

# Leica\_data\_20200918



### **New Calibration**

## 统计

# 统计

名称	值
平均位置	0.1946
最大位置	0.4899
位置 RMS	0.2183
平均姿态	0
姿态 Max	0
姿态 RMS	0
可靠度	0

### 结果

#### 基座

名称	Х	Υ	Z	Rx	Ry	Rz
基座	199.5783	488.5875	123.0136	0.548	-0.0512	-3.7073

### 工具

名称	Х	Υ	Z	Rx	Ry	Rz
工具	-12.8753	-12.5266	37.1857	90	0	-90.0002

#### DH参数

名称	Alpha	Α	D	Theta
连接1	0	0	98.5	180
			140.6164	-90.06
	179.7365			-1.0195
连接4	179.8765	377.096	-18.8837	-90.4331
连接5	-90.062	-0.0549	101.8412	-0.6609
连接6	89.6241	-0.2192	96.1435	0

### 关节

名称	UpperLimit	it LowerLimit MaxVel		MaxAcc	IsLinear	IsCoupled	CoupledIndex	CoupledSign	CouplingRatio	ReductionRatio
关节1	170	-170	180	180	0	0	0	0	0	1
关节2	100	-100	180	180	0	0	0	0	0	1
关节3	100	-100	180	180	0	0	0	0	0	1
关节4	100	-100	180	180	0	0	0	0	0	1
关节5		-100	180	180	0	0	0	0	0	1
关节6	100	-100	180	180	0	0	0	0	0	1

### 位姿

### 位姿

名称	名义 X 名义 Y 名义 Z 名		名义 Rx	名义 Ry	名义 Rz	测量 X	测量 Y	测量 Z	余量 位置	
Motion1	-103.2308	41.4452	758.0208	168.9283	-10.2391	29.2919	-103.2268	41.4704	757.9206	0.1035
Motion2	-15.7974	481.0731	909.7337	174.0369	-3.6681	13.884	-15.7992	481.1371	909.6931	0.0758
Motion3	60.778	74.6123	943.5905	173.5556	-11.8079	-23.506	60.764	74.4676	943.4595	0.1957
Motion4	339.6027	-2.9627	864.0156	169.6096	-27.7905	-21.0424	339.6085	-2.9768	863.9642	0.0536
Motion5	117.1044	201.9797	893.206	172.4913	-9.9152	-18.3529	117.1892	201.8944	893.2714	0.1369
Motion6	-132.9854	407.5466	961.3051	175.3892	-3.7893	27.1764	-133.2189	407.6458	960.9794	0.4128
Motion7	1.8221	476.3953	913.8179	173.9169	-8.6525	1.3601	1.7872	476.5192	913.8407	0.1308
Motion8	293.7848	3.309	896.9853	170.9146	-29.4364	-29.9866	293.8497	3.2293	896.8401	0.1779
Motion9	166.9687	43.9445	972.4455	174.6155	-12.0513	-30.1241	167.0208	43.9227	972.2966	0.1593
Motion10	345.3404	129.3198	617.0347	165.6179	-7.2021	-2.0802	345.2406	129.3384	617.1155	0.1297
Motion11	461.1072	74.9099	815.1201	170.1267	-12.112	-16.8725	461.0209	74.9373	815.0469	0.1165
Motion12	-9.2999	280.2589	947.3525	174.5685	-15.0059	22.1111	-9.3047	280.2316	947.3677	0.0317
Motion13	424.1343	11.7131	874.4701	170.5321	-21.1056	-3.4653	424.184	11.5769	874.3081	0.2173
Motion14	74.7485	-3.5444	764.5255	167.2759	-0.443	-27.0828	74.7961	-3.4896	764.6356	0.1319
Motion15	422.703	-7.5412	888.1093	170.7079	-30.0348	-24.4285	422.6915	-7.5749	887.7689	0.3423
Motion16	454.3288	9.1295	930.4127	172.7097	-22.5184	-14.2909	454.4228	8.9941	930.0604	0.389
Motion17	322.3452	67.8683	786.096	167.8903	-26.3102	-24.6702	322.3162	67.9521	786.1709	0.1161
Motion18	397.1892	154.7602	650.7683	164.6788	-26.0281	-12.2921	397.0218	154.7265	651.1201	0.3911
Motion19	-77.5979	301.0239	845.0444	171.5104	-16.5636	16.9489	-77.5982	300.9747	845.1467	0.1135
Motion20	344.3609	29.1456	782.6123	167.4393	-18.4225	-1.3455	344.2361	29.1716	782.8375	0.2587
Motion21	-129.6218	158.6802	870.8194	172.2625	-14.9642	26.7596	-129.8403 158.6402		870.6	0.3122
Motion22	-1.9361	105.3863	776.6352	170.3634	-0.941	8.3705	-1.8546	105.3302	776.4736	0.1895
Motion23	21.7594	148.9926	970.1451	175.9046	-1.9461	-26.9641	21.6152	148.9777	970.1243	0.1466
Motion24	194.0628	149.8853	637.2193	164.7971	-25.8756	-17.294	194.121	149.9387	637.3232	0.1305
Motion25	145.3414	-7.9782	879.9115	172.2285	-4.781	-10.3209	145.265	-8.0973	879.9534	0.1476
Motion26	355.3544	103.9706	877.9424	171.8964	-15.7284	-16.3936	355.4789	103.945	877.9615	0.1285
Motion27	-16.7597	319.0664	824.5321	171.1016	-18.6395	-12.1784	-16.8229	319.1105	824.7653	0.2457
Motion28	335.4185	429.3423	1034.4947	178.5199	-2.1544	3.854	335.3928	429.5174	1034.4561	0.1812
Motion29	-10.5478	482.5141	999.4554	176.3278	-8.1635	19.274	-10.5991	482.5553	999.3142	0.1558
Motion30	243.1142	191.6347	933.5185	173.8574	-5.5301	11.5904	243.1263	191.5848	933.6498	0.141
Motion31	17.0071	243.773	853.6476	171.4038	-20.5279	19.2464	17.1101	243.7027	853.8538	0.241
Motion32	399.6348	217.0164	905.8094	173.6011	-11.5133	6.051	399.7209	217.0601	905.9131	0.1417
Motion33	87.7256	348.8608	906.8232	173.2285	-8.4001	9.9354	87.7291	348.8827	907.0164	0.1945
Motion34	193.345	18.6039	860.422	170.5761	-1.5127	-6.3305	193.4514	18.4364	860.4427	0.1995
Motion35	10.6236	212.408	845.0719	171.0649	-6.0833	-19.2938	10.7032	212.4446	845.32	0.2632
Motion36	4.1249	380.58	1082.1507	178.866	-9.5026	-21.8066	4.0622	380.7636	1081.9619	0.2707
Motion37	413.4645	404.5273	955.096	175.7885	-3.1819	-0.286	413.6108	404.6034	955.1951	0.1924

Motion38	255.7553	24.5431	679.964	163.6985	-21.5727	-16.6328	255.6452	24.6907	680.418	0.4899
Motion39	13.2334	394.8707	1014.1676	176.8497	-1.925	-14.6711	13.2093	395.0422	1014.0648	0.2014
Motion40	-150.7712	183.6169	790.9555	168.5279	-27.494	37.8097	-150.6759	183.5648	791.0075	0.1205
Motion41	468.6908	232.1909	1023.1548	177.2892	-2.9909	-27.9135	468.9995	232.2459	1022.9592	0.3696
Motion42	206.8917	102.2142	947.2652	174.8264	-1.7689	14.2766	206.8101	102.0972	947.3526	0.1673
Motion43	220.1195	120.2694	956.9482	174.4002	-21.2805	-30.688	220.2324	120.2474	956.9002	0.1246
Motion44	-42.9884	246.0427	1004.1911	176.6396	-6.119	21.7675	-43.1027	246.0765	1004.05	0.1847
Motion45	344.1563	39.6883	755.07	166.1472	-29.9211	-25.364	344.0403	39.7983	755.2015	0.207
Motion46	469.3615	63.5414	800.5756	169.0971	-23.5301	-19.8716	469.2848	63.554	800.4256	0.169
Motion47	52.2592	94.54	885.1181	171.565	-5.8753	-15.8738	52.2623	94.4163	884.9427	0.2146
Motion48	-42.4115	458.591	857.3263	172.1312	-13.3245	20.8875	-42.2853	458.4672	857.45	0.2158
Motion49	286.1223	6.9826	817.2606	169.0884	-2.7043	-3.9723	286.1216	7.0028	817.4347	0.1753
Motion50	15.3285	123.7804	669.7342	167.1692	-7.2409	-14.5073	15.4522	123.7737	669.7168	0.1251

### 位姿

关联	ŧ																														
-	Bas	Bas		Base		Base									Link									Link			Too I: Y		Tool: Rx		Tool:
Base	e: X	e: Y 0.17		0.289	: Ry -0.50	: <b>Rz</b> -0.91	-0.43		0.54					0.54	4. u	0.45	-0.02	-0.46		-0.03				6: A -0.26		0.00			0	<b>Ry</b> 0	<b>Rz</b> 0
: X		27	221	4	27	41	41	6	61	34	87	93	3	6	56	42	21	61	72	5	32	27	69	24	02	68	064	939			
Base : Y	0.17 27	1	-0.1 437	-0.05 25	-0.24 77	-0.14 7	-0.06	0.29	-0.54 28	-0.14 43	-0.94 66	-0.75 77	0.73	0.78	0.69 5	0.63 91	0.25 58	-0.75 71	-0.81	-0.30 76	-0.76 13	-0.62 65	0.39 74	0.35 67	-0.15 03	0.05 55	-0.0 446	-0.8 175	0	0	0
Base	-0.2	-0.1	1	-0.35	-0.27	0.092	-0.43	0.30	0.22	-0.17	0.22	0.17	0.09	0.04	0.09	0.20	-0.35	-0.12	_	0.36	-0.09	-0.05		-0.20	0.09	-0.0	0.00	-0.0	0	0	0
: Z	221	437	0.0	32	55	3	09	47	65	24	24	53	48	22	97	65	03	77	53	09	17	41	76	95	82	032	24	717	_		
Base : Rx	0.28 94	-0.0 525	-0.3 532	1	0.344	-0.19 52	0.45 75	-0.50 99	-0.04 97	0.16 35	-0.12 4	0.01 58	-0.21 07	-0.13 74	-0.29 83	-0.38 26	0.42 43	0.27 39	0.11	-0.42 7	0.20 96	0.11 59	-0.30 98	0.12	0.00	-0.0 319	0.02	0.21 16	0	0	0
Base	-0.5	-0.2		0.344	1	0.543	0.83	-0.63	-0.44	0.46	0.30	0.03		-0.74	-0.53	-0.76	0.19	0.75	0.47	-0.11	0.77	0.65	-0.75	0.25		0.10	ı	0.73	0	0	0
: Ry Base	-0.9	477 -0.1	755	-0.19	0.5/3	1	0.42	0.01	-0.62	93 0.79	0.31	-0.32	-0.61	-0.54	-0.16	-0.42	16 0.00	23 0.45	78 0.19	94	57 0.54	76 0.49	59 -0.57	29 0.27	-0.40	-0.0	829	79	0	0	0
: Rz	141	47	23	52	1	· ·	56	33	32	92	82	37	57	85	53	68	25	47	26	12	78	98	47	45	41	054	53	1	U		O
Link2	-0.4	-0.0	-0.4	0.457	0.833		1	-0.82	-0.47	0.44	0.02	-0.05		-0.49	-0.58	-0.77	0.50	0.61	0.34	-0.50	0.61	0.49	-0.75	0.36	-0.21	-0.0	0.00		0	0	0
: α Link2	341 0.04	0.29	309 0.30	-0.50	-0.63	6 0.013	-0.82	45 1	-0.04	0.01	-0.16	-0.41	0.48	19	92	0.77	73 -0.40	-0.60	-0.54	0.41	-0.56	-0.41	99 0.56	-0.07	-0.08	106 0.02	-0.0	-0.5	0	0	0
: A	6	28	47	99	82	3	45		72	56	13	87	25	6	99	25	02	86	9	63	48	65	78	79	56	29	189	774	ŭ	ŭ	
Link2 : D	0.54 61	-0.5 428	0.22 65	-0.04 97	-0.44 34	-0.62 32	-0.47 45	-0.04 72	1	-0.6	0.37 49	0.77 25	0.07 75	-0.01 77	-0.22 44	0.04 14	-0.30 19	0.04 76	0.35	0.28	-0.01 99	-0.06 61	0.32	-0.53 68	0.46	-0.0 081	0.00 63	0.07 79	0	0	0
Link2	-0.7	-0.1	_	0.163		0.799	0.44	0.01	-0.6	1	0.23	-0.37	-0.61	-0.49	-0.14	-0.44	0.15	0.45	0.11		0.51	0.45	-0.59	0.28	-0.38	-0.0	0.03		0	0	0
: θ	434	443	724	5	3	2	13	56			88	43	22	31	61	12	75	72	99	16	24	06	1	62	91	452	61	75			
Link3 : α	-0.3 287	-0.9 466	0.22	-0.12 4	0.306	0.318	0.02 49	-0.16 13	0.37 49	0.23 88	1	0.66 34	-0.74 78	-0.81 41	-0.59 94	-0.58 05	-0.34 47	0.74 65	0.76 44	0.42 65	0.77	0.66 72	-0.39 92	-0.32 95	0.07	-0.0 247	0.02	0.81 27	0	0	0
Link3	0.24	-0.7		0.015	0.032	-0.32	-0.05		0.77	-0.37	0.66	1	-0.28	-0.41		-0.39	-0.22	0.45	0.67	0.30	0.40	0.31	-0.01	-0.50	0.41	-0.0		0.49	0	0	0
: A	93	577	53	8	8	37	82	87	25	43	34	0.00	94	17	64	56	49	45	34	05	26	28	85	42	04	134	12	69			0
Link3 : D	0.61	0.73 48	0.09 48	-0.21 07	-0.72 64	-0.61 57	-0.58 86	0.48 25	0.07 75	-0.61 22	-0.74 78	-0.28 94	1	0.93	0.74 39	0.88 17	0.04 37	-0.91 3	-0.77 11	-0.08 11	-0.96 72	-0.78 01	85	-0.01 63	0.15 94	0.00 89	-0.0 087	-0.9 553	0	0	0
Link3	0.54	0.78	0.04	-0.13	-0.74	-0.54	-0.49		-0.01	-0.49	-0.81	-0.41	0.93	1	0.66	0.83	0.08	-0.94		-0.15	-0.97	-0.83		0.03	0.13	0.00	-0.0	-0.9	0	0	0
: θ Link4	0.22	73 0.69	0.09	-0.29	-0.53	-0.16	-0.58	0.77	-0.22	-0.14	-0.59	-0.59	0.74	0.66	99	74 0.86	75 -0.05	-0.72	-0.88	0.05	-0.76	-0.58	17 0.61	91 0.04	-0.07	58 0.00	-0.0	761 -0.7	0	0	0
: α	56	5	97	83	01	53	92	99	44	61	94	64	39	99	'	93	76	07	07	52	19	57	99	21	81	27	035	902	Ü		١
Link4		0.63	0.20	-0.38	-0.76	-0.42	-0.77	0.77	0.04	-0.44	-0.58			0.83	0.86	1	-0.23	-0.90			-0.89	-0.65		0.03		0.00	-0.0	-0.9	0	0	0
: A Link4	-0.0	91 0.25	-0.3	26 0.424	0.191	68 0.002	0.50	-0.40	-0.30	12 0.15	-0.34	-0.22	0.04	0.08	93 -0.05	-0.23	32 1	36 0.16	-0.28	-0.87	-0.01	94 0.14	-0.33	91 0.45	-0.18	27 0.02	-0.0	159 -0.0	0	0	0
: D	221	58	503	3	6	5	73	02	19	75	47	49	37	75	76	32		11	98	39	01	52	04	57	12	86	222	161			
Link4 : θ	-0.4 661	-0.7 571	-0.1 277	0.273	0.752	0.454 7	0.61 49	-0.60 86	0.04 76	0.45 72	0.74 65	0.45 45	-0.91	-0.94 18	-0.72 07	-0.90 36	0.16 11	1	0.72	-0.03 82	0.95	0.82 54	-0.76 42	-0.03 31	-0.08 44	0.04	-0.0 311	0.97 22	0	0	0
Link5	-0.2	-0.8		0.118	-	0.192	0.34	-0.54	0.35	0.11	0.76	0.67	-0.77	-0.74	-0.88	-0.77	-0.28	0.72	1	0.36	0.76	0.52	-0.43	-0.29	0.08	0.17	-0.1	0.82	0	0	0
: α	372	107	53	2	8	6	5	9	53	99	44	34	11	39	07	15	98	34		67	35	91	96	87	96	14	319	17			
Link5 : A	-0.0 35	-0.3 076	0.36	-0.42 7	-0.11 94	0.061	-0.50 04	0.41 63	0.28	-0.07 16	0.42 65	0.30	-0.08	-0.15 94	0.05 52	0.16 21	-0.87 39	-0.03 82	0.36	1	0.04	-0.08 82	0.36	-0.52 48	0.21 69	0.28 96	-0.2 253	0.09	0	0	0
Link5	-0.5	-0.7	-0.0	0.209	0.775	0.547	0.61	-0.56	-0.01	0.51	0.77	0.40	-0.96	-0.97	-0.76	-0.89	-0.01	0.95	0.76	0.04	1	0.86	-0.82	0.04	-0.14	-0.0	0.04		0	0	0
: D Link5	532 -0.5	613 -0.6	917	6 0.115	7 0.657	8 0.499	0.49	48	99 -0.06	24 0.45	22 0.66	26 0.31	72 -0.78	56 -0.83	19 -0.58	41	0.14	7	35 0.52	-0.08	0.86	04	-0.88	18 0.41	52 -0.40	511 -0.0	16 0.01	61	0	0	0
: θ	027	265	541	9	6	8	12	65	61	0.43	72	28	01	41	57	94	52	54	91	82	0.00	'	23	0.41	91	176	53	0.01	U	١	U
Link6	0.57	0.39	0.23	-0.30	-0.75	-0.57	-0.75		0.32	-0.59	-0.39	-0.01		0.73	0.61		-0.33	-0.76			-0.82	-0.88	1	-0.57		0.07	-0.0	-0.7	0	0	0
: α Link6	-0.2	74 0.35	76 -0.2	98	59 0.252	47 0.274	99	78 -0.07	-0.53	0.28	92 -0.32	-0.50	-0.01	0.03	99	0.03	04	-0.03	96	-0.52	0.04	23 0.41	-0.57	08	-0.64	87 0.00	628 -0.0	421 -0.0	0	0	0
: A	624	67	095	8	9	5	37	79	68	62	95	42	63	91	21	91	57	31	87	48	18	08	08	-	43	44	033	865			
Link6 : D	0.37	-0.1 503	0.09	0.003	-0.25 49	-0.40 41	-0.21 69	-0.08 56	0.46 31	-0.38 91	0.07	0.41 04	0.15 94	0.13	-0.07 81	0.01 37	-0.18 12	-0.08 44	0.08 96	0.21 69	-0.14 52	-0.40 91	0.46 24	-0.64 43	1	0.00 53	-0.0 044	-0.0 638	0	0	0
Tool:	0.00	0.05	-0.0	-0.03	0.108	-0.00	-0.01	0.02	-0.00	-0.04	-0.02	-0.01		0.00	0.00	0.00	0.02	0.04	0.17	0.28	-0.05	-0.01	0.07	0.00	0.00	1	-0.5	-0.0	0	0	0
X	68	55	032	19	3	54	06	29	81	52	47	34	89	58	27	27	86	23	14	96	11	76	87	44	53		784	001			
Tool:	-0.0 064	-0.0 446	0.00	0.025	-0.08 29	0.005	0.00 94	-0.01 89	0.00 63	0.03	0.02	0.01 12	-0.00 87	-0.00 63	-0.00 35	-0.00 38	-0.02 22	-0.03 11	-0.13 19	-0.22 53	0.04	0.01 53	-0.06 28	-0.00 33	-0.00 44	-0.5 784	1	0.00 19	0	0	0
Tool:	-0.4	-0.8		0.211		0.481	0.56	-0.57	0.07	0.44	0.81	0.49	-0.95	-0.97	-0.79		-0.01	0.97	0.82		0.98	0.81		-0.08	-0.06		0.00		0	0	0
Z	939	175	717	6	9	0	87	74	79	75	27	69	53	61	02	59	61	22	17	16	61	02	21	65	38	001	19	0	_		0
Tool: Rx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tool: Ry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tool: Rz	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TVZ																				1				<u> </u>							