

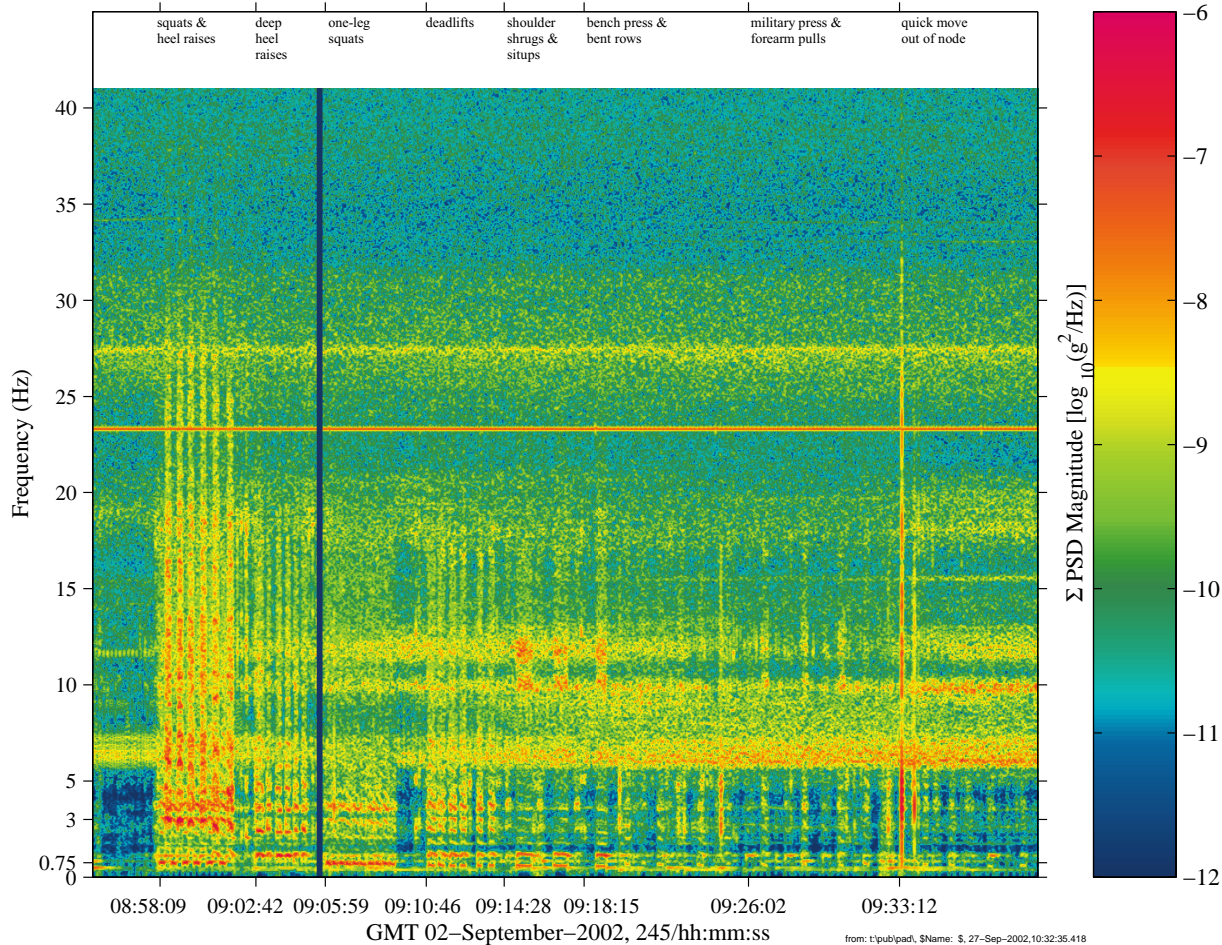
# Resistive Exercise Device (RED) Qualify

sams2, 121f02 at LAB1O2, ER1, Drawer 1:[128.73 -23.53 144.15]  
250.0 sa/sec (100.00 Hz)  
 $\Delta f = 0.061$  Hz, Nfft = 4096  
Temp. Res. = 0.820 sec, No = 3891

RED Exercise

Start GMT 02-September-2002, 245/08:55:00.003

Increment: 5, Flight: UF2  
Sum  
Hanning  
Span = 45 minutes



## Data Description

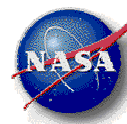
Sensor	121f02 250.0 sa/sec (100.00 Hz)
Location	LAB1O2, ER1, Drawer 1
Inc/Flight	Increment: 5, Flight: UF2
Plot Type	spectrogram

### Notes:

- multi-purpose exercise device
- crank canisters to adjust resistance
- in the interim, it is hardmounted
- used routinely and located in the Z1 alcove of Node 1
- base plate parallel with Z1 hatch
- help crew preserve strength and bone mineral
- exercise types: squats, heel raises, deadlifts, bench press, upright rows, bent rows



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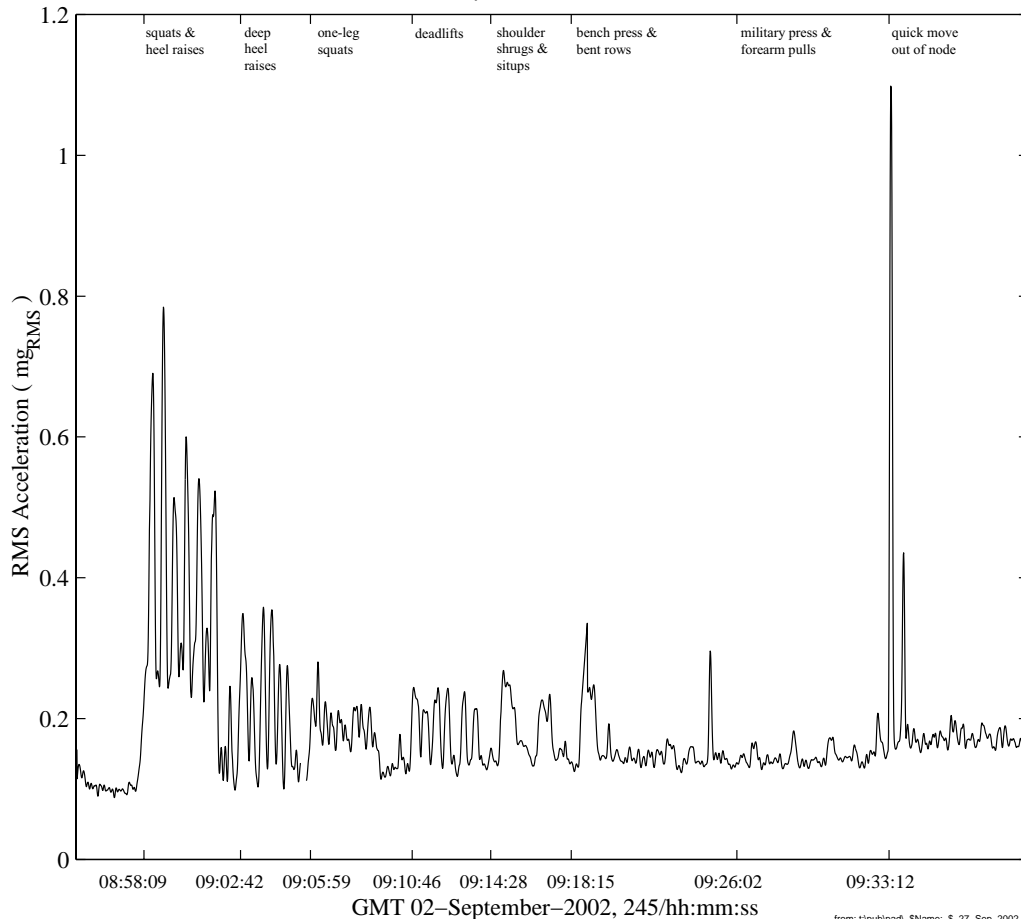
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Regime:	Vibratory
Category:	Crew Activity
Source:	Resistive Exercise Device (RED)

## Resistive Exercise Device (RED) Quantify

sams2, 121f02 at LAB1O2, ER1, Drawer 1:[128.73 -23.53 144.15]  
 250.0 sa/sec (100.00 Hz)  
 $\Delta t = 0.061$  Hz, Nfft = 4096  
 Temp. Res. = 0.820 sec, No = 3891  
**RED Exercise,  $0 < f < 30$  Hz**  
 Start GMT 02-September-2002, 245/08:55:00.003

Increment: 5, Flight: UF2  
 Sum  
 Hanning  
 Span = 45 minutes



Data Description	
Sensor	121f02 250.0 sa/sec (100.00 Hz)
Location	LAB1O2, ER1, Drawer 1
Inc/Flight	Increment: 5, Flight: UF2
Plot Type	interval RMS

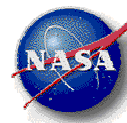
### Notes:

The interval RMS figure shown spans the entire RED exercise period and covers the frequency range below 30 Hz. This period consisted of several exercise types as annotated in the figure. Several of these types were analyzed for the frequency range below 10 Hz as tabulated below:

Type	Maximum ( $\mu g_{RMS}$ )	GMT Start 02-Sep-2002, 245/
baseline (no RED)	60	08:55:00
squats	301	08:58:09
heel raises	691	08:58:26
deep heel raises	336	09:02:42
deadlifts	206	09:10:46
bench/bent rows	222	09:20:21
one-leg squats	255	09:05:59



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Category:	Crew Activity
Source:	Resistive Exercise Device (RED)