



MODIFICATION OF SUBCONTRACT / PURCHASE ORDER

1. MODIFICATION # 017	2. EFFECTIVE DATE: See Item 11c.	3. SUBCONTRACT # JSA-15-C0587	4. REQUISITION # 368861, 368863
5. NAME & ADDRESS OF SUBCONTRACTOR RI Research Instruments, GmbH Friedrich-Ebert-Str.1, 51429 Bergisch Gladbach, Germany		6. ISSUED AND ADMINISTERED BY: Jefferson Science Associates, LLC 628 Hofstadter Rd. (Suite 5) Newport News, VA 23606 ATTENTION: Procurement Department	
7. ACCOUNTING AND APPROPRIATION DATA L2CP02.LCLS2.43-042			

8. THE PURPOSE OF THIS MODIFICATION IS TO:
Provide phased funding for upcoming subcontract milestones

IMPORTANT: SUBCONTRACTOR IS NOT REQUIRED TO SIGN THIS MODIFICATION.
 SUBCONTRACTOR IS REQUIRED TO SIGN AND RETURN (1) COPY OF MODIFICATION TO ISSUING OFFICE.

9. DESCRIPTION OF MODIFICATION

This modification:

- Provides phased funding for the following MOD013 subcontract milestones
 - 32+3 Cavities: Milestones 56-67, Total \$2,649,500.00
 - Additional Material: Milestones 68-73, Total \$4,305,575.25
- Increases the subcontract funding by \$6,955,075.025 from \$15,540,781.60 to \$22,495,856.85 in accordance with the attached Mod 017 Milestone Schedule.
- The subcontract value remains at \$24,065,448.60.
- There are no other changes to this subcontract.

10A. NAME/TITLE OF SIGNER Michael Peiniger Hanspeter Vogel Managing Director Managing Director		11A. NAME/TITLE OF PROCUREMENT REPRESENTATIVE Lynn McKnight, Procurement Manager	
10B. SUBCONTRACTOR (PERSON AUTHORIZED TO SIGN) 		11B. JSA/TJNAF SIGNATURE	
10C. DATE SIGNED 08- June 2017	10D. TELEPHONE +49 2204 7062 2500	11C. DATE SIGNED 06/13/2017	11D. TELEPHONE (757) 269-7603

PD 4 (Rev. 6/06)

MOD 017 MILESTONE SCHEDULE

Line #	Description	Due Date	Milestone Amount	Funded Amount
1	Proof of equipment order furnace uprade	9/1/15	\$ 157,470.00	\$ 157,470.00
2	Proof of completed furnace uprade	11/1/15	\$ 157,470.00	\$ 157,470.00
3	JLab Accept Ni Doping - Cavity 1 (of 2)	12/1/15	\$ 104,980.00	\$ 104,980.00
4	JLab Accept Ni doping - Cavity 2 (of 2)	2/28/16	\$ 104,980.00	\$ 104,980.00
5	Ph II: Manufacturing Drawings Accepted	12/4/15	\$ 317,520.00	\$ 317,520.00
6	PH II: First Article Cavities Mech Pre-Fab	12/11/15	\$ 423,360.00	\$ 423,360.00
7	PH III: Mech Pre-Fab Cavities (9-72)	9/30/16	\$ 1,607,500.00	\$ 1,607,500.00
8	PH III: Mech Pre-Fab Cavities (73-133)	3/31/16	\$ 1,446,750.00	\$ 1,446,750.00
9	PH II: First Articles Deliver & Accept (1-8)	8/25/16	\$ 317,520.00	\$ 317,520.00
10	PH III: Deliver & Accept Cavities (9-12)	12/15/16	\$ 160,750.00	\$ 160,750.00
11	PH III: Deliver & Accept Cavities (13-16)	1/3/17	\$ 160,750.00	\$ 160,750.00
12	PH III: Deliver & Accept Cavities (17-20)	1/11/17	\$ 160,750.00	\$ 160,750.00
13	PH III: Deliver & Accept Cavities (21-24)	1/19/17	\$ 160,750.00	\$ 160,750.00
14	PH III: Deliver & Accept Cavities (25-28)	1/27/17	\$ 160,750.00	\$ 160,750.00
15	PH III: Deliver & Accept Cavities (29-32)	2/6/17	\$ 160,750.00	\$ 160,750.00
16	PH III: Deliver & Accept Cavities (33-36)	2/14/17	\$ 160,750.00	\$ 160,750.00
17	PH III: Deliver & Accept Cavities (37-40)	2/22/17	\$ 160,750.00	\$ 160,750.00
18	PH III: Deliver & Accept Cavities (41-44)	3/2/17	\$ 160,750.00	\$ 160,750.00
19	PH III: Deliver & Accept Cavities (45-48)	3/10/17	\$ 160,750.00	\$ 160,750.00
20	PH III: Deliver & Accept Cavities (49-52)	3/20/17	\$ 160,750.00	\$ 160,750.00
21	MOD 002: DESY Equip Refurbishment	4/18/16	\$ 90,800.00	\$ 90,800.00
22	MOD 002: DESY Equip Service & Support Costs	6/19/17	\$ 49,696.00	\$ 49,696.00
23	MOD 003: Accel Shipment (1-16) Incentives (Max of \$323,136)	10/10/16	\$ 323,136.00	\$ 323,136.00
24	MOD 004: Incentives for Accelerated Production Deliveries	7/17/17	\$ 246,240.00	\$ 246,240.00
25	MOD 005: DESY Equipment Lease (\$9,200/ month)	7/17/17	\$ 147,200.00	\$ 147,200.00
26	PH III: Deliver & Accept Cavities (53-56)	3/28/17	\$ 160,750.00	\$ 160,750.00
27	PH III: Deliver & Accept Cavities (57-60)	4/5/17	\$ 160,750.00	\$ 160,750.00
28	PH III: Deliver & Accept Cavities (61-64)	4/13/17	\$ 160,750.00	\$ 160,750.00
29	PH III: Deliver & Accept Cavities (65-68)	4/21/17	\$ 160,750.00	\$ 160,750.00
30	PH III: Deliver & Accept Cavities (69-72)	5/1/17	\$ 160,750.00	\$ 160,750.00
31	PH III: Deliver & Accept Cavities (73-76)	5/9/17	\$ 160,750.00	\$ 160,750.00
32	PH III: Deliver & Accept Cavities (77-80)	5/17/17	\$ 160,750.00	\$ 160,750.00
33	PH III: Deliver & Accept Cavities (81-84)	5/25/17	\$ 160,750.00	\$ 160,750.00
34	PH III: Deliver & Accept Cavities (85-88)	6/2/17	\$ 160,750.00	\$ 160,750.00
35	PH III: Deliver & Accept Cavities (89-92)	6/12/17	\$ 160,750.00	\$ 160,750.00
36	PH III: Deliver & Accept Cavities (93-96)	6/20/17	\$ 160,750.00	\$ 160,750.00
37	PH III: Deliver & Accept Cavities (97-100)	6/28/17	\$ 160,750.00	\$ 160,750.00
38	PH III: Deliver & Accept Cavities (101-104)	7/6/17	\$ 160,750.00	\$ 160,750.00
39	PH III: Deliver & Accept Cavities (105-108)	7/14/17	\$ 160,750.00	\$ 160,750.00
40	PH III: Deliver & Accept Cavities (109-112)	7/24/17	\$ 160,750.00	\$ 160,750.00
41	PH III: Deliver & Accept Cavities (113-116)	8/1/17	\$ 160,750.00	\$ 160,750.00
42	PH III: Deliver & Accept Cavities (117-120)	8/9/17	\$ 160,750.00	\$ 160,750.00
43	PH III: Deliver & Accept Cavities (121-124)	8/17/17	\$ 160,750.00	\$ 160,750.00
44	PH III: Deliver & Accept Cavities (125-128)	8/25/17	\$ 160,750.00	\$ 160,750.00
45	PH III: Deliver & Accept Cavities (129-133)	9/19/17	\$ 160,750.00	\$ 160,750.00
46	MOD 007: LCLS-II R&D Cavities (4)	9/1/16	\$ 38,000.00	\$ 38,000.00
47	MOD 008: CTM Spare Parts	9/30/16	\$ 71,500.00	\$ 71,500.00
48	MOD 009: Recipe Modification (Cavities 21-133)	9/19/17	\$ 484,000.00	\$ 484,000.00
49	MOD 010: Niobium Caps \$494.02/ea (Cavs 17-133)	9/19/17	\$ 57,800.00	\$ 57,800.00
50	MOD 010: Ningxia Material Sorting	2/28/17	\$ 21,335.00	\$ 21,335.00
51	MOD 011: Optional Cavities 1-8 (134-141)	11/24/17	\$ 499,817.60	\$ 499,817.60
52	MOD 012: DESY Testing 4X RF Tests	6/2/17	\$ 129,500.00	\$ 129,500.00
53	MOD 012: Add DESY Testing Costs (Not to Exceed)	9/19/17	\$ 58,240.00	\$ 58,240.00
54	MOD013: 32+3 - Material Supply, 1st lot	27-Jun-17	\$ 658,681.00	\$ 658,681.00

55	MOD013: 32+3 - Material Supply, 2nd lot	18-Jul-17	\$ 658,681.00	\$ 658,681.00
56	MOD013: 32+3 - DESY QA of 1st material lot	15-Jul-17	\$ 69,750.00	\$ 69,750.00
57	MOD013: 32+3 - DESY Q of 2nd material lot	15-Aug-17	\$ 69,750.00	\$ 69,750.00
58	MOD013: 32+3 - Deliver & Accept 4 Cavities	1-May-18	\$ 299,200.00	\$ 299,200.00
59	MOD013: 32+3 - Deliver & Accept 4 Cavities	8-May-18	\$ 299,200.00	\$ 299,200.00
60	MOD013: 32+3 - Deliver & Accept 4 Cavities	15-May-18	\$ 299,200.00	\$ 299,200.00
61	MOD013: 32+3 - Deliver & Accept 4 Cavities	22-May-18	\$ 299,200.00	\$ 299,200.00
62	MOD013: 32+3 - Deliver & Accept 4 Cavities	29-May-18	\$ 299,200.00	\$ 299,200.00
63	MOD013: 32+3 - Deliver & Accept 4 Cavities	5-Jun-18	\$ 299,200.00	\$ 299,200.00
64	MOD013: 32+3 - Deliver & Accept 4 Cavities	12-Jun-18	\$ 299,200.00	\$ 299,200.00
65	MOD013: 32+3 - Deliver & Accept 4 Cavities	19-Jun-18	\$ 299,200.00	\$ 299,200.00
66	MOD013: 32+3 - Deliver & Accept 2 Single Cell Cavities	19-Jun-18	\$ 23,400.00	\$ 23,400.00
67	MOD013: 32+3 - Lease/Maintenance DESY Equipment	26-Mar-19	\$ 93,000.00	\$ 93,000.00
68	MOD013: Add Mat'l - Material Supply, 1st lot	7-Nov-17	\$ 1,299,466.75	\$ 1,299,466.75
69	MOD013: Add Mat'l - DESY QA of 1st material lot	2-Jan-18	\$ 135,725.00	\$ 135,725.00
70	MOD013: Add Mat'l - Material Supply, 2nd lot	27-Feb-18	\$ 1,299,466.75	\$ 1,299,466.75
71	MOD013: Add Mat'l - DESY QA of 2nd material lot	24-Apr-18	\$ 135,725.00	\$ 135,725.00
72	MOD013: Add Mat'l - Material Supply, 3rd lot	19-Jun-18	\$ 1,299,466.75	\$ 1,299,466.75
73	MOD013: Add Mat'l - DESY QA of 3rd material lot	14-Aug-18	\$ 135,725.00	\$ 135,725.00
74	MOD013: Add Mat'l - Material Supply, 4th lot	9-Oct-18	\$ 1,299,466.75	\$ -
75	MOD013: Add Mat'l - DESY QA of 4th material lot	4-Dec-18	\$ 135,725.00	\$ -
76	MOD013: Add Mat'l - Storage of material for up to 6 months	11-Jun-19	\$ 4,500.00	\$ -
77	MOD013: Add Mat'l - Package and air shipment of material	4-Dec-18	\$ 52,300.00	\$ -
78	MOD013: Add Mat'l - Deliver & Accept 1-Cell Cavites (Lot 1)	24-Apr-18	\$ 19,400.00	\$ -
79	MOD013: Add Mat'l - Deliver & Accept 1-Cell Cavites (Lot 2)	14-Aug-18	\$ 19,400.00	\$ -
80	MOD013: Add Mat'l - Deliver & Accept 1-Cell Cavites (Lot 3)	4-Dec-18	\$ 19,400.00	\$ -
81	MOD013: Add Mat'l - Deliver & Accept 1-Cell Cavites (Lot 4)	26-Mar-19	\$ 19,400.00	\$ -
82	MOD014: Supply & QC of 320 TD Sheets	9-Sep-17	\$ 492,989.00	\$ 492,989.00
83	MOD015: Acceptance of Optional Cavities (9-16)	5-Jan-17	\$ 499,816.00	\$ 499,816.00
84	MOD015: Incentive- Accelerated Delivery \$5K/ cavities (9-16)	31-Jan-18	\$ 40,000.00	\$ 40,000.00
85	MOD016: Transport Excess Zanon Cavity Materials to R1	30-May-17	\$ 6,150.00	\$ 6,150.00
86	MOD016: Delivery & Accept TD Cavities (Zanon Material 1-4 of 18)	15-Jan-18	\$ 299,200.00	\$ 299,200.00
87	MOD016: Delivery & Accept 4 TD Cavities (Zanon Material 5-8 of 18)	22-Jan-18	\$ 299,200.00	\$ 299,200.00
88	MOD016: Delivery & Accept 4 TD Cavities (Zanon Material 9-12 of 18)	29-Jan-18	\$ 299,200.00	\$ 299,200.00
89	MOD016: Delivery & Accept 4 TD Cavities (Zanon Material 13-16 of 18)	5-Feb-18	\$ 299,200.00	\$ 299,200.00
90	MOD016: Delivery & Accept 2 TD Cavities (Zanon Material 17-18 of 18)	12-Feb-18	\$ 149,600.00	\$ 149,600.00
			\$ 24,065,448.60	\$ 22,495,856.85
NOTE 1:	Milestones (in gray) are complete.			
NOTE 2:	MOD017 provides funding for milestones 56-73.			