

## **Revision 1**

Supplementary Material for:

# **Sound Velocity of Neon at High Pressures and Temperatures by Brillouin Scattering**

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Table S1. Pressure-volume-temperature data of Pt

$P$ (GPa)	$T$ (K)	$a$ (Å)	$V$ (Å <sup>3</sup> )
9.5(1)	300	3.8818(5)	58.49(2)
9.6(1)	300	3.8814(6)	58.47(3)
10.9(2)	300	3.8765(6)	58.25(3)
11.5(2)	300	3.784(8)	54.18(3)
14.2(2)	300	3.8638(8)	57.68(4)
21.2(4)	300	3.839(1)	56.59(5)
23.4(4)	300	3.832(1)	56.26(5)
27.3(4)	300	3.820(1)	55.72(5)
3.5(1)	550	3.9152(5)	60.02(2)
4.0(1)	550	3.9131(5)	59.92(2)
7.4(2)	550	3.898(1)	59.24(6)
11.1(2)	550	3.883(6)	58.55(3)
11.9(2)	550	3.8781(8)	58.33(4)
12.2(2)	550	3.8784(7)	58.34(3)
13.7(2)	550	3.8728(7)	58.09(3)
14.0(2)	550	3.8712(6)	58.01(3)
15.0(3)	550	3.868(1)	57.86(5)
16.1(2)	550	3.8638(6)	57.68(3)
16.6(2)	550	3.8618(5)	57.59(2)
18.0(2)	550	3.8571(7)	57.38(3)
18.4(1)	550	3.8553(5)	57.3(2)
20.7(2)	550	3.8472(7)	56.94(3)
22.7(4)	550	3.840(1)	56.63(5)
24.8(4)	550	3.833(1)	56.33(6)
27.0(6)	550	3.826(2)	56.01(8)
31.7(3)	550	3.8113(8)	55.36(4)
35.3(5)	550	3.801(2)	54.90(7)
40.0(1)	550	3.788(3)	54.33(12)
49.6(5)	550	3.762(1)	53.24(5)
3.8(1)	800	3.9225(5)	60.35(3)
9.2(2)	800	3.899(1)	59.26(4)
9.8(2)	800	3.8960(7)	59.14(3)
12.9(2)	800	3.8834(5)	58.56(2)
18.2(3)	800	3.8628(9)	57.64(4)
23.3(3)	800	3.8450(8)	56.84(4)
26.7(3)	800	3.8336(8)	56.34(4)
33.5(2)	800	3.8136(4)	55.46(2)
38.4(4)	800	3.7971(9)	54.75(4)
19.6(2)	1100	3.8661(3)	57.79(1)
22.5(3)	1100	3.8515(7)	57.13(3)
27.9(2)	1100	3.8371(4)	56.49(2)
43.0(4)	1100	3.7914(7)	54.5(3)
43.9(4)	1100	3.7889(4)	54.39(2)
52.9(5)	1100	3.7652(7)	53.38(3)

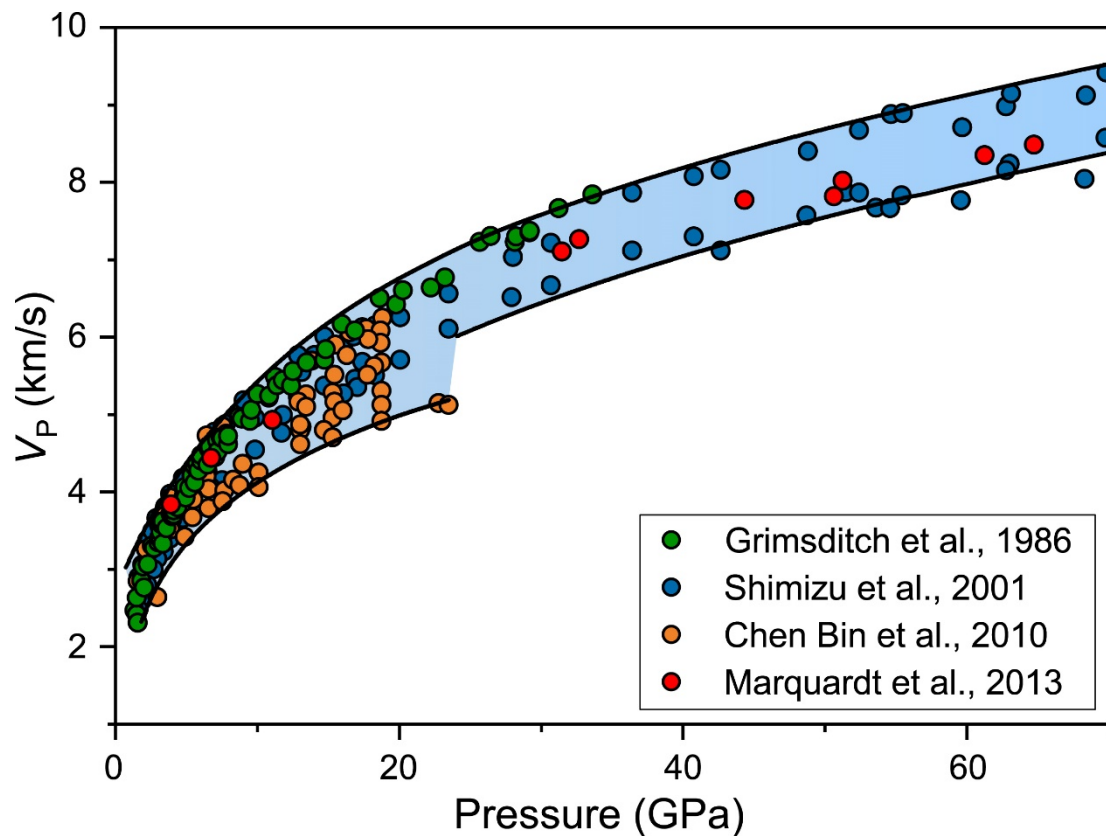


Figure S1.  $V_P$  of the solid Ar at high P-T conditions. Green: Grimsditch et al. (1986); blue: Shimizu et al. (2001); yellow: Chen et al. (2010); red: Marquardt et al. (2013). Black lines indicate the maximum and minimum of the measurements in literature.

## References cited

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