Table S1. RT-qPCR_ Primers: One set of ATF1, ATF2, and Lg-ATF1 primers

		Length
ATF1 Forward	GGT AAG TGT ACT ATC ACT CC	103
ATF1 Reverse	TAT CCG TAA GCC ATT CG	
ATF2 Forward	TTAGCCCTGTAATCATACC	88
ATF2 Reverse	TCAAACCCATCAGTATCC	
Lg-ATF1 Forward	ACCGCTTTGACTATACC	145
Lg-ATF1 Reverse	AGTGAATTGAGGATCTACC	

Table S2. Preparation for RT-qPCR 20 µl Reaction RNA_Earth = 738 ng/uL RNA_Microgravity=792 ng/uL

COMPONENT	RNA_Earth	RNA_Micorgravity	Control
Luna Universal One-Step Reaction Mix (2X)	10 µl	10 µl	10 µl
Luna WarmStart® RT Enzyme Mix (20X)	1 µl	1 µl	1 µl
Forward primer (10 µM)	0.8 µl	0.8 µl	0.8 µl
Reverse primer (10 µM)	0.8 µl	0.8 µl	0.8 µl
Template RNA	1.1 uL	1.02 uL	0 uL
Nuclease-free Water	6.3 µl	6.38 µl	7.4 µl

The total amount of RNA in 20uL reaction mixture = 0.81ug

Table S3. Cycle process description for qPCR

Cycle step	Temperature	Time	Cycles
Reverse Transcription	55°C*	10 minutes	1
Initial Denaturation	95°C	1 minute	1
Denaturation	95°C	10 seconds	45
Extension	60°C	30 seconds	
Melt Curve	60-95°C	various	1