



# ESS weekly meeting (2021 W37)

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FREIA Planning	2021-08-25																								20	22				
				Aug	gust				Sep	tem	ber		Oc	tobe	r		Nov	emb	er		Dec	cemb	ber			Já	anua	ıry		
Equipment	Responsible			2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	6	13	20	27	1	8	15	22	29	
		wee	k #	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	1	2	3	4	5	+
Liquefier & 2K pumps	Esat																									0				
RF power stations	Mykhailo																													
Cryomodule test stand	Akira					C١	/101					CN	<b>//04</b>	1			CM	103				C№	106					CN	И07	1
		W	/e	ar	e l	he	re	/		_	1	J			: •		: :	:			: :		: :			,	:		:	
				CI CI	MC MC	)1 )3	de re	epa ce	/ art ept	tur io	re n		In pł S <sup>v</sup> th	ry: ny: we	)ct <u>sic</u> ede pro	ai <u>al</u> en oje	nd ly a bu ect	N <u>aw</u> ut <u>i</u> fre	ov <u>/ay</u> rei on	r, A y_f <u>ma</u> n (	ki ro <u>ote</u> Ge	ra m ely ern	w le na	rill eac ny	b€ d	Ð				



### W36&W37 progress



week			W36										
		M	ON	TI	TUE		WED		THU	FRI		SAT	SUN
date		06-sep		07-sep		08-sep		09-sep		10-sep		11-sep	12-sep
		m a		m	а	m	а	m a		m	а		
present CM	CM01	remove concrete blocks	disc. Pumping stations & cables	disc. Water pipes, insulation bellows	disc. waveguide	disc. cryogenic lines	swap modules. Connect	fillir	ng dry N2	outgoing tes			
next CM	СМ04						waveguide	warm stepp	test of the per motors				

week	(						W37						
		MON		Т	TUE		WED		THU	FRI		SAT	SUN
date		13-sep		14-sep		15-sep		16-sep		17-sep		18-sep	19-sep
		m	а	m	а	m	а	m	а	m	а		
are views				doorknob	outgoing					activate shock			
previous	CM01			dismountin	test (VNA),					sensors, close	waitin	g in the	box
				g	shock sens.					the box			
		connect	connect	leak test of b	beam vacuum	leak test 8	k purging of He						
present CM	CM04	cryogenic	pumping	pumps, pur	np from one	circuit, R	F calibration,		coupler warı	n conditioning			
		lines	stations	side, TPG	i300 starts	stat	ions ON						
nevt CM	CM03		/	prepared at Orsay					departure at	Orsay			
	CIVIUS		_/										

- One of the pumping stations is not leak tight when internal gate valve is closed
  - Either the valve (happened once) or connection
- Our leak detector is under repair

### We are here

- Coupler conditioning with one pump  $\rightarrow$  may take longer than usual





orward power [kW]



# Two pumps (CM05)





We need to plan minimum 120 hours = 24 hours x 5 days + safety margin for down time  $\rightarrow$  7 week days



# W38, 39 40 planning



week	[		W38											
		М	ON	TI	JE		WED		THU	FRI		SAT	SUN	
date		20-	-sep	21-	sep	2	22-sep	23	3-sep	24-se	р	25-sep	26-sep	
		m	а	m	а	m	а	m	а	m	а			
previous CM	СМ01	departu	ire to ESS		preparation	of documer	nts	publish test report Avoid						
present CM	СМ04		5 w	eek d	ays	coupler war	m conditioning				wee	eke	nd	
next CM	СМ03		transport via Lund					recept	reception at UU			thermalization at UU		
· · · · ·	The	<u>o will c</u>	come to	help us	S									
week	[		W39											
		M	ON	т	TUE		WED		THU	FRI		SAT	SUN	
date 27-sep		sep	28-sep		29-sep		30-sep		01-okt		02-okt	03-okt		
		m	а	m	а	m	а	m	а	m	а			
present CM	СМ04	Purging	N2 cooling	coolin	g down	4K filling	coupler cold conditioning	2K pumping at cold		MP conditioning		CTS thermaliz		
next CM	CM03	reception	test LEMO	receptior	i test VNA					•				
next next CM	СМ06					ţ	preparation at C	orsay	etetive	e e e l				
week							W/40		manve	goai				
		M	ON	ТІ	JE		WED		THU	FRI		SAT	SUN	
date		04	-okt	05-	okt	(	06-okt	0	7-okt	08-ok	t	09-okt	10-okt	
		m	а	m	а	m	а	m	а	m	а			
present CM	СМ04	CTS te	st at 2K		heat load measurements				start warming up vent insulation			ation vacuum warming up		
next CM	CM03		doork	nob mountin	g & water lea	ak check			wait	ing in the docki	ng area			
next next CM	СМ06		preparation at Orsay 5											





### <u>CTS1</u>

Turns	Limit	switch	(1	=	closed,	0	=	open)
0	1							
-10	0							
-20	0							
-30	0							
-40	0							
-50	0							
-60	0							
-70	0							

#### Positive direction

-60	0									
-50	0									
-40	0									
-30	0									
-20	0									
-10	0									
0	1	Very	close	to	Ο,	-	a	few	hundred	steps

Define 0 as 0



Turns	Limit switch $(1 = closed, 0 = open)$
0	1
-10	1
-20	1
-30	0 At ~ -40000 steps
-40	0
-50	0
-60	0
-70	0

Positive direction

0	1				
-10	1				
-20	1	At	~	-47000	step
-30	0				
-40	0				
-50	0				
-60	0				

Define 0 as 0

- Using Phytron driver + Minilog-comm, the motors moved and limit switches worked
- CTS1's initial position was very close to the limit switch





## Previous cavity string (Jan 2021)

Cavity location	Cavity IN	Cavity OUT
Cavité	DSPK10	DSPK17
Coupleur	CPL11	CPL03
Manchette	DWT26	DWT03



### New cavity string

Cavity location	Cavity IN	Cavity OUT
Cavité	SPK-DSPK-08	SPK-DSPK-11
Coupleur	SPK-CPL-32	SPK-CPL-05
Manchette	SPK-DWT-30	SPK-DWT-24



- The new cavity string is leak tight at warm <sup>3</sup>
- New cavity string → coupling conditioning will take time
- Are previous cavities and couplers repaired to be mounted to another module?



# He circuit is fully leak tight



### <u>Reminder</u>

Value 1
Value 2

- we had some doubt on the safety valve
- We still keep one spare SV90 (also leaky)







- Foams in oil of the pump
- There seem like water inside the module??





## Outgoing test OK



- Shock sensors mounted (trigger >3g)
- We will launch DAQ and close the box later