

OCAM	Qty	Qty	CBE Mass	CBE Mass	Mass Reserve		Flight Mass	CBE Power	Duty cycle	CBE Average	Power Reserve		Average Flight	TRL	Source	Prchs	Notes
	(mass)	(power)	per unit	Total	%	kg	kg	per Unit	%	Power	%	W	Power				
	Unit	Unit	kg	kg				W		W		W	W				
Instrument Totals				400.0	33.6%	134.30	534.3			10820.0	21.7%	2350.00	13170.00				
Cryostat				50.0	38.6%	19.30	69.3										
Primary Structure and instrument	1	0	31.00	31.0	50.0%	15.50	46.5	0.0	0%	0.0	0.0%	0.00	0.00	6	Universal Cryogenics	1	
PT-410 coldhead	1	0	19.00	19.0	20.0%	3.80	22.8	0.0	0%	0.0	0.0%	0.00	0.00	5	Cryomech inc	1	w/ custom helium stabilization pot
Electronics				50.0	50.0%	25.00	75.0			520.0	50.0%	260.0	780.0				
Bias Electronics	1	1	10.00	10.0	50.0%	5.00	15.0	100.0	100%	100.0	50.0%	50.00	150.00	6	UofA	1	
IF system	1	1	10.00	10.0	50.0%	5.00	15.0	100.0	100%	100.0	50.0%	50.00	150.00	6	Caltech	1	
Spectrometer	1	1	10.00	10.0	50.0%	5.00	15.0	100.0	100%	120.0	50.0%	60.00	180.00	7	Omnisys Inc.	1	
OCL controller	1	1	10.00	10.0	50.0%	5.00	15.0	100.0	100%	100.0	50.0%	50.00	150.00	6	MIT	1	
Instrument Computer	1	1	10.00	10.0	50.0%	5.00	15.0	100.0	100%	100.0	50.0%	50.00	150.00	7	Rack mount industrial computer	1	
Cable Harness	1	1	10.00	10.0	50.0%	5.00	15.0	0.0	0%	0.0	0.0%	0.00	0.00	7	UofA	1	
Compressor System				290.0	13.0%	88.00	378.0			10000.0	20.3%	2030.00	12030.00				
CP289C Compressor	1	1	120.00	120.0	20.0%	24.00	144.0	8400.0	100%	8400.0	20.0%	1680.00	10080.00	5	Cryomech Inc.	1	Modified for airworthiness
Heat exchanger and circulator pump	1	1	50.00	50.0	50.0%	25.00	75.0	1500.0	100%	1500.0	20.0%	300.00	1800.00	5	Cryomech Inc.	1	
Compressor tip-tilt gimbal	1	1	50.00	50.0	50.0%	25.00	75.0	100.0	100%	100.0	50.0%	50.00	150.00	5	Universal Cryogenics	1	
Helium Flex Lines 25m	2	1	31.00	62.0	20.0%	12.40	74.4	0.0	100%	0.0	0.0%	0.00	0.00	5	Cryomech Inc.	2	
Helium Flex lines 3m	2	1	4.00	8.0	20.0%	1.60	9.6	0.0	100%	0.0	0.0%	0.00	0.00	5	Cryomech Inc.	2	
Command & Control				10.0	20.0%	2.00	12.0			300.0	20.0%	60.00	360.00				
Control Computer	1	1	10.00	10.0	20.0%	2.00	12.0	300.0	100%	300.0	20.0%	60.00	360.00	9	Rack mount industrial computer	1	
GSE totals																	
Ground Control																	
GSE Computer Workstations															Dell Precision T3500	4	
GSE Monitors															Dell Ultrashorp U271	4	
GSE Backup storage															Seagate Expansion 750GB	4	
UPS															APC Back-UPS ES 550	4	
System level Integration & Testing																	
GSE Compressor system															Cryomech CP289C	1	
GSE electronics rack															1/2 height COTS 19" rack	1	
Tools																	
Mechanical tool set															ERAFTSMAN 289C tool set	1	
Electronics tool set															Empire 902 12390 PC Electronics Tool Kit	1	
EDS mats															ESD-2X3KT	3	
Test Equipment																	
Oscilloscope															Hameg HM1500	1	
Spectrum Analyzer															Agilent E8563E	1	
Power meter															Agilent 437B	1	
Synthesizer															Agilent 83751A	1	
Multimeter															Fluke 28	3	
Field Operations																	
SI Instrument Cart															Universal Cryogenics	1	
Cryostat Transport Container															Reinforced wood crates	1	
Compressor Transport Containers															Reinforced wood crates	3	
GSE & Tools Transport Containers															Pelican 0370 Cube Case	10	