VENDOR HOT ISOSTAIC PRESSING .4605 NW Pacific Rim Blvd. . CAMAS . WASHINGTON . 98607 . TEL 360.833.1120 . FAX 360.834.2450 . www.bodycote.com

## **Certification**

Customer: GE Aviation VENDOR Run Number: 519-19

Date: 01/13/2019

Customer Purchase Order Number: 1BP5797 ORDER ROM19-67

This is to certify that the material referenced by the above P.O. was processed in compliance with all customer requirements excluding metallurgical testing not completed by Bodycote HIP Camas, WA. The following documents were adhered to:

Customer Specification: Process Parameters: 115°F ±2 x 1,725psi +25/-24 x 12mirs +10/-0 C50 F15Rev S1 Class B

Bodycote HIP Camas, WA does not employ the use of Mercury or Radioactive Luminescent Material during processing. "Material furnished on this order has not come in direct contact with Mercury or any of its compounds, nor with any Mercury containing device not employing a double boundary containment."

Any deviations associated with the above referenced run are noted below:

We certify that physical, electrical and / or inspection records are on file for examination. Measuring and recording devices used in the processing of this material have been calibrated using ISO 10012-1 and are traceable to N.I.S.T. "NOTE: The recording of false, fictitious or fraudulent statement or entries on this document may be punished as a felony under Federal Statutes including Federal Law, Title 18, Chapter 47."

Ву:		VENDOR HIF
	Lava Laante, Quality Assistant	-

## **VENDOR HIP**

## **Process Gas Analysis**

Hip #: 51219-19

Date: 10/10/19

Date. 10/	10/10				- Me	asured	in Parts	Per Mil	lion -	
Proces	s State	Pressur e (PSI)	D.P.°F	H <sub>2</sub> O	CO <sub>2</sub>	H2	<b>O</b> 2	N2	CH4	СО
Vessel Pr	e-Check	450	-116	0.4	BDL	9.9	4.1	4	BDL	BDL
Equalizat	ion	7300	-108	0.8	BDL	10.1	3.1	BDL	BDL	BDL
At Tempe	rature	14750	-104	1.1	BDL	10.2	3.3	6.9	BDL	BDL
Cool		13500	-106	0.9	BDL	9.1	3	5.2	BDL	0.1
Vent		9000	-89	3.8	BDL	6.2	3.1	5.2	1.2	BDL
Other										
Input Gas Levels Allowable	Medical Grade		-65°F	24	N/A	2	10	20	5	15
Input Gas Levels Allowable	Grade 1		-65°F	24	5	125	5	15	5	10
Input Gas Levels Allowable	Grade 2		-40°F	128	20	N/A	20	100	30	100
Pre-Check Levels Allowable	HZLM 603802		-87°F	5	5	30	5	15	5	10
Exhaust Gas Levels Allowable	HZLM 603802		-77°F	10	10	125	5	50	10	20
Exhaust Gas Levels Allowable	ITP SPE-009		-65°F	24	N/A	125	25	50	25	N/A

Reclaim:

Vessel Pre-Check:

Equalization:

At Temperature:

Cool: Vent:

THC:

Note: Medical grade limits are for individual components. Total Impurities shall not exceed 30 PPM

Note: Grade 1 gas, limits are for individual components.

Note: Total Impurities shall not exceed 100 PPM. Gas Purity will be 99.995% or better.

Note: Dew point readings are taken at 30 PSIG.

 Cycle #:
 51219-19
 Furnace:
 5

 Started:
 09:00:07 10/10/2019
 Base:
 3

 Completed:
 19:57:42 10/10/2019
 Layers:
 3

		Centerline	OD		
TC#	Lot	Location	Location	Layer	Notes
1	BC-N-18-061	114			
2	BC-N-18-061		114		
3	BC-N-18-061		114	3	
4	BC-N-18-061	88			
5	BC-N-18-061		88		
6	BC-N-18-061	52			
7	BC-N-18-061		52		
8	BC-N-18-061	29		2	
9	BC-N-18-061		26		
10	BC-N-18-061		26		
11	BC-N-18-061	22			
12	BC-N-18-061		22		
13	BC-N-18-061		22	1	
14	BC-N-18-061	1			
15	BC-N-18-061		1		

Load TC's measured from the bottom up in inches.

E = Erratic / D = Disregarded / O = Open

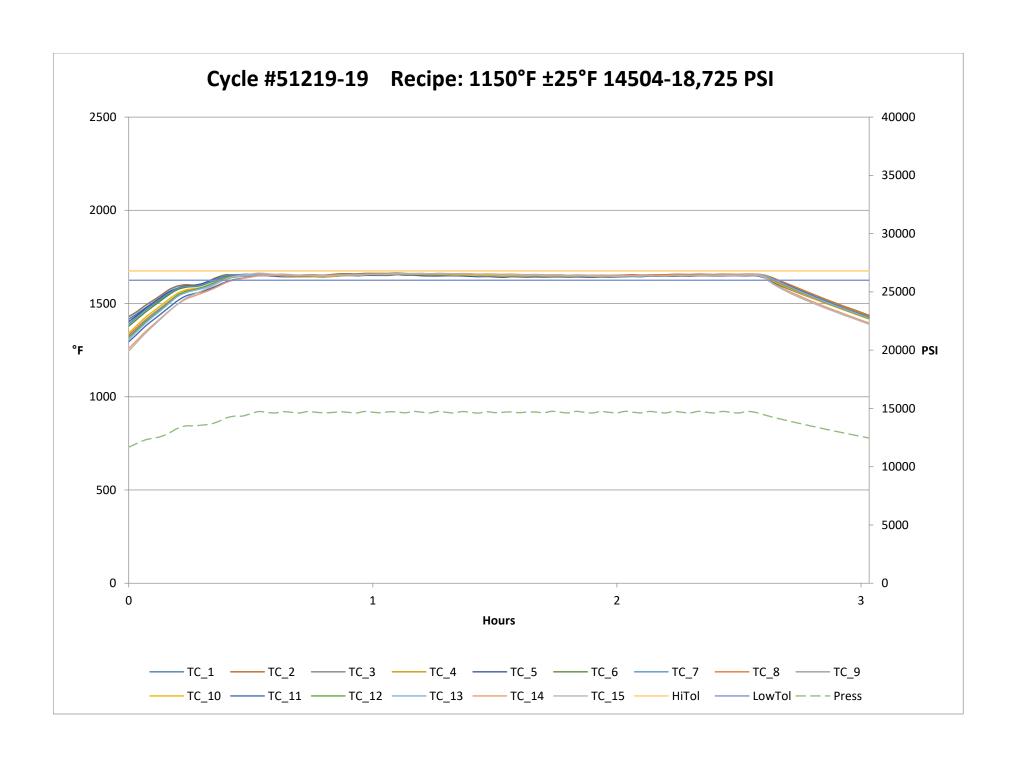
Thermocouples marked with an 'E' (Erratic), 'D' (Disregarded) or an 'O' (Open) means those specific thermocouples were disregarded for the cycle.

						QUANTIT'	Y / BUILD		TEAR DOWN
	PART#	LOT#	SEQ#	REV#	COUNT	TM	LAYER	STAMP	STAMP
1	BLOCK	5.8 X 0.6 X 4.1			1	0	1	BHIP 372	BHIP 269
2	BLANKS	4.1 X 0.6 X 0.6			8	0	1	BHIP 273	BHIP 269

Rerun of Abort 1 - Cycle #515-19

DO NOT WRAP PARTS IN SS FOIL.

ADN# 5153512SAB1E



UNIT OF MEASURE FOR THERMOCOUPLES = F UNIT OF MEASURE FOR VACUUM = MICRONS

**BHIP** 

QC 8

Recipe: Recipe: 11F ±25°F 14504-1825 PSI

51219-19

Date:

Hip:

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
09:00:02	104	100	100	96	97	113	112	122	110	112	126	118	119	117	103	-0.355	10364
09:02:02	103	99	99	95	97	112	111	121	110	111	124	117	118	116	103	-14.35	10364
09:04:02	102	99	99	95	96	111	110	121	109	110	124	116	118	116	102	-15.87	736.8
09:06:02	102	99	99	95	97	111	110	120	109	110	125	116	118	116	102	-15.87	329.3
09:08:02	103	99	99	95	97	111		121	110	110	125	116	118	116	102	-15.57	315
09:10:02	103	99	99	96	97	111	11099	121	110	110	125	116	118	116	103	-15.87	311.1
09:12:02	103	99	100	96	97	111	109	121	110	110	125	116	118	116	103	-5.528	7397
09:14:02	107	102	103	98	98	116	115	122	111	113	128	120	121	117	103	54.41	10364
09:16:02	110	107	108	101	100	119	119	124	113	115	128	120	122	117	104	112.5	10364
09:18:02	113	112	112	105	103	121	122	126	115	116	128	121	122	117	104	170	10364
09:20:02	118	116	118	110	106	125	125	127	118	118	129	120	122	115	102	359.9	10364
09:22:02	131	129	133	121	117	133	134	132	123	123	127	123	124	113	100		10364
09:24:02	133	133	135	121	120	132	133	130	122	123	123	121	122	110	100	435.6	10364
09:26:02	134	133	135	121	120	130	130	128	121	122	121	120	121	108	100		10364
09:28:02	133	133	135	121	120	128	128	126	120	121	120	119	120	107	100		10364
09:30:02	133	133	134	120	120	127	127	125	119	120	118	118	119	107	100	442	10364
09:32:02	132	132	134	120	120	125	125	123	118	120	117	118	118	106	100	439.6	10364
09:34:02	132	132	133	120	119	124	124	122	117	119	116	117	117	106	100		10364
09:36:02	131	131	132	119	119	123	123	122	117	118	115	116	117	106	100	435	10364
09:38:02	130	131	132	119	119	123	122	121	116	118	115	116	116	105	101	432.6	10364
09:40:02	130	130	131	119	119	122	122	120	116	118	114	115	116	105	101		10364
09:42:02	130	129	131	119	118	121	121	119	116	117	114	115	115	105	101		
09:44:02	129	129	130	118	118	121	120	119	115	117	113	114	115	105	101		10364
09:46:02	129	128	130	118	118	120	120	118	115	117	113	114	114	105	101		10364
09:48:02	132	131	133	123	120	124	124	120	118	119	118	117	118	107	104		10364
09:50:02	154	149	153	141	135	140	143	129	131	131	126	127	128	112	107		10364
09:52:02	168	163	167	151	147	151	154	136	138	139	127	130	130	110	104	1155	10364
09:54:02	180	174	177	159	156	158	161	140	141	142	128	132	132	108	101	1356	10364
09:56:02	187	182	185	164	162	163	165	143	143	144	128	133	133	106	100	1511	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
09:58:02	192	187	190	168	166	166	167	144	144	145	128	134	133	105	99	1657	10364
10:00:02	196	192	195	172	170	168	170	146	145	146	129	134	134	103	98	1801	10364
10:02:02	200	196	199	175	173	171	172	147	146	147	129	135	135	103	97	1943	10364
10:04:02	204	200	203	177	176	173	174	149	147	148	130	136	136	102	97	2081	10364
10:06:02	207	204	207	180	178	176	177	150	148	149	130	137	137	101	96	2216	10364
10:08:02	211	208	210	182	181	178	179	151	149	150	131	138	137	101	96	2343	10364
10:10:02	215	212	215	186	184	181	182	154	152	153	135	140	140	104	98	2564	10364
10:12:02	227	222	227	204	198	194	194	171	170	171	156	158	159	128	122	2773	10364
10:14:02	241	234	240	221	215	211	211	192	190	191	176	178	180	154	147	2963	10364
10:16:02	256	248	254	237	232	227	227	210	208	210	194	197	199	175	167	3144	10364
10:18:02	268	260	265	252	247	242	242	227	225	227	211	214	216	194	185	3322	10364
10:20:02	280	273	277	267	262	256	256	243	241	243	227	230	232	211	202	3502	10364
10:22:02	292	286	290	281	277	270	270	258	256	257	242	245	248	227	217	3703	10364
10:24:02	318	317	320	312	307	302	308	282	282	281	269	273	277	255	243	4036	10364
10:26:02	356	362	364	351	348	342	350	318	318	317	305	310	314	290	275	4319	10364
10:28:02	391	401	402	388	385	378	386	354	353	353	339	347	349	323	307	4589	10364
10:30:02	424	436	437	422	420	413	421	389	387	387	373	381	383	356	339	4856	10364
10:32:02	459	472	473	458	455	446	455	423	421	421	405	413	416	388	371	5187	10364
10:34:02	517	530	532	510	508	495	506	465	463	463	445	455	456	427	408	5625	10364
10:36:02	582	593	594	571	566	551	563	514	512	513	492	501	504	470	448	6017	10364
10:38:02	641	652	652	625	621	604	615	565	562	564	537	549	552	513	489	6405	10364
10:40:02	695	707	706	675	671	653	663	614	609	613	580	596	597	555	531	6787	10364
10:42:02	742	756	755	722	719	699	709	661	654	660	624	640	638	596	572	7164	10364
10:44:02	791	802	802	767	764	743	753	705	699	705	667	682	679	636	613	7556	10364
10:46:02	840	851	851	812	810	788	792	749	742	750	708	722	721	676	653	7976	10364
10:48:02	894	905	905	864	864	839	848	797	790	797	756	774	769	723	698	8483	10364
10:50:02	955	967	966	923	923	895	905	850	843	851	806	828	821	772	748	8995	10364
10:52:02	1012	1026	1025	978	979	949	958	903	895	905	856	880	870	820	795	9507	10364
10:54:02	1061	1077	1077	1026	1030	999	1003	952	945	954	904	928	917	866	842	9760	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
10:56:02	1106	1121	1121	1071	1076	1046	1054	997	991	1000	949	974	965	912	888	10009	10364
10:58:02	1149	1164	1164	1114	1121	1089	1100	1041	1036	1045	995	1018	1010	956	934	10244	10364
11:00:02	1190	1205	1205	1156	1164	1133	1144	1084	1079	1090	1039	1062	1053	1000	978	10467	10364
11:02:02	1230	1245	1245	1196	1206	1175	1187	1126	1121	1132	1081	1106	1096	1042	1021	10681	10364
11:04:02	1268	1284	1283	1234	1246	1214	1228	1167	1161	1174	1123	1148	1138	1083	1064	10896	10364
11:06:02	1306	1323	1322	1274	1287	1259	1271	1209	1204	1218	1169	1193	1182	1130	1110	11111	10364
11:08:02	1345	1361	1360	1314	1328	1300	1312	1252	1246	1261	1212	1236	1224	1174	1157	11309	10364
11:10:02	1382	1396	1395	1352	1367	1340	1352	1292	1284	1302	1255	1277	1265	1217	1202	11495	10364
11:12:02	1416	1430	1429	1390	1403	1379	1390	1331	1324	1342	1295	1319	1307	1259	1245	11672	10364
11:14:02	1444	1457	1455	1427	1436	1415	1426	1371	1366	1383	1335	1359	1350	1303	1292	11994	10364
11:16:02	1475	1489	1488	1463	1472	1452	1463	1411	1407	1424	1377	1400	1392	1347	1338	12290	10364
11:18:02	1503	1517	1515	1495	1504	1485	1495	1446	1445	1458	1412	1436	1430	1386	1380	12444	10364
11:20:02	1530	1546	1543	1525	1534	1517	1526	1479	1479	1492	1446	1473	1465	1424	1420	12597	10364
11:22:02	1558	1576	1574	1556	1564	1549	1556	1513	1513	1525	1481	1509	1502	1462	1460	12903	10364
11:24:02	1580	1594	1592	1575	1582	1575	1580	1544	1543	1555	1515	1546	1538	1496	1497	13287	10364
11:26:02	1592	1601	1597	1587	1594	1588	1592	1566	1564	1573	1540	1564	1558	1523	1528	13501	10364
11:28:02	1591	1599	1595	1592	1597	1592	1594	1576	1574	1580	1553	1574	1570	1540	1549	13504	10364
11:30:02	1598	1606	1603	1602	1606	1598	1600	1583	1583	1587	1564	1586	1580	1556	1568	13569	10364
11:32:02	1618	1625	1623	1619	1621	1614	1617	1596	1597	1603	1580	1603	1596	1572	1589	13647	10364
11:34:02	1636	1643	1640	1636	1638	1631	1635	1613	1615	1621	1598	1623	1615	1592	1610	13871	10364
11:36:02	1644	1655	1652	1648	1650	1648	1651	1631	1632	1639	1617	1639	1634	1613	1632	14188	10364
11:38:02	1644	1652	1648	1651	1651	1652	1655	1642	1641	1646	1629	1645	1642	1626	1645	14334	10364
11:40:02	1646	1654	1650	1654	1656	1654	1655	1648	1647	1650	1636	1651	1648	1635	1652	14347	10364
11:42:02	1649	1656	1653	1657	1657	1656	1657	1652	1651	1653	1643	1654	1651	1642	1658	14550	10364 START
11:44:02	1656	1660	1657	1658	1656	1660	1660	1656	1656	1657	1649	1657	1655	1650	1663	14734	10364
11:46:02	1652	1656	1653	1655	1649	1656	1654	1656	1654	1654	1649	1656	1654	1650	1660	14650	10364
11:48:02	1648	1652	1648	1652	1646	1651	1649	1654	1651	1650	1648	1654	1652	1650	1657	14614	10364
11:50:02	1651	1654	1651	1652	1644	1650	1648	1654	1648	1647	1650	1653	1653	1653	1658	14720	10364
11:52:02	1650	1653	1651	1651	1644	1649	1647	1652	1646	1646	1649	1651	1651	1652	1655	14665	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
11:54:02	1650	1652	1650	1650	1643	1648	1646	1651	1645	1644	1648	1650	1650	1651	1653	14609	10364
11:56:02	1652	1655	1652	1651	1644	1649	1647	1651	1645	1645	1649	1651	1651	1652	1654	14732	10364
11:58:02	1652	1654	1652	1650	1643	1649	1646	1650	1644	1643	1649	1649	1649	1652	1652	14671	10364
12:00:02	1651	1653	1651	1650	1642	1648	1646	1650	1644	1644	1649	1649	1648	1651	1651	14626	10364
12:02:02	1652	1656	1653	1652	1646	1649	1648	1650	1645	1645	1649	1649	1649	1651	1650	14652	10364
12:04:02	1657	1660	1658	1655	1650	1653	1652	1653	1648	1649	1651	1653	1652	1653	1653	14713	10364
12:06:02	1657	1660	1658	1656	1651	1655	1653	1654	1650	1651	1652	1654	1653	1653	1653	14660	10364
12:08:02	1656	1659	1657	1655	1649	1654	1652	1654	1651	1651	1652	1655	1654	1653	1653	14610	10364
12:10:02	1659	1662	1659	1657	1651	1656	1655	1656	1653	1653	1655	1658	1657	1656	1656	14736	10364
12:12:02	1659	1662	1659	1658	1651	1657	1655	1657	1654	1654	1655	1659	1658	1657	1656	14676	10364
12:14:02	1659	1662	1659	1659	1651	1657	1655	1658	1654	1654	1656	1659	1658	1657	1656	14628	10364
12:16:02	1659	1662	1660	1659	1651	1658	1656	1658	1655	1655	1657	1660	1659	1658	1657	14712	10364
12:18:02	1661	1664	1662	1661	1655	1660	1658	1660	1657	1657	1658	1661	1661	1660	1659	14692	10364
12:20:02	1659	1661	1658	1660	1652	1659	1656	1660	1656	1656	1658	1661	1660	1659	1659	14627	10364
12:22:02	1658	1660	1657	1659	1652	1658	1656	1660	1656	1656	1659	1661	1660	1660	1660	14744	10364
12:24:02	1657	1659	1656	1658	1649	1658	1655	1660	1656	1656	1659	1661	1661	1661	1660	14677	10364
12:26:02	1654	1656	1653	1656	1648	1656	1653	1659	1654	1654	1658	1660	1659	1660	1659	14613	10364
12:28:02	1654	1657	1654	1656	1648	1656	1654	1660	1655	1655	1659	1661	1661	1661	1660	14742	10364
12:30:02	1653	1656	1653	1656	1649	1656	1653	1659	1655	1655	1659	1660	1660	1661	1660	14668	10364
12:32:02	1651	1654	1651	1655	1649	1654	1652	1658	1654	1653	1658	1659	1659	1660	1658	14608	10364
12:34:02	1653	1655	1652	1655	1648	1654	1652	1658	1654	1654	1659	1660	1660	1661	1659	14732	10364
12:36:02	1651	1654	1651	1654	1646	1653	1651	1657	1653	1652	1658	1659	1659	1660	1658	14658	10364
12:38:02	1650	1652	1649	1653	1644	1651	1648	1656	1650	1650	1656	1656	1656	1658	1656	14601	10364
12:40:02	1652	1654	1651	1653	1645	1652	1650	1656	1650	1650	1657	1657	1657	1659	1657	14714	10364
12:42:02	1649	1652	1649	1652	1643	1651	1648	1655	1650	1649	1656	1655	1655	1658	1655	14643	10364 1HF
12:44:02	1648	1650	1648	1650	1641	1649	1646	1654	1648	1648	1654	1654	1654	1657	1654	14669	10364
12:46:02	1651	1653	1651	1651	1644	1651	1648	1654	1649	1649	1655	1655	1655	1658	1654	14700	10364
12:48:02	1650	1652	1650	1651	1643	1650	1648	1653	1648	1648	1654	1653	1654	1656	1652	14636	10364
12:50:02	1649	1651	1648	1650	1642	1649	1647	1653	1648	1648	1653	1653	1653	1655	1651	14692	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
12:52:02	1651	1653	1650	1651	1643	1651	1648	1653	1649	1649	1653	1654	1654	1656	1652	14691	10364
12:54:02	1648	1651	1648	1650	1642	1650	1647	1653	1648	1648	1652	1652	1652	1654	1650	14624	10364
12:56:02	1648	1651	1648	1650	1643	1650	1647	1653	1648	1648	1652	1653	1653	1654	1651	14751	10364
12:58:02	1649	1651	1648	1650	1643	1650	1648	1653	1648	1648	1652	1653	1653	1654	1650	14678	10364
13:00:02	1647	1650	1647	1650	1642	1649	1646	1652	1648	1647	1651	1652	1652	1652	1649	14616	10364
13:02:02	1648	1651	1649	1650	1643	1650	1647	1652	1648	1648	1652	1653	1652	1653	1650	14745	10364
13:04:02	1648	1651	1648	1650	1642	1650	1647	1652	1648	1648	1651	1652	1652	1653	1649	14669	10364
13:06:02	1646	1649	1646	1648	1641	1648	1645	1651	1647	1646	1650	1651	1651	1651	1648	14610	10364
13:08:02	1648	1651	1648	1650	1643	1649	1647	1651	1647	1647	1651	1652	1652	1653	1649	14739	10364
13:10:02	1649	1652	1650	1650	1642	1649	1647	1651	1647	1647	1650	1651	1651	1652	1648	14669	10364
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13:14:02	1651	1654	1652	1652	1644	1650	1648	1651	1647	1648	1651	1651	1651	1652	1648	14748	10364
13:16:02	1652	1655	1652	1652	1645	1651	1649	1652	1648	1648	1650	1651	1651	1652	1648	14675	10364
13:18:02	1651	1653	1650	1651	1644	1651	1648	1652	1648	1648	1650	1651	1651	1650	1647	14614	10364
13:20:02	1652	1654	1652	1652	1647	1652	1650	1653	1649	1649	1651	1652	1652	1652	1649	14742	10364
13:22:02	1652	1655	1652	1653	1646	1652	1650	1653	1649	1649	1651	1652	1652	1652	1648	14668	10364
13:24:02	1651	1655	1652	1653	1646	1652	1649	1653	1649	1649	1651	1651	1651	1651	1647	14613	10364
13:26:02	1654	1657	1655	1654	1646	1653	1651	1654	1650	1650	1652	1653	1653	1653	1649	14741	10364
13:28:02	1654	1657	1654	1654	1647	1653	1651	1654	1650	1650	1652	1653	1653	1653	1649	14669	10364
13:30:02	1653	1656	1654	1654	1646	1653	1650	1654	1650	1650	1651	1652	1652	1652	1648	14614	10364
13:32:02	1655	1658	1656	1655	1648	1654	1652	1655	1651	1651	1653	1654	1654	1653	1649	14746	10364
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13:38:02	1655	1658	1655	1656	1648	1655	1653	1656	1652	1652	1654	1655	1655	1654	1650	14743	10364
13:40:02	1654	1657	1654	1656	1649	1655	1653	1656	1652	1652	1654	1655	1655	1654	1650	14668	10364
13:42:02	1653	1656	1654	1655	1648	1655	1652	1656	1651	1652	1653	1654	1654	1653	1649		10364 2
13:44:02	1655	1658	1655	1656	1649	1656	1654	1657	1653	1653	1655	1656	1656	1655	1652		
13:46:02	1654	1657	1654	1656	1649	1656	1653	1657	1653	1653	1655	1656	1656	1655	1651	14666	10364 E
13:48:02	1645	1645	1641	1648	1640	1652	1649	1654	1647	1645	1653	1653	1653	1646	1642	14470	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
13:50:02	1625	1621	1615	1629	1619	1638	1633	1641	1628	1624	1637	1632	1635	1613	1610	14279	10364
13:52:02	1608	1602	1596	1611	1601	1621	1616	1623	1608	1603	1617	1610	1614	1589	1584	14109	10364
13:54:02	1592	1584	1579	1594	1584	1603	1598	1606	1590	1584	1598	1590	1594	1568	1562	13943	10364
13:56:02	1575	1567	1562	1577	1567	1586	1581	1588	1571	1566	1578	1571	1575	1549	1541	13784	10364
13:58:02	1558	1550	1545	1560	1550	1568	1564	1570	1553	1548	1560	1553	1556	1530	1522	13627	10364
14:00:02	1542	1533	1529	1543	1533	1551	1547	1552	1536	1531	1541	1535	1538	1511	1504	13471	10364
14:02:02	1526	1517	1512	1526	1517	1534	1530	1534	1518	1513	1523	1517	1520	1494	1486	13319	10364
14:04:02	1509	1501	1496	1510	1500	1517	1513	1517	1501	1497	1506	1500	1503	1476	1469	13169	10364
14:06:02	1493	1485	1481	1493	1484	1501	1497	1500	1485	1480	1489	1483	1486	1460	1453	13022	10364
14:08:02	1478	1469	1465	1477	1468	1484	1481	1483	1469	1464	1472	1467	1470	1443	1436	12878	10364
14:10:02	1462	1454	1450	1462	1452	1469	1465	1467	1452	1448	1456	1451	1454	1427	1421	12737	10364
14:12:02	1446	1438	1435	1446	1437	1453	1449	1451	1437	1432	1440	1435	1438	1411	1405	12597	10364
14:14:02	1432	1423	1420	1431	1422	1437	1434	1435	1421	1417	1424	1419	1422	1396	1389	12461	10364
14:16:02	1417	1409	1405	1416	1407	1422	1419	1420	1406	1401	1408	1404	1407	1380	1375	12328	10364
14:18:02	1402	1394	1391	1401	1392	1407	1404	1404	1391	1386	1393	1389	1392	1365	1360	12198	10364
14:20:02	1387	1380	1376	1386	1377	1392	1389	1389	1376	1371	1378	1374	1377	1351	1345	12066	10364
14:22:02	1373	1366	1362	1371	1363	1378	1374	1374	1362	1357	1363	1359	1362	1336	1331	11938	10364
14:24:02	1359	1352	1349	1357	1349	1363	1360	1360	1347	1343	1348	1345	1348	1322	1317	11814	10364
14:26:02	1345	1338	1335	1343	1335	1349	1346	1346	1333	1329	1334	1332	1334	1308	1303	11692	10364
14:28:02	1332	1325	1322	1330	1322	1336	1333	1332	1320	1315	1320	1318	1320	1294	1290	11573	10364
14:30:02	1318	1312	1309	1317	1308	1322	1319	1318	1306	1302	1307	1304	1307	1281	1276	11456	10364
14:32:02	1305	1299	1296	1303	1295	1309	1306	1305	1293	1288	1293	1291	1293	1267	1263	11342	10364
14:34:02	1293	1286	1283	1290	1283	1296	1293	1291	1280	1275	1280	1278	1280	1254	1250	11229	10364
14:36:02	1280	1273	1271	1277	1270	1283	1280	1278	1267	1263	1267	1265	1267	1241	1238	11117	10364
14:38:02	1268	1261	1259	1265	1257	1270	1268	1265	1254	1250	1254	1252	1255	1229	1225	11008	10364
14:40:02	1255	1249	1247	1253	1245	1258	1255	1253	1241	1237	1241	1240	1242	1216	1213	10902	10364
14:42:02	1243	1237	1235	1240	1233	1246	1243	1240	1229	1225	1229	1228	1230	1204	1201	10797	10364
14:44:02	1231	1225	1223	1228	1221	1234	1231	1228	1217	1213	1217	1215	1218	1192	1189	10693	10364
14:46:02	1220	1214	1211	1217	1209	1222	1219	1216	1206	1201	1205	1203	1206	1180	1177	10592	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
14:48:02	1208	1202	1200	1205	1198	1210	1208	1204	1194	1190	1193	1192	1194	1168	1166	10493	10364
14:50:02	1197	1191	1189	1194	1187	1199	1196	1193	1182	1178	1181	1180	1182	1157	1154	10395	10364
14:52:02	1186	1180	1178	1182	1175	1187	1185	1181	1171	1167	1169	1169	1171	1145	1143	10299	10364
14:54:02	1175	1169	1167	1171	1164	1176	1174	1170	1160	1156	1158	1158	1160	1134	1132	10205	10364
14:56:02	1164	1158	1157	1160	1153	1165	1163	1158	1149	1145	1147	1146	1148	1123	1121	10113	10364
14:58:02	1153	1148	1146	1149	1143	1154	1152	1147	1138	1134	1136	1136	1138	1112	1110	10023	10364
15:00:02	1142	1137	1136	1139	1132	1143	1141	1136	1127	1123	1125	1125	1127	1101	1100	9933	10364
15:02:02	1132	1127	1125	1128	1122	1133	1131	1126	1117	1113	1114	1114	1116	1091	1089	9845	10364
15:04:02	1122	1117	1115	1118	1111	1122	1120	1115	1106	1102	1104	1104	1106	1081	1079	9758	10364
15:06:02	1111	1107	1105	1107	1101	1112	1110	1105	1096	1092	1093	1093	1095	1070	1068	9672	10364
15:08:02	1101	1097	1095	1097	1091	1102	1100	1094	1086	1082	1083	1083	1085	1060	1058	9588	10364
15:10:02	1091	1087	1085	1087	1081	1092	1090	1084	1076	1072	1073	1073	1075	1050	1048	9505	10364
15:12:02	1082	1077	1076	1077	1071	1082	1080	1074	1066	1062	1063	1063	1064	1040	1039	9423	10364
15:14:02	1072	1067	1066	1068	1061	1072	1070	1064	1057	1052	1053	1053	1055	1030	1029	9343	10364
15:16:02	1062	1058	1057	1058	1052	1062	1061	1054	1047	1042	1043	1044	1045	1021	1019	9263	10364
15:18:02	1053	1048	1047	1048	1042	1052	1051	1045	1037	1033	1033	1034	1035	1011	1010	9184	10364
15:20:02	1043	1039	1038	1039	1033	1043	1041	1035	1028	1023	1024	1024	1026	1002	1000	9107	10364
15:22:02	1034	1030	1029	1029	1024	1033	1032	1026	1019	1014	1015	1015	1017	993	991	9032	10364
15:24:02	1025	1021	1020	1020	1015	1024	1023	1016	1009	1005	1005	1006	1007	984	982	8957	10364
15:26:02	1016	1012	1011	1011	1006	1015	1014	1007	1000	996	996	997	998	974	973	8883	10364
15:28:02	1007	1003	1002	1002	997	1006	1005	998	991	987	987	988	989	965	964	8809	10364
15:30:02	998	994	993	993	988	997	996	989	982	978	978	979	980	957	955	8738	
15:32:02	989	986	984	984	979	988	987	980	974	969	969	970	971	948	947	8667	10364
15:34:02	981	977	976	976	970	979	978	971	965	960	961	961	963	939	938	8597	
15:36:02	972	968	967	967	962	971	970	963	956	952	952	953	954	931	930	8528	10364
15:38:02	964	960	959	959	954	962	961	954	948	943	943	944	945	922	921	8461	
15:40:02	955	952	951	950	945	954	953	946	940	935	935	936	937	914	913		10364
15:42:02	947	943	943	942	937	945	945	937	931	927	926	927	929	906	905	8328	10364
15:44:02	939	935	935	934	929	937	937	929	923	919	918	919	920	898	897	8263	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
15:46:02	931	927	927	926	921	929	928	921	915	910	910	911	912	890	889	8199	10364
15:48:02	923	919	919	918	913	921	920	913	907	903	902	903	904	882	881	8135	10364
15:50:02	915	912	911	910	905	913	912	905	899	895	894	895	896	874	873	8073	10364
15:52:02	907	904	903	902	897	905	905	897	891	887	886	888	889	866	865	8011	10364
15:54:02	900	896	895	894	890	897	897	889	884	879	878	880	881	859	858	7950	10364
15:56:02	892	889	888	886	882	889	889	882	876	872	871	872	873	851	850	7890	10364
15:58:02	884	881	880	879	875	882	882	874	868	864	863	865	866	844	843	7831	10364
16:00:02	877	874	873	872	867	874	874	866	861	857	856	857	858	837	836	7773	10364
16:02:02	869	866	866	864	860	867	867	859	854	849	848	850	851	829	828	7716	10364
16:04:02	862	859	859	857	853	860	859	852	847	842	841	843	844	822	821	7659	10364
16:06:02	855	852	851	850	846	853	852	845	839	835	834	836	836	815	814	7604	10364
16:08:02	848	845	844	842	838	845	845	837	832	828	827	828	829	808	807	7548	10364
16:10:02	841	838	837	836	832	838	838	831	825	821	820	821	822	801	800	7494	10364
16:12:02	834	831	831	829	825	831	831	824	818	814	813	815	815	794	793	7440	10364
16:14:02	827	824	824	822	818	824	824	817	811	807	806	808	808	788	787	7388	10364
16:16:02	821	817	817	815	811	818	817	810	805	801	799	801	802	781	780	7336	10364
16:18:02	814	811	810	808	804	811	811	803	798	794	792	794	795	774	773	7285	10364
16:20:02	807	804	804	802	798	804	804	797	791	787	786	788	788	768	767	7235	10364
16:22:02	801	798	797	795	791	798	797	790	785	781	779	781	782	761	760	7186	10364
16:24:02	794	791	791	789	785	791	791	784	778	774	773	775	775	755	754	7137	10364
16:26:02	788	785	784	782	778	785	784	777	772	768	766	768	769	749	748	7089	10364
16:28:02	782	779	778	776	772	778	778	771	766	761	760	762	763	743	742	7042	10364
16:30:02	775	772	772	770	766	772	772	765	760	755	754	756	756	736	735	6994	10364
16:32:02	769	766	766	763	760	766	766	758	753	749	747	749	750	731	729	6947	10364
16:34:02	763	760	760	757	754	760	759	752	747	743	741	743	744	725	723	6900	10364
16:36:02	757	754	754	751	748	754	753	746	741	737	735	737	738	719	718	6853	10364
16:38:02	751	748	748	745	742	748	747	740	735	731	729	731	732	713	712	6806	10364
16:40:02	745	742	742	739	736	741	741	734	729	725	723	726	726	707	706	6760	10364
16:42:02	739	736	736	733	730	736	735	729	724	720	718	720	720	701	700	6714	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
16:44:02	734	730	730	727	724	730	730	723	718	714	712	714	715	696	695	6669	10364
16:46:02	728	725	725	722	719	724	724	717	712	708	706	708	709	690	689	6623	10364
16:48:02	722	719	719	716	713	718	718	711	707	703	700	703	703	685	684	6579	10364
16:50:02	716	714	713	710	707	713	712	706	701	697	695	697	698	679	678	6536	10364
16:52:02	711	708	708	705	702	707	707	700	695	692	689	692	692	674	673	6493	10364
16:54:02	705	703	702	699	696	702	701	695	690	686	684	686	687	668	667	6450	10364
16:56:02	700	697	697	694	691	696	696	689	684	681	679	681	681	663	662	6410	10364
16:58:02	695	692	692	688	686	691	691	684	679	675	673	675	676	658	657	6369	10364
17:00:02	689	687	686	683	680	685	685	679	674	670	668	670	671	653	652	6329	10364
17:02:02	684	681	681	678	675	680	680	674	669	665	663	665	665	648	647	6289	10364
17:04:02	679	676	676	673	670	675	675	668	663	660	658	660	660	643	642	6249	10364
17:06:02	674	671	671	668	665	670	670	663	658	655	653	655	655	638	637	6211	10364
17:08:02	669	666	666	663	660	665	665	658	653	650	648	650	650	633	632	6172	10364
17:10:02	664	661	661	658	655	660	660	653	648	645	643	645	645	628	627	6134	
17:12:02	659	656	656	653	650	655	655	648	643	640	638	640	640	623	622	6096	10364
17:14:02	654	651	651	648	645	650	650	643	638	635	633	635	635	618	617	6058	10364
17:16:02	649	646	646	643	640	645	645	639	634	630	628	630	631	614	613	6021	10364
17:18:02	644	642	642	638	635	640	640	634	629	626	623	625	626	609	608	5984	
17:20:02	639	637	637	633	631	635	635	629	624	621	619	621	621	604	604	5946	10364
17:22:02	634	632	632	628	626	630	630	624	619	616	614	616	616	600	599	5909	10364
17:24:02	630	628	627	624	621	626	626	620	615	611	609	611	612	595	595	5871	10364
17:26:02	625	623	623	619	617	621	621	615	610	607	605	607	607	591	590	5834	
17:28:02	620	618	618	615	612	616	616	610	605	602	600	602	603	587	586	5796	10364
17:30:02	616	614	614	610	608	612	612	606	601	598	596	598	598	582	581	5759	10364
17:32:02	611	609	609	606	603	607	607	602	597	594	592	594	594	578	577	5723	10364
17:34:02	607	605	605	601	599	603	603	597	592	589	587	589	589	574	573	5686	10364
17:36:02	602	600	600	597	594	598	599	593	588	585	583	585	585	569	569	5651	10364
17:38:02	598	596	596	592	590	594	594	588	583	581	579	581	581	565	564	5615	10364
17:40:02	594	592	591	588	586	590	590	584	579	576	574	576	577	561	560	5581	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
17:42:02	589	587	587	584	582	586	585	580	575	572	570	572	572	557	556	5547	10364
17:44:02	585	583	583	579	577	581	581	576	571	568	566	568	568	553	552	5515	10364
17:46:02	581	579	579	575	573	577	577	572	567	564	562	564	564	549	548	5482	10364
17:48:02	577	575	575	571	569	573	573	567	563	560	558	560	560	545	544	5451	10364
17:50:02	573	571	571	567	565	569	569	563	559	556	554	556	556	541	540	5419	10364
17:52:02	569	567	567	563	561	565	565	559	555	552	550	552	552	537	537	5389	10364
17:54:02	565	563	563	559	557	561	561	555	551	548	546	548	548	533	533	5358	10364
17:56:02	561	559	559	555	553	557	557	551	547	544	542	544	544	530	529	5328	10364
17:58:02	557	555	555	551	549	553	553	548	543	540	538	540	540	526	525	5298	10364
18:00:02	553	551	551	548	546	549	549	544	539	536	535	536	537	522	522	5268	10364
18:02:02	549	547	547	544	542	545	546	540	535	533	531	533	533	519	518	5239	10364
18:04:02	545	543	543	540	538	542	542	536	531	529	527	529	529	515	514	5210	10364
18:06:02	542	540	540	536	534	538	538	533	528	525	524	525	525	511	511	5181	10364
18:08:02	538	536	536	533	531	534	534	529	524	522	520	522	522	508	507	5153	
18:10:02	534	532	532	529	527	530	531	525	520	518	516	518	518	504	504	5125	10364
18:12:02	530	529	529	525	524	527	527	522	517	515	513	515	515	501	500	5097	10364
18:14:02	527	525	525	522	520	523	523	518	513	511	509	511	511	498	497	5071	10364
18:16:02	523	522	522	518	517	520	520	515	510	508	506	508	508	494	493	5044	10364
18:18:02	520	518	518	515	513	516	516	511	506	504	502	504	504	491	490	5019	10364
18:20:02	516	515	515	512	510	513	513	508	503	501	499	501	501	488	487	4992	10364
18:22:02	513	511	511	508	506	509	510	504	500	498	496	497	497	484	483	4966	10364
18:24:02	510	508	508	505	503	506	506	501	496	494	492	494	494	481	480		10364
18:26:02	506	505	505	501	500	503	503	498	493	491	489	491	491	478	477	4914	10364
18:28:02	501	499	499	495	494	497	497	491	487	486	484	485	486	473	471	4667	10364
18:30:02	488	486	486	482	482	484	485	482	478	478	475	477	478	465	463	4351	10364
18:32:02	474	473	473	470	470	473	474	472	468	470	467	469	470	458	456	4075	10364
18:34:02	464	462	462	460	459	465	465	464	460	462	461	462	463	452	450	3829	10364
18:36:02	455	453	453	452	451	457	458	457	453	455	455	456	457	447	445	3614	10364
18:38:02	449	445	445	445	445	451	451	450	446	448	449	450	451	442	440	3421	10364

Hip19																	
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac
18:40:02	443	439	439	439	440	446	446	445	441	442	444	445	446	437	436	3246	10364
18:42:02	438	433	434	434	435	441	441	440	436	437	440	441	442	433	432	3091	10364
18:44:02	432	429	429	429	431	436	436	437	432	432	436	437	437	429	428	2954	10364
18:46:02	427	425	425	425	427	432	432	433	428	428	432	433	433	425	425	2828	10364
18:48:02	423	421	422	422	423	429	429	430	424	425	428	429	430	422	422	2717	10364
18:50:02	420	418	418	419	420	426	426	426	421	421	425	426	426	419	419	2623	10364
18:52:02	418	415	416	416	417	423	423	423	418	418	422	423	423	415	416	2541	10364
18:54:02	415	413	413	414	414	420	420	421	416	416	419	420	420	413	413	2472	10364
18:56:02	413	411	411	412	412	418	418	418	413	413	417	418	418	410	411	2414	10364
18:58:02	411	410	410	410	410	416	416	416	412	410	414	415	415	408	409	2367	10364
19:00:02	410	408	408	409	408	414	414	414	410	408	412	413	413	406	406	2331	10364
19:02:02	408	407	407	407	407	413	413	413	408	407	410	411	411	404	404	2306	10364
19:04:02	408	406	406	406	406	411	411	411	406	405	408	409	409	402	402	2292	10364
19:06:02	407	405	405	406	405	410	410	410	405	404	407	407	407	400	401	2286	10364
19:08:02	407	405	405	405	404	409	409	409	404	402	405	406	406	398	399	2283	10364
19:10:02	390	389	387	386	392	393	394	393	389	384	391	394	398	389	389	1683	10364
19:12:02	367	366	364	365	373	374	374	372	368	368	377	382	384	378	376	1258	10364
19:14:02	352	350	349	353	359	361	361	359	356	357	369	373	375	371	367	948	10364
19:16:02	343	340	340	346	351	353	352	351	348	350	364	367	369	366	361	718.9	10364
19:18:02	337	333	334	342	345	348	346	345	343	345	360	363	364	361	357	546.7	10364
19:20:02	333	329	329	338	339	344	343	343	341	342	357	359	361	359	354	414.6	10364
19:22:02	329	326	326	335	336	342	340	341	339	340	356	357	359	356	352	315.2	10364
19:24:02	327	324	325	332	333	340	338	340	339	339	355	356	357	355	351	238.5	10364
19:26:02	326	323	323	330	332	339	337	340	338	338	354	355	357	355	351	180.1	10364
19:28:02	325	322	322	329	331	338	336	339	338	337	353	354	356	354	351	134.7	10364
19:30:02	324	322	322	328	331	337	335	339	338	337	353	354	356	354	351	100.4	10364
19:32:02	324	321	322	328	331	337	335	339	339	337	353	354	356	354	351	74.19	10364
19:34:02	324	321	322	328	330	337	335	340	339	338	354	354	356	355	351	53.8	10364
19:36:02	324	321	322	328	331	337	335	340	340	338	354	354	356	355	352	38.28	10364

Hip19																		
Time	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9	TC10	TC11	TC12	TC13	TC14	TC15	PSI	Evac	
19:38:02	324	321	322	328	331	337	335	340	340	338	354	355	356	355	352	26.11	10364	
19:40:02	324	321	322	328	331	337	335	341	340	339	355	355	356	356	352	16.99	10364	
19:42:02	325	321	322	329	331	337	335	341	341	339	355	355	357	356	353	10.29	10364	
19:44:02	325	322	322	329	331	337	335	341	341	340	356	355	357	357	353	5.425	10364	
19:46:02	325	322	322	329	331	337	335	342	342	340	356	356	357	357	353	1.774	10364	
19:48:02	325	322	323	330	331	337	336	343	342	340	357	356	357	358	353	-0.355	10364	
19:50:02	326	322	323	330	330	337	336	343	342	340	357	356	357	358	353	-1.876	10364	
19:52:02	326	322	323	331	330	337	336	344	342	340	358	356	358	359	354	-1.876	10364	