					margins [W]	margins [W]		EDL	<u> </u>	Deployment Mode	Mode	MIN	idie rereption		Safe/ Hibernation	ernation		Communication	tion	Chargi	Charging (RTG)	_	Locomotion	uo	Payloa	Payload: Observation		Payload: Ice Core Mode	e Core N
Subsystem	Unit	Amount [-]	Maturity Level Margin [%]	Standb (SB)	y Nominal (ON)	ON Max (MAX)	Status	Duty Power Cycle [W]	er Status	Duty Cycle	Power [W]	Status	Duty Pov Cycle [V	Power [W]	tus Duty Cycle	Power [W]	] Status	s Duty Cycle	Power [W]	Status C	Duty Po Cycle [V	Power [W]	tus Duty Cycle	Power [W]	Status	Duty Cycle	Power [W]	Status	Duty Power Cycle [W]
Payload														L							Ĺ	0							
	Ice Core Drill	-	20,00%	0	-	12	OFF		OFF		0	OFF	_	0 OFF	Ŧ	0	OFF		0	OFF		0 OFF	J.	0	OFF		0	MAX	20%
	APXS Analyser	1	20,00%	0	0,1	1	OFF		OFF			OFF		Н	Ŧ	0	OFF		0	OFF		0 OFF	-E	0	OFF		0		20%
	Stereo Vision Camera	2	2,00%	0	2	4	OFF		NO	%09	2,1	NO	20% 0,	0,84 OFF	T.	0	OFF		0	OFF	Ĺ	NO 0	%001 N	4,2	NO	100%	4,2	OFF	
	Hazcams	4	2,00%	0	2	4	OFF		ON	20%	4,2	NO	20% 1,	1,68 OFF	Ŧ	0	OFF		0	OFF	Ĺ	NO 0	N 100%	8,4	OFF		0	OFF	
	Ground RADAR	1	10,00%	0	0,1	_	OFF		OFF		0	OFF		0 OFF	T.	0	OFF		0	OFF	Ĺ	0 OFF	T.	0	MAX	25%	0,275	OFF	
	LED Lampe	16	20,00%	0	0,75	2	OFF		OFF		0	NO	20% 2,	2,88 OFF	TF	0	OFF		0	OFF		NO 0	N 100%	14,4	NO	Н	14,4	OFF	
Command & DH								L	L		0			0		0			0	L	Ĺ	0		0			0		_
	OBC	_	2,00%		∞	10	OFF		NO	100%	8,4	MAX	,6 %06	9,45 SE	B 100%	0 1,05	NO	100%	8,4	VO VO	5% 0,	0,42 ON	%001 N	8,4	NO	100%	8,4		%001
	Housekeeping	1	20,00%	0	1	2	OFF		ON	10%	0,12	NO	10% 0,	0,12 ON	N 10%	0,12	ON	100%		NO	5% 0,	0,06 ON	N 100%	1,2	ON	100%	1,2	Т	%001
Thermal Control System											0			0		0			0			0		0			0		
	Heaters	2	5,00%	0	-	2	ON 10	100% 2,1	NO	100%	2,1	NO	50% 1,1	1,05 ON	N 100%	2,1	ON	100%	2,1	OFF		NO 0	N 100%	2,1	ON	100%	2,1	NO	100%
		1		$\downarrow$	$\downarrow$		$\frac{1}{4}$		+	$\downarrow$	,	1	1	+	+	٠	$\downarrow$	$\downarrow$	Ī	1	+	1	+	٠		†		1	†
Electric Power Supply		1	100000		-		T	_	+	,000	+		4	+	$^{\dagger}$			$\dagger$	_	$^{+}$	_	+	$\dagger$	0 .		, 0000	0 :	T	, 000
	PCDU	-	20,00%	0,6	-	-	SB	100% 0,72	SB Z	100%	7/,0	Z O	100%	1,7 SB Z,1	8 I00%	0,72	o O	%00I	1,2	NO NO	0001	1,7 ON 2,1	%001 N	7,1	NO.	0001	7,7	N O	%001
Communication							1	+	+	-	-	Ī	1	-	+	c	-	$\downarrow$		1	1	-	+	c			c		t
Commitmication	Transmittor	-	\$ 00%	90	2	15	OFF		OFF			OFF	+	OFF	İ		MAY	70007	15.75	OFF	+	OFF	Ē		OFF			OFF	+
	Decima		20000	35.0	+	3 ,	5 5	+	3	1,000	1	$^{+}$	70001	t	1000		MAN	$^{+}$	┸	Т	70001	+	1000/	2	100	1000/		T	70001
	Necelver	-	20,0070	CC,U	-	7	J		S	+	+	T	_	+	$^{+}$		MAZ	$\top$	+,4	T	_	0,42	$\top$	7,1	OIN	100%	7,1	T	
Locomotion								L	L	L	0		Ľ	0	L	0		L	0		Ĺ	0		0		l	0	T	H
	Motor (wheels)	4	20,00%	0	6	15	OFF		OFF		0	OFF		0 OFF	T.	0	OFF		0	OFF		NO 0	N 100%	43,2	OFF		0	OFF	
	Motor (steering)	4	5,00%	0	2	4	OFF		OFF		0	OFF		0 OFF	T.	0	OFF		0	OFF		ON ON	N 50%	4,2	OFF		0	OFF	
	IMU	4	10,00%	0	-	_	OFF		ON	Н	4,4	NO	5% 0,	0,22 OFF	Ŧ	0	ON	100%	4,4	OFF		NO 0	N 100%	4,4	ON	100%	4,4	П	-
	Motor (Deployment)	2	5,00%	0	2	4			ON	75%	1,575			0	_	0			0			0		0			0	ON	25% 0,525
Chassi & Structure											_			7		0			0			+		0			0		
	Boom Mechanism	_	20,00%	0	∞ (	∞ (	OFF	+	NO	100%		OFF	-1,	$\dagger$	F	0	OFF	+	0	OFF	+	+	H. 1	0 0	OFF		0 0	+	, , ,
	Drill Mechanism	- (	20,00%	0	. c	£ 4	GFF.	+	3 3	+	4	E E	+	+	÷ F	0	OFF	+	0	OFF.	+	+	Ť	0 7	GFF.	/9001	0 5	T	20%
	Cam Kotation Motors	7	2,00%		7	4	115	+	S	100%	7,1	N.	70% 0,	0,42 OFF	<u>.</u>	5	Š	+	0	Į.	+		N 100%	7,1	N O	0,001	7,1	- GFF	
S/C Net I	S/C Net Power Demand [W]		Margin [%]					2,82	2		36,52		19	19,06		5,19		-	35,45		2,	2,10		95,00			39,48		28,63
Power	Power Distribution loss		2,00%					90'0	2		0,73		o,	0,38		0,10			0,71		O,	0,04		1,90			62'0		0,57
Load L	Load Discharge (PCDU)		2,00%					0,20	0		2,56		1,	1,33		0,36			2,48		0,	0,15		6,65			2,76		2,00
PCDU Mar	PCDU Margin (Conversion etc.)		2,00%					0,14	4		1,83		0	0,95		0,26			1,77										
Ξ	Harness losses		3,50%					0,10	0		1,28		0,	0,67		0,18			1,24		0,	0,07		3,33			1,38		1,00
Add	Additional losses		2,00%					0,14	4		1,83		0,	0,95		0,26			1,77		0,	0,11		4,75			1,97		1,43
S/C Brutto	S/C Brutto Power Demand [W]							3,45	2		44,73		23	23,35		96'39			43,43		2,	2,47		111,63			46,38		33,63
Ś	System Margin		20,00%					0,69	6		8,95		4,	4,67		1,27			8,69		O,	0,49		22,33			9,28		6,73
Required power from	Required power from Battery (20% System Margin) [W]	[w] (r						4,15	2		53,68		28	28,02		7,63			52,11		2,	2,96		133,95			55,66		40,36
Total Rover Power Demai Charge loss 5%	Total Rover Power Demand excluding battery charge (Battery Charge loss 5% + Lilon Efficiency 5%) [W]	(Battery	10,00%					4,56	9		59,04		30	30,82		8,39			57,32		3,	3,26		147,35			61,23		44,40
Incon	Incoming Power RTG							12,08	8,		12,08		12	12,08		12,08			12,08		12	12,08		12,08			12,08		12,08
Total Rover Power Den.	Total Rover Power Demand including battery charge [W]	[W]			_			-7.52	2		46.96		2	70 77		9 60			75 37		0	600		10 101					