APOLLO LUNAR LANDING SITE CANDIDATES - 1969 TO 1972

		TYPE MISSION HT NUMBER	G G-1 11	H-1 12	H-2 13	H H-3 14	H-4 15	J-1 16	J-2 17	J J-3 18	J-4 19	J-5 20
ATE/EVENTS 1st QTR	ORG GLEP	CHOICE LANDING SITES	Abulfeda Crater Chair	, Alexander (South of), Alpl	honsus Crater, Aristarchus Plat	eau, Censorinus Crater, Cope	micus CD, Copernicus Crater	E CANDIDATES	Wall), Davy Rille, Descartes	Formation, Dionysius Crater, F	ra Mauro Formation, Gassen	di Crater, Hadley Rille,
28 MAY ASSB REVIEWS	ASSB NOTIONAL GLEP	CANDIDATE POOL LAUNCH SCHEDULE NOV. 1968 LIST	JULY 1969 East Mare	NOVEMBER 1969 West Mare	MARCH 1970 Fra Mauro Formation	Sel Crater, Mare (Eastern), Ma JULY 1970 Copernicus Crater	DECEMBER 1970 Censorinus Crater	JUNE 1971 Littrow Area	DECEMBER 1971 Tycho	Prinz I, Schroeter's Valley, Tobi JUNE 1972 Tobias Mayer Crater	as Mayer P, Tycho Crater DECEMBER 1972 Hadley-Apennine	JUNE 1973 Marius Hills
3 JUNE		K LAUNCH SCHEDULE	16 JULY 1969	13 SEPTEMBER 1969	10 NOVEMBER 1969	FEBRUARY 1970	NOT ADDRESSED	NOT ADDRESSSED	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSI
MISSIONS SITE SELECTIONS	ASSB	INTERMEDIATE	ALS 1, ALS 2 ALS 3 ALS 4 ALS 5	ALS 1, ALS 2 ALS 3 3R, 4R, 6R (S-I)	Censorinus Crater Fra Mauro Formation Littrow Area Tycho Crater (N. Rim)	Not Addressed Censorinus Crater	Not Addressed	Not Addressed	Not Addressed	Not Addressed	Not Addressed	Not Addressed Rima Prinz I
& TENTATIVE LANDING LIST REVIEW	A356	AGGRESSIVE										
17 JUNE		PRIMARY	ALS 2, ALS 3	ALS 5	Fra Mauro Formation	(Northwest Rim) Rima Bode II	Censorinus Crater	Copernicus Crater	(Central Peak) Marius Hills	Tycho Crater	Rima Prinz I	Descartes Formati
PLANNING	GLEP	SCIENCE ALTERNATE	N/A	N/A	Hipparchus Crater (Cayley Formation)	Hyginus Crater/Rille Littrow Area	None	None	None	None	Schroeter's Valley	Abulfeda Crater Ch
10 JULY SITE SELECTION REVIEW	ASSB	PRIMARY	ALS 2 ¹ , ALS 3 ¹ ALS 5 ¹	ALS 7(S-III) ¹ 6R (S-I) ¹	Fra Mauro Formation ¹	Censorinus Crater (Northwest Rim)	Rima Bode II	Tycho Crater (North Rim)	Copernicus Crater (Central Peak)	Marius Hills	Descartes Formation	Rima Prinz I
16 JULY 24 JULY	G	-1 MISSION FINAL	APOLLO 11 LAUNCHE	ALS 7	NASA designates Surveyor	III's young "less blue" Western	Mare landing site, ALS 7 (O	ceanus Procellarum), as the				a is postponed to Nove
29 JULY INITIAL APOLLO FLIGHT PLAN				14 NOVEMBER 1969	MARCH 1970	JULY 1970 Censorinus Crater	NOVEMBER 1970	APRIL 1971 Tycho Crater	SEPTEMBER 1971	FEBRUARY 1972	JULY 1972	DECEMBER 19 Copernicus Crate
		PRIMARY			Fra Mauro Formation	(Northwest Rim) Rima Bode II	Censorinus Crater	(North Rim) Tycho Crater (North Rim)	Copernicus Crater	Descartes Formation	Marius Hills	(Wall) Hadley Rille (West Side)
SITE SELECTION REVIEW		ALTERNATE			None Fra Mauro Formation	Littrow Area Censorinus Crater	Unknown	None Tycho Crater	None Copernicus Crater	None Marine Hille	None Descartes Formation	None Rima Prinz I
	GLEP	PRIMARY			Fra Mauro Formation	(Northwest Rim)	Censorinus Crater	(North Rim) Descartes Formation	(Central Peak)	Copernicus Crater	Descares Formation	Tycho Crater
		ALTERNATE 1 ALTERNATE 2			Alphonsus Crater Hyginus Crater/Rille	Littrow Area	Fra Mauro Formation	Censorinus Crater (Northwest Rim)		Davy Rille ² Tycho Crater (North Rim)	Hadley Rille (West Side) Rima Prinz I Hadley Rille	(North Rim) Copernicus Crate
		ALTERNATE 3			Fra Mauro Formation Hyginus Crater/Rille		Censorinus Crater (Northwest Rim)	Descartes Formation	Marius Hills			(Central Peak)
		ADDITIONAL ALTERNATES NEW			Fra Mauro Formation TBD	Rima Bode II Fra Mauro Formation		Copernicus Crater (Central Peak)				Descartes Formati Copernicus Crate
16-17 OCTOBER SITE SELECTION		PRIME		ALS 7	Alphonsus Crater Hipparchus Crater	Littrow Area	Censorinus Crater (Northwest Rim), Fra Mauro Formation	Mid-Serentitatis (Censorinus Crater, Northwest Rim) Tycho Crater	Copernicus Crater (Central Peak)	Marius Hills	(West Side) Davy Rille ² (Tycho Crater,	(Central Peak)
REVIEW		ALTERNATE 1								Davy Rille ²	North Rim) Marius Hills	Hadley-Apennine Tycho Crater (N. R Rima Bode II
	GLEP ALTERNATE	ALTERNATE 2			Littrow Area	Fra Mauro Formation	Censorinus Crater (Northwest Rim)	Descartes Formation Rima Bode II	Marius Hills	Copernicus Crater	Hadley Rille (West Side)	
	(WISH LIST)	ALTERNATE 3			Alphonsus Crater	Littrow Area	None	Polar Orbit Mission	Marius Hills	None	Tycho Crater (North Rim)	Hyginus Crater/R Gassendi Crate (Central Peak)
		ADDITIONAL ALTERNATES			Hyginus Crater/Rille Rima Bode II Davy Rille ²	Fra Mauro Formation	Lassel Crater	Censorinus Crater (Northwest Rim)	Copernicus Crater (Central Peak)	Descartes Formation	Marius Hills	Hadley-Apennii
30 OCTOPED		PRIMARY			Davy Rille [*] Fra Mauro Formation ³		Censorinus Crater (Northwest Rim)	Descartes Formation		Copernicus Crater (Central Peak)	Hadley Rills	Tycho Crater (North Rim)
SITE SELECTION MEETING	ASSB	ALTERNATE		14 NOVEMBER 1969 APOLLO 12 LAUNCHE	Hyginus Crater/Rille	Littrow Area	Fra Mauro Formation	Censorinus Crater (Northwest Rim), Lalande Crater	Marius Hills	Davy Rille ²	(West Side)	Copernicus Crat (Central Peak)
14 NOVEMBER					12 MARCH 1970	8 JULY 1970	30 OCTOBER 1970	29 MARCH 1971	30 JULY 1971	19 FEBRUARY 1972	14 JULY 1972	7 FEBRUARY 1
10 DECEMBER H-2 SITE CHOICE	NASA	FINAL			Fra Mauro Formation	NASA assigns a Mare Imbriu					o avoid a March night launch	L
4 JANUARI NASA DECISION 5 JANUARY					11 APRIL 1970	1 OCTOBER 1970	MARCH 1971	NASA CANCELS THI SEPTEMBER 1971	E APOLLO 20 FLIGH 1st HALF 1973 ⁴	T 2nd HALF 1973 ⁴	1st HALF 1974 ⁴	<u></u>
6-7 FEBRUARY SITE SELECTION	GLEP	PRIMARY				Littrow Area	Davy Rille ²	Marius Hills	Descartes Formation	Copernicus Crater (Central Peak)	Hadley-Apennine	
		ALTERNATE			Fra Mauro Formation	None	(Northwest Rim)	(Central Peak)	None Decouter Formation	Marius Hills	(North Rim)	
H-3 MISSION SITE SELECTION	ASSB	ALTERNATE				None	Censorinus Crater	(Central Peak) None	None	None	None	
6 MARCH	NASA TENTATI	FINAL VE FLIGHT PLAN #2			11 APRIL 1970	Littrow Area 1 OCTOBER 1970	NASA selects a volcanic are FEBRUARY 1971	a and nearby rille in Souther JULY 1971	ast Mare Serenitatis for the A MARCH 1972	pollo 14 landing site and sets a FEBRUARY 1974 ⁴	Oct launch date. JULY 1974 ⁴	
11 APRIL 6-7 MAY	ASSB	-2 MISSION PRIMARY			APOLLO 13 LAUNCHES	Fra Mauro Formation	Davy Rille ²	Marius Hills	Descartes Formation	Copernicus Crater	Hadley-Apennine	
SITE REVALUATION	NASA	FINAL					NASA retargets Apollo 14 f	from the Littrow Area to the launch is delayed to 31 Janu	Fra Mauro Formation and se ary 1971, to accommodate Cl	sets a 5 October launch date, which CM/SM modifications recommende	ch is then post-poned to 3	
9 JUNE						3 DECEMBER 1970	Acident Investigation Repor 28 MARCH 1971	27 AUGUST 1971 Descartes Formation	TBD ⁴		TBD ⁴	tions (Skylab) workshop.
17 JUNE	GROUP	ALTERNATE	e Tran			Fra Mauro Formation	Marius Hills Littrow Area	Marius Hills	Descartes Formation	Not Addressed	Not Addressed	
2 SEPTEMBER NASA DECISION	J-	4 MISSION	st Mar	S 7 (S-III, Southest Oceanus Procellarum) on 19-20 November 1969				NASA CANCE 15	15 THE APOLLO IS A 16	AND 19 FLIGHTS 17		
	NEW FI	AGHT SCHEDULE NS LANDING SITES	uthwes			Fra Mauro Formation	r budgtary resons.	JULY 1971 Copernicu	JANUARY 1972 s Crater, Descartes Formation	JUNE 1972 a, Davy Rille ² ,		
	GEOLOGY	1st CHOICE	; 2 (Soi		uro Formation			Tycho Crater (North Rim)	-Apennine, Marius Hills, Ty Davy Rille ²	Marius Hills		
		2nd CHOICE 1st CHOICE	s ALS					Descartes Formation Descartes Formation	None Copernicus Crater	None Davy Rille ²		
	GEO- CHEMISTRY GROUP	2nd CHOICE	xplore					Copernicus Crater (Central Peak),	(Central Peak) Descartes Formation	Hadley-Apennine		the A pollo Applications
J-1 MISSION	GEO- PHYSICS	1st CHOICE	A pollo 11 crew successfully o					Hadley-Apennine	1-Descartes Formation	Davy Rille ²		oollo A
	GROUP									Marius Hills		the A ₁
	MSC	1st CHOICE							Descartes Formation	(Central Peak), New Site		ble for
		2nd CHOICE						Copernicus Crater (Central Peak)	None	None 1-Marius Hills		vehicle a vailable
	ASSB	FINALISTS						1-Hadley-Apennine 2-Marius Hills	2-Copernicus Crater (Central Peak)	2-Copernicus Crater (Central Peak), 3-New Site		ehicle
	NASA	FINAL			Fra Ms			Hadley-Apennine		th a rille and mountains at the	easons	launch v
31 JANUARY	H	1			at the	APOLLO 14 LAUNCHES			Kant Plateau added as an alternate to Descartes Formation		tary n	to make Saturn V la
5 MAY	ASSB	CANDIDATE ADDITION		es AL	tempt					No Change	budge	
1 3 JUNE J-2 MISSION SITE SELECTION 7 MEETING				explor	ding at		tht) for		1-Descartes Formation 2-Alphonsus Crater	1-Tycho Crater (North Rim), 1a-Davy Rille ²	19 Flight) for	o mako
	ASSB	FINALISTS		sfully	a land	1791	15 Flig	Hadley-Apennine	3-Kant Plateau Copernicus Crater (Central Peak),	2-Un-Named New Site 3-Gassendi Crater (Central Peak),	9 Fiig	ight) to
	1			succes	t make a	Febuary	Pollo		Davy Rille ²	4-Copernicus Crater (Central Peak),	pollo	o 20 Fl
				crew	does not	5-6	H-4 (A		Descartes Formation	NASA selects a volcanic highland for the Apollo 16 landing site and sets a March	cancels Mission J-4 (A pollo	Apollc
	NASA	FINAL		5 2 0		5	sion	APOLLO 15 LAUNCHE	s	1972 launch date ⁵	fission	an J-5
		FINAL		ollo 12 ci	13	lion	<u>.</u>				s N	Aissid
MEETING				Apollo 12 c	Apollo 13 d	ormation	icels Mis			Taurus-Littrow Valley added for consideration after de- briafing by Apollo 15 CMP	ncel	<u> </u>
MEETING 26 JULY	J	-1 MISSION CANDIDATE		Apollo 12 c	13	auro Formation	SA cancels Mis	не		for consideration after de- briefing by Apollo 15 CMP Alphonsus Crater	SA cancel	ancels N
MEETING 26 JULY	J	-1 MISSION CANDIDATE ADDITION CURRENT CANDIDATE		Apollo 12 ci	13	Fra Mauro Formation	NASA cancels Mission H-4 (Apollo 15 Fight) for budgetary	pennine		for consideration after de- briefing by Apollo 15 CMP Alphonsus Crater Copernicus Crater (Central Peak), Gassendi Crater	NASA cancel	ASA cancels Mission J-5 (Apollo 20 Flight)
MEETING 26 JULY OCTOBER	ASSB	-1 MISSION CANDIDATE ADDITION CURRENT		Apollo 12 ci	13	es the Fra Mauro Formation	NASA cancek Mk	dley-Apennine 71	Descartes Formation	for consideration after de- briefing by Apollo 15 CMP Alphonsus Crater Copernicus Crater (Central Peak), Gassendi Crater (Central Peak), SW of Mare Crisium, Taurus-Littrow Valley	ASA	NASA cancels N
MEETING 26 JULY OCTOBER 3 JANUARY	ASSB	-1 MISSION CANDIDATE ADDITION CURRENT CANDIDATE		Apollo 12 c	13	explores the Fra Mauro Formation	NASA canceb Mb	res Hadley-Apennine gust 1971	Descartes Formation	for consideration after de- briefing by Apollo 15 CMP Alphonsus Crater (Central Peak), Gassendi Crater (Central Peak), SW of Mare Crisium,	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY II FEBRUARY J-3 MISSION SITE SELECTION	ASSB	CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY		Apollo 12 c	13		NASA cancels Mb	explores Hadley-Apennine m h 2 August 1971	Descartes Formation	for consideration after de- briefing by Apollo 15 CMP Alphonsus Crater Copenicus Crater (Centra Peak), Gassendi Crater (Centra Peak), SW of Mare Crisium, Tarums-Linov Valley 2-Gassendi Crater (Centra Peak), 3-Alphonsus Crater Tarus-Linov Val ey 2-Gassendi Crater Tarus-Linov Val ey	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY 11 FEBRUARY J-3 MISSION	ASSB	CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY		Apolo 12 c	13	successfully	NASA cancels Mb	ssfully explores Hadley-Apennine on trough 2 August 1971	Descartes Formation	for consideration after de- briefing by Apollo 15 CMP Aphonsus Crater Copernicus Crater (Centra Peak), Gasendi Crater (Centra Peak), SW of Mare Cristian, Tarans-Litrow Valley 2-Gasendi Crater (Centra Peak), S-Aphonsus Crater Turus-Litrow Valley NASA seleste a complex valley for the Apollo 17 landing size and sets a	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY 11 FEBRUARY J-3 MISSION THE SELECTION MEETING 16 APRIL	ASSB ASSB ASSB NASA	1 MISSION CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY FINALISTS FINAL		Apolo 12 c	13	crew successfully	NASA cancels Mb	sucess fully ex on uly through 2	Descrites Formation	for consideration after de- briefing by Apollo 15 CMP Alphonsus Crater Copencius Crater Copencius Crater Common Peak, Second Peak, Taurus Latrow Valley 1-Taurus Latrow Valley 1-Taurus Latrow Valley Cocond Coate Cocond Coate Cocond Coate Cocond Coate NASA selesci a complex valley for the Apollo 17 Indensity in a desta December Launch date	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY JA MISSION SITE SELECTION MEETING	ASSB ASSB ASSB NASA	I MISSION CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY FINALISTS FINAL		Apollo 12 c	13	14 crew successfully	NASA cancels Mb	15 crew 30 J	APOLLO 16 LAUNCHES	for consideration after de- triefing by Apollo 15 CMP Alphoneus Center Capteriliza Center (Central Peak), Gasendi Center (Central Peak), SW of Mare Cristian, Taurus-Litrow Valley 2-Gasendi Crater (Central Peak), 3-Alphonus Crater Taurus-Litrow Valley 2-Gasendi Crater (Central Peak), 3-Alphonus Crater Taurus-Litrow Valley NASA selects a complex valley for the Apollo 17 landing site and sets a December bauech date.	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY 11 FEBRUARY J-3 MISSION THE SELECTION MEETING 16 APRIL	ASSB ASSB ASSB NASA	1 MISSION CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY FINALISTS FINAL		Apolo 12 c	13	crew successfully	NASA cancels Mi	crew 30.J	APOLLO 16 LAUNCHES	for consideration after de- triefing by Apollo 15 CMP Alphoneus Center Capteriliza Center (Central Peak), Gasendi Center (Central Peak), SW of Mare Cristian, Taurus-Litrow Valley 2-Gasendi Crater (Central Peak), 3-Alphonus Crater Taurus-Litrow Valley 2-Gasendi Crater (Central Peak), 3-Alphonus Crater Taurus-Litrow Valley NASA selects a complex valley for the Apollo 17 landing site and sets a December bauech date.	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY 11 FEBRUARY J-3 MISSION THE SELECTION MEETING 16 APRIL	ASSB ASSB ASSB NASA	1 MISSION CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY FINALISTS FINAL		Apolo 12 c	13	14 crew successfully	NASA enneels Mb	15 crew 30 J	APOLLO 16 LAUNCHES	for consideration after de- triefing by Apollo 15 CMP Alphoneus Center Capernicus Center (Central Peak), Gasendi Center (Central Peak), SW of Mare Cristian, Taurus-Litrow Valley 2-Gasendi Crater (Central Peak), 3-Alphonus Crater Taurus-Litrow Valley 2-Gasendi Crater (Central Peak), 3-Alphonus Crater Taurus-Litrow Valley NASA selects a complex valley for the Apollo 17 landing site and sets a December bauech date.	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY 11 FEBRUARY J-3 MISSION THE SELECTION MEETING 16 APRIL	ASSB ASSB ASSB NASA	1 MISSION CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY FINALISTS FINAL		Apolo 12 c	13	14 crew successfully	NASA cancels Mb	15 crew 30 J	APOLLO 16 LAUNCHE	for consideration after de- triefing by Apollo 15 CMP Aponeus Carter Capernisos Carter Capernisos Carter (Central Peak), Swo of Mare Craiter (Central Peak), Swo of Mare Craiter (Central Peak), 3-Aghonaus Craiter Tauras-Litrov Valley 2-Gasendi Craiter (Central Peak), 3-Aghonaus Craiter Mares-Litrov Valley NASA selects a complex valley for the Apollo 17 Indige site and sees a December bunch date. State Complex Complex State Complex	ASA	
MEETING 26 JULY OCTOBER 3 JANUARY JA MISSION SITE SELECTION MEETING 16 APRIL 7 DECEMBER ABBREVIATIONS	ASSB ASSB ASSB NASA 1	1 MISSION CANDIDATE ADDITION CURRENT CANDIDATE SUMMARY FINALISTS FINAL	Scino)	Apollo 12	13	Apollo 14 crew successfully		15 crew 30 J	Apollo 16 crew successfully explores the Descartes Formation 20-23 April 197.2	for consideration after de- triefing by Apollo 15 CMP Alphoneux Carter Corporation 15 CMP Control Peak), Gasendi Carter (Central Peak), SW of Mare Cristian, Tauras-Litrov Valky 2-Gasendi Crater (Central Peak), 3-Aphoneux Carter Tauras-Litrov Valky 2-Gasendi Crater (Central Peak), 3-Aphoneux Carter Tauras-Litrov Valky 2-Gasendi Crater (Central Peak), 3-Aphoneux Carter Tauras-Litrov Valky NASA selects a complex valky for the Apollo 17 Janding site and sets a December launch date. S APOLLO 17 LAUNCHESS CL 1 Jaquing Marson 2000 FF-11 (Central Peak), Santo 200	ASA	NSA
	G-I, H-I, AND H-2 MISSIONS SITE SELECTIONS & TENTATIVE LANDING LIST REVIEW IT JUNE SITE SELECTION REVIEW H-1 JULY SITE SELECTION REVIEW H-2 JULY H-2 JULY H-	G. JUNE (G. JE A, SN BUSCONS STE SELECTIONS A TENTIFY LEVEW ASSB 17 JUNE STE SELECTION PLANNING GLEP 19 JUNE STE SELECTION PLANNING GLEP 19 JUNE STE SELECTION REVIEW GLEP 19 JUNE STE SELECTION REVIEW SASB 19 JUNE STE SELECTION REVIEW GLEP 19 JUNE STE SELECTION REVIEW SASB 19 JUNE STE SELECTION REVIEW GLEP 19 JUNE STE SELECTION REVIEW GLEP 14 JUN STI SELECTION REVIEW GLEP 14 JUN STE SELECTION REVIEW GLEP 14 JUN STE SELECTION REVIEW GLEP 14 JUNE REVIEW GLEP 14 JUNE REVIEW GLEP 14 JUNE REVIEW JUNE SITE SELECTION REVIEW 30 OCTOBER STE SELECTION REVIEW ASSB 14 AOVEABER PO DECEMBER H O DECEMB	0 	3.1 NE MISSION SET SENT TO SENT TO SENT TO SET STATUTOR SENT TO SENT	3.18.00 (-1.14.34.01.63 (-1.14.34.14.35)ALS 1.4.3.2 (-1.14.34.14.35)ALS 1.4.3.2 (-1.14.34.14.35)ALS 1.4.3.2 (-1.14.34.34.35)ALS 1.4.3.2 (-1.14.34.34.35)ALS 1.4.3.2 (-1.14.34.34.35)ALS 1.4.3.2 (-1.14.34.34.35)ALS 2.4.3.53ALS 2.5.3.53ALS 2			0.1 M.S.NOV NATIONARY ACCOUNT 10.0000000000 MALACAD<	1 A.B. A.B. A.B. A.B. A.B. A.B. A.B. A.B	NAME AND<	Number Aux A	Part of the second s

VOTES

¹ Apolio Management targets, subject to further review, the first three crewed hunar landings to be on an old "blue" Eastern Mare (ALS 2 or ALS 3), a young "red" Western Mare (ALS 4, ALS 5, ALS 7 or 6R), and a debris site near Mare lanbrium (Fra Mauro).
² At the beginning of the Apolo Ib Program the Davy feature is classified as a rile and is thought to be a connected chain of rowner were creaters. Lank and the apolio Abal photography reveals it to be merely a chain of individual impact craters.
³ NASA will care the rought Fra Mauro formation landing size only if the H-1 Mission (Apolio I) and 10°4, after the Apolo Apolication Program (Skubh) missions are flown between 1972 and 1973.
⁴ In January 1972 Apollo Management formally delays the J-2 Mission (Apolio 16) launch from 17 March to 16 Apoli to evaluate and correct two equipment issues and one spacesuit issue.