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Compressibility of single-crystal zircon up to 19 GPa: implications for the partitioning coefficient of trace elements

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Figure captions (Supplement)

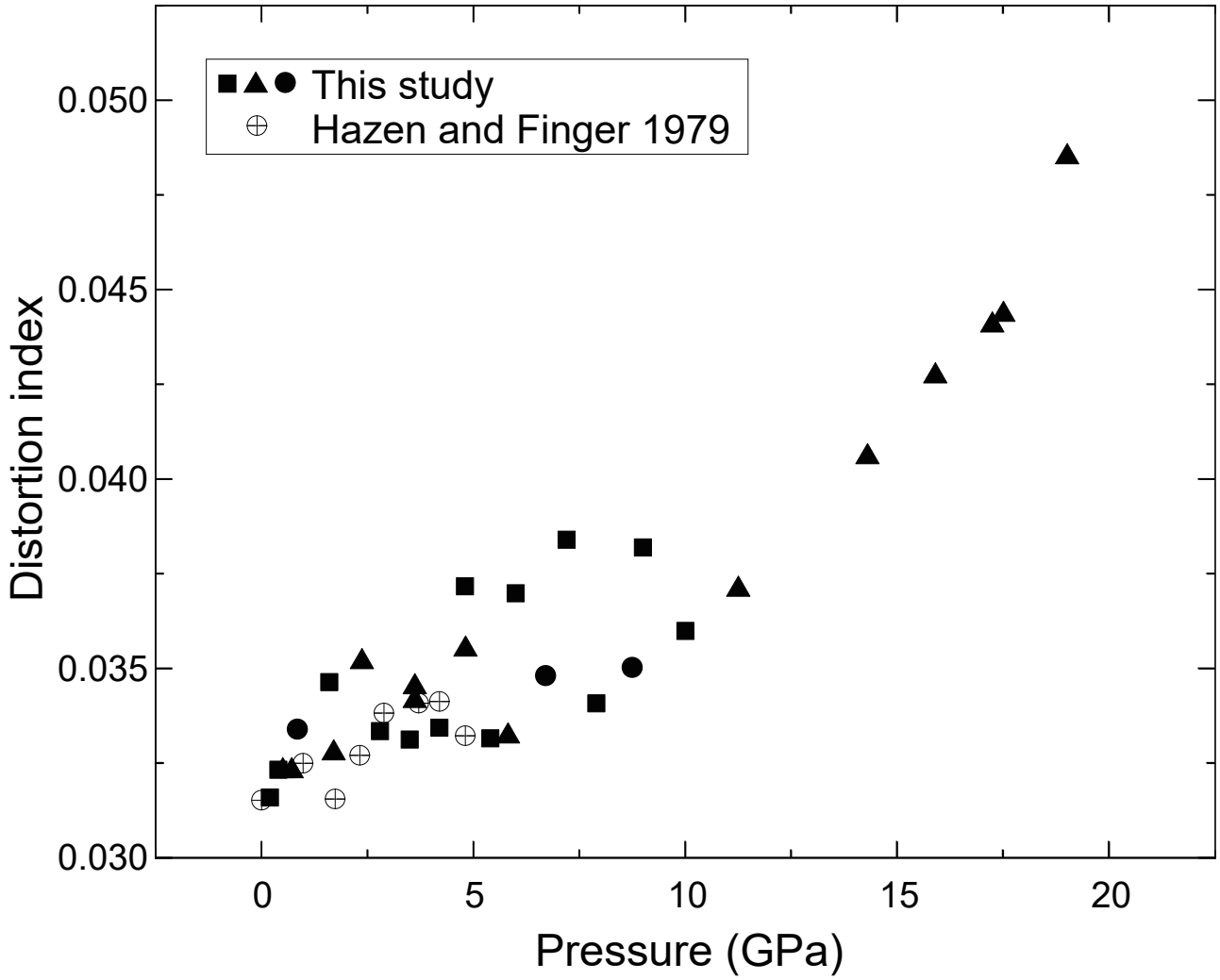
Figure S1.

Pressure evolution of the (a) distortion index and (b) effective coordination number of zircon. Filled symbols show the data, which is likely taken in the zircon stability field, and open symbols are in the metastable pressure conditions.

Figure S2.

Pressure evolution of the strain of the bond length of zircon. Filled symbols show the data, which is likely taken in the zircon stability field, and open symbols are in the metastable pressure conditions.

Fig. S1


This study
Hazen and Finger 1979
Distortion index
0.050
0.045
0.040
0.035
0.030
0
5
10
15
20
Pressure (GPa)

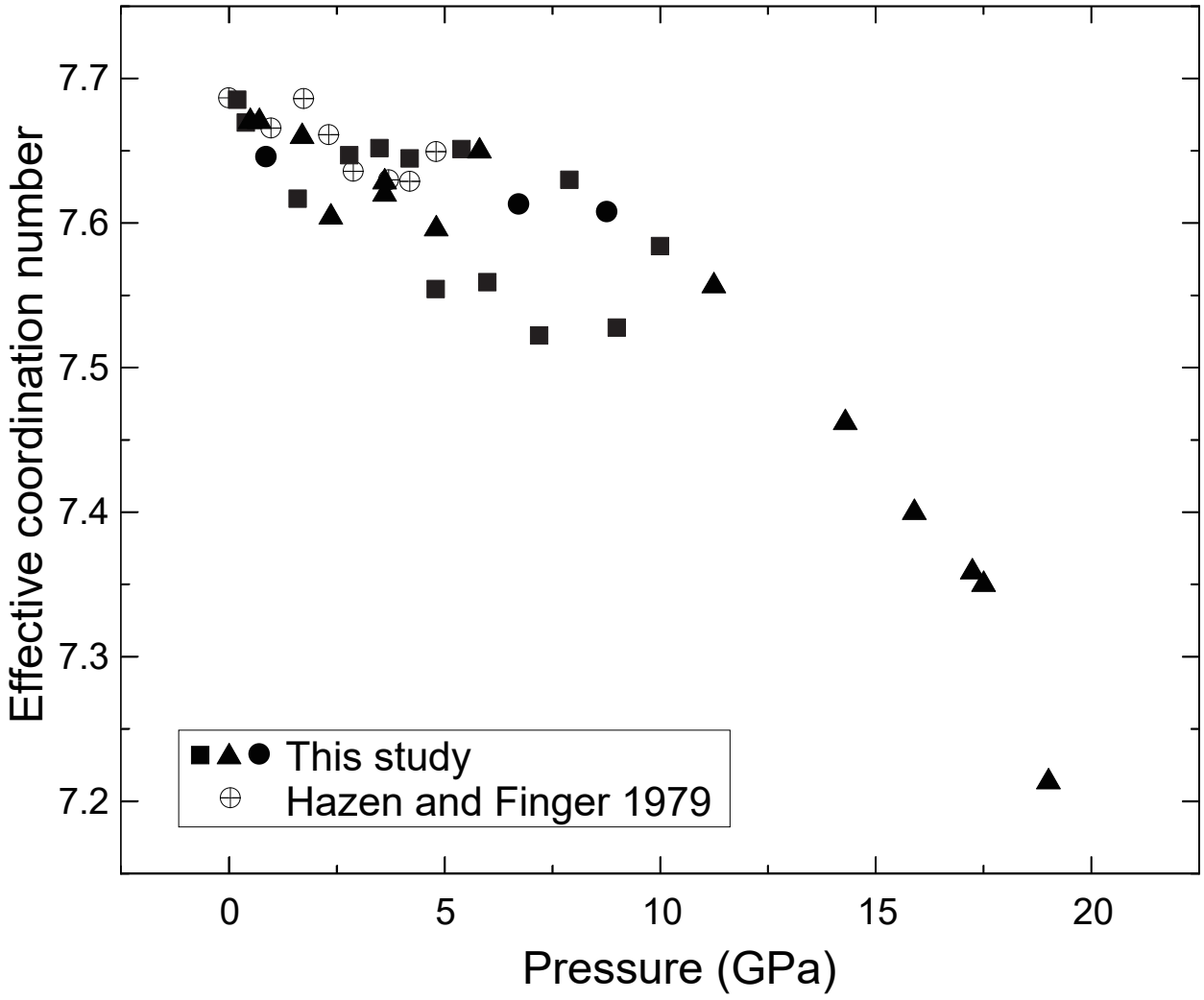

This study
Hazen and Finger 1979
Effective coordination number
7.7
7.6
7.5
7.4
7.3
7.2
0
5
10
15
20
Pressure (GPa)

Fig. S2

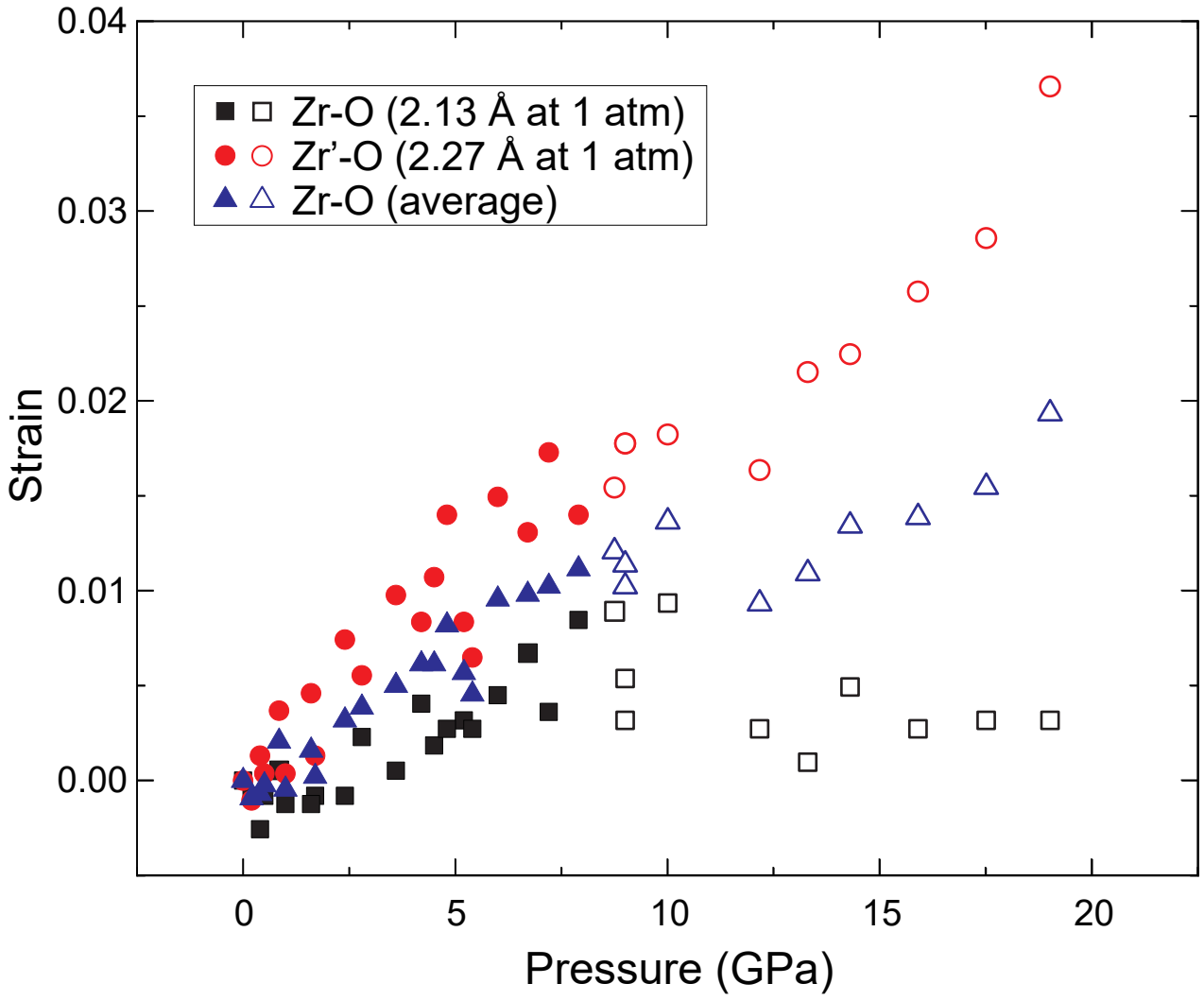

Zr-O (2.13 Å at 1 atm)
Zr'-O (2.27 Å at 1 atm)
Zr-O (average)
Strain
Pressure (GPa)
0.04
0.03
0.02
0.01
0.00
0
5
10
15
20

Table S1. Comparison of Young's moduli.

Data	Young's modulus E (GPa)
Zr-O bond length (2.13 Å at 1 atm)	412(41)
Zr'-O bond length (2.27 Å at 1 atm)	789(91)
Averaged Zr-O bond length	606(40)
Cite compressibility of ZrO_8	251(38)