

Enhanced Néel Temperature in EuSnP under Pressure

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FIG. S1. Powder X-ray diffraction pattern with Rietveld fitting for EuSnP single crystals under ambient pressure. The blue, red and orange lines indicate observed pattern, Rietveld fitting and difference between them.

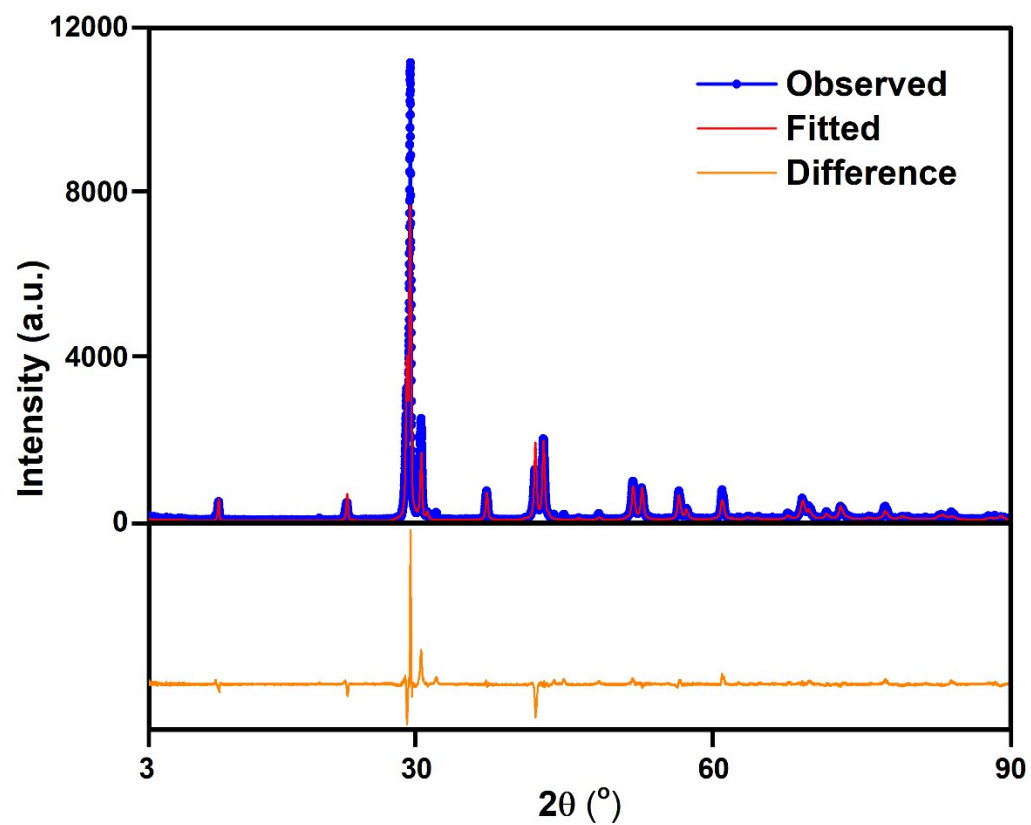


FIG. S2. Temperature dependence of resistivity $\rho(T)$ at various pressures up to 2.15 GPa between 2 and 300 K.

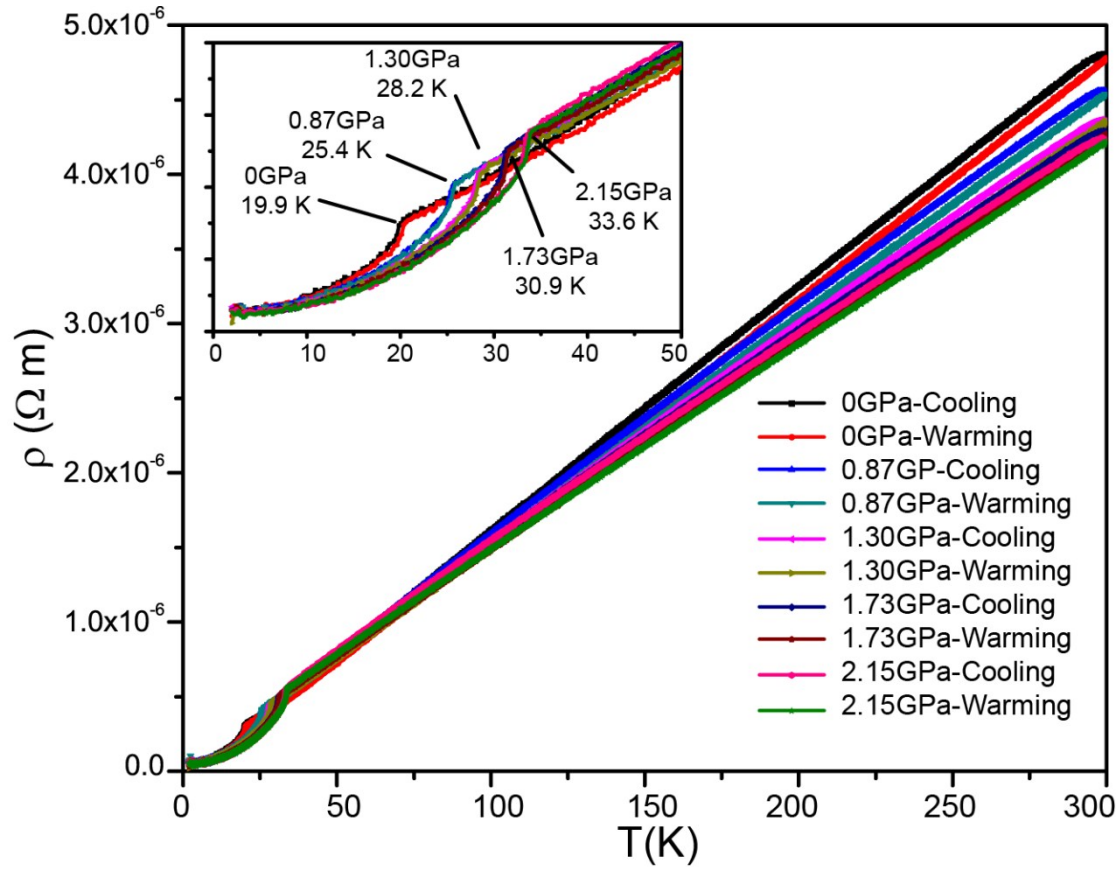


FIG. S3. Temperature dependence of C/T for EuSnP single crystal under ambient pressure.

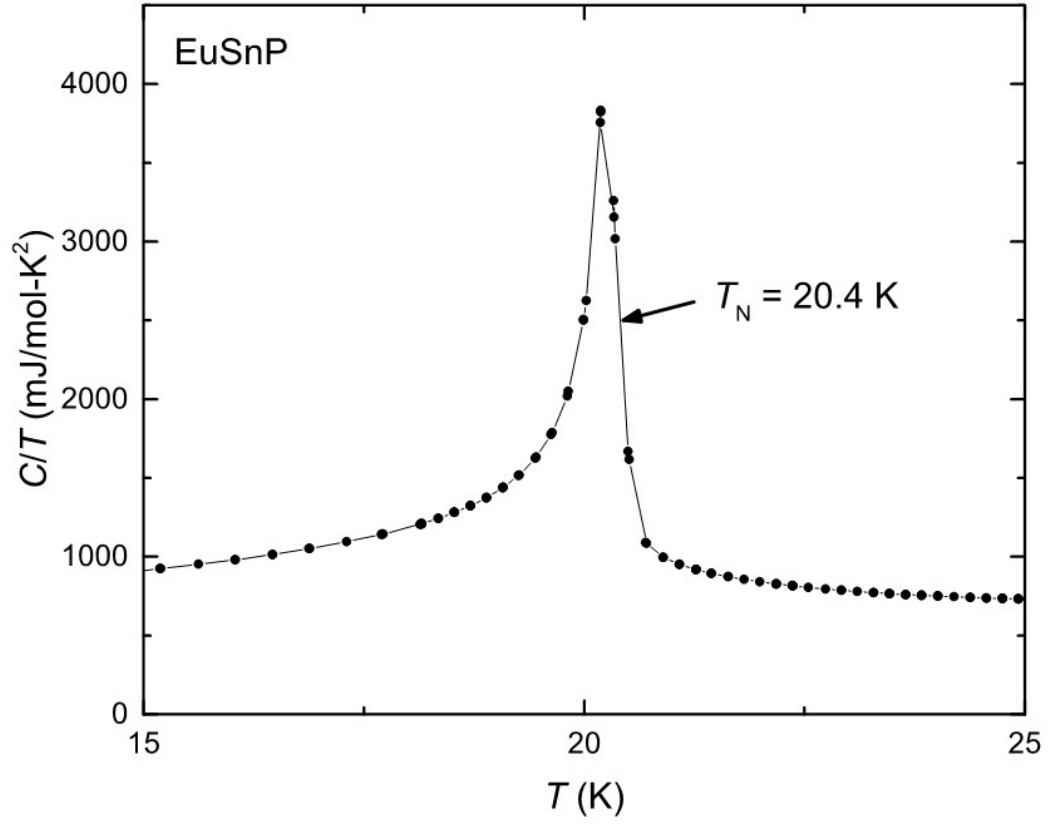


Table S1. Bond lengths and percent changes for critical interactions in EuSnP under various pressures.

	0 GPa (Å)	Δ_{p2-p1} %	2.15 GPa (Å)	Δ_{p3-p2} %	6.18 GPa (Å)	Δ_{p3-p1} %
Eu1-P5	3.041 (1)	-1.78 %	2.987 (1)	-2.31 %	2.918 (1)	-4.04 %
Eu1-P6	2.966 (2)	-2.56 %	2.890 (9)	-2.21 %	2.826 (6)	-4.72 %
Eu1-Sn4	3.367 (1)	-2.41 %	3.286 (4)	-2.71 %	3.197 (3)	-5.05 %
Sn3-P5	2.458 (2)	-0.08 %	2.456 (10)	-0.86 %	2.435 (6)	-0.94 %
Sn3-Sn4	3.176 (1)	-1.83 %	3.118 (2)	-2.37 %	3.044 (1)	-4.16 %

Table S2. Integrated COHP (ICOHP) and its percentage (ICOHP%) per formula for EuSnP under various pressures.

	0 GPa		2.15 GPa		6.18 GPa	
	ICOHP	ICOHP (%)	ICOHP	ICOHP (%)	ICOHP	ICOHP (%)
Eu1-P5	2.70	39.07	4.34	46.87	5.55	50.18
Eu1-P6	0.68	9.84	1.15	12.42	1.48	13.38
Eu1-Sn4	0.15	2.17	0.26	2.81	0.36	3.26
Sn3-P5	2.62	37.92	2.55	27.54	2.51	22.69
Sn3-Sn4	0.76	11.00	0.96	10.36	1.16	10.49
Total	6.91	100	9.26	100	11.06	100

Table S3. Percent changes for ICOHP per formula for EuSnP under various pressures.

	Δ_{p2-p1} %	Δ_{p3-p2} %	Δ_{p3-p1} %
Eu1-P5	+60.74 %	+27.88 %	+105.56 %
Eu1-P6	+69.12 %	+28.70 %	+117.65 %
Eu1-Sn4	+73.33 %	+38.46 %	+140 %
Sn3-P5	-2.67 %	-1.57 %	-4.20 %
Sn3-Sn4	+26.32 %	+20.83 %	+52.63 %

Table S4. Percent changes for ICOHP% per formula for EuSnP under various pressures.

	Δ_{p2-p1} %	Δ_{p3-p2} %	Δ_{p3-p1} %
Eu1-P5	+19.96 %	+7.06 %	+28.44 %
Eu1-P6	+26.22 %	+7.73 %	+35.98 %
Eu1-Sn4	+29.49 %	+16.01 %	+50.23 %
Sn3-P5	-27.37 %	-17.61 %	-40.16 %
Sn3-Sn4	-5.82 %	+1.25 %	-4.64 %