.04	53.76	0.53	0.27	2.66	0.10
357	83.88	19.76	692	2307	28.21	35.55	20.66	0.37	2.21	0.17
399	72.73	20.93	3609	7739	44.16	55.32	20.18	0.21	1.53	0.14
$4\bar{8}\bar{8}$	62.72	16.81	288	391	8.25	5.17	59.57	1.93	1.04	1.86
$4\bar{6}\bar{4}^*$	100.77	15.79	164	956	37.32	37.32	0	0.43	3.42	0.13
$5\bar{9}\bar{7}$	61.12	20.61	4118	5152	37.58	48.89	23.14	0.20	0.97	0.21
$5\bar{7}\bar{5}$	128.91	9.08	115	1404	57.77	53.52	7.94	0.39	5.72	0.07
$5\bar{7}\bar{3}$	70.62	12.71	40556	79491	86.66	71.65	20.96	0.16	1.42	0.11
$5\bar{5}\bar{1}$	43.88	17.09	2736	1218	76.15	86.86	12.33	0.08	0.39	0.21
$5\bar{3}\bar{1}$	54.21	16.66	22716	19558	83.81	72.05	16.33	0.12	0.70	0.17
515	81.95	13.98	6345	19640	56.85	53.85	5.58	0.24	2.08	0.12
537										

559	120.81	11.86	65	654	40.26	40.82	1.36	0.48	5.04	0.10
579	72.63	21.67	2364	5048	38.22	37.66	1.50	0.30	1.53	0.20
662*	60.23	18.24	376	449	10.19	4.79	112.82	1.99	0.93	2.14
795	90.82	17.45	233	989	35.49	37.42	5.15	0.39	2.68	0.15
771	121.83	10.39	148	1526	55.09	48.13	14.47	0.41	5.12	0.08
751	84.17	12.89	8801	29674	67.13	57.22	17.31	0.24	2.23	0.11
733	69.51	14.81	24603	45929	77.75	61.39	26.65	0.18	1.36	0.13
715	72.44	15.01	15696	33243	68.72	57.37	19.78	0.20	1.52	0.13
739	117.98	12.56	65	609	38.04	39.49	3.67	0.48	4.80	0.10
8106	89.32	20.23	183	738	34.70	46.09	24.71	0.31	2.57	0.12
860*	70.17	18.02	152	293	7.44	3.67	102.64	3.03	1.40	2.16
993	90.35	18.24	176	734	31.91	35.22	9.39	0.41	2.64	0.16
971	66.82	21.78	4049	6685	42.53	41.45	2.60	0.25	1.23	0.20
953	108.93	12.44	196	1444	44.78	44.09	1.56	0.40	4.06	0.10
935	101.72	13.16	297	1780	44.58	44.14	1.00	0.37	3.49	0.11
917	108.99	13.16	124	916	38.16	40.89	6.68	0.43	4.07	0.11
1171	80.49	20.66	999	2932	31.07	35.61	12.76	0.36	1.99	0.18
12102	96.03	20.86	99	498	32.48	41.05	20.87	0.37	3.06	0.12
1280	78.26	23.48	931	2510	31.05	45.32	31.49	0.27	1.86	0.15

* weak reflection