1754 H. Lim et al.

Table 1. Orientation correction estimates for the stations in South Korea.

STA	Orientation	Error %Backazimuth		Orientation	Validation period		Previously reported data (°)		
	(°; from harmonic decomposition)	(°; 1σ)	coverage	(°; from mean of T-RF)	From	То			
BAR	5.5	0.4	94	5.5	2007-12	2015-01			
BGD	359.5	0.6	100	359.6	2005-01	2015-01	359.8^{a}	357.2^{b}	
BOSB	31.5	0.6	87	31.3	2012-08	2015-01	33.6^{c}		
BUS2	9.3	0.3	99	9.4	2005-01	2015-01			
CHC2	3.8	0.6	90	3.9	2012-08	2015-01			
CHJ2	10.5	0.4	99	10.6	2005-01	2015-01		h	
CHNB	19.4	0.6	100	19.3	2005-01	2015-01	13.5 ^a	15.3 ^b	
DACB	268.4	0.3	94	268.5	2010-08	2015-01	267.6 ^c		
DAG2	3.5 9.6	0.3 0.4	93 94	3.5 9.5	2010-08 2010-08	2015-01			
DGY2 EMSB	338.2	0.4	93	338.2	2010-08	2015-01 2015-01	337.0 ^c		
EURB	104.4	0.0	86	105.1	2012–12	2013-01	106.0°		
GAHB	128.5	0.3	94	128.6	2008–10	2015-01	130.7 ^c		
GKP1	5.4	0.5	97	5.4	2005-01	2015-01	4.2 ^a	3.4^{b}	
GOCB	234.5	0.5	89	234.3	2012-08	2015-01	235.0 ^c	2	
GSU	146.2	0.6	99	146.5	2005-01	2015-01	142.6 ^a	147.7 ^c	140.8^{b}
GWYB	120.5	0.7	90	120	2012-08	2015-01	123.3 ^c		
HALB	355.4	1.1	92	355.1	2012-08	2015-01	221.3^{c}		
HAMB	121.0	0.5	90	120.8	2012-08	2015-01	125.0^{c}		
HAWB	246.7	0.6	89	247.1	2012-08	2015-01	246.2 ^c		
HKU	8.2	0.5	96	8.3	2005-01	2015-01	9.1^{a}	5.6^{b}	
HSB	144.7	0.8	83	144.5	2005-01	2007-01			
HSB	228.5	0.4	96	228.6	2008-01	2015-01	224.3 ^a	226.2^{c}	221.6 ^b
HWCB	3.3	0.3	93	3.4	2010-08	2015-01	2.4^{c}		
HWSB	60.9	0.9	96	60.7	2008-01	2012-10	59.0 ^a	66.9 ^c	59.0^{b}
HWSB	=	_	-	_	2014-01	2014–06 ^c	155.6 ^c		
IMWB	196.7	0.4	92	197.1	2012-08	2015-01	196.1 ^c	2504	
INCN ⁰⁰ INCN ⁰⁰	335.3	5.0	92	327.7	2009-10	2012–10	356 ^d 358 ^d	359^{d}	
INCN ¹⁰	4.6	1.1	90	4	2013–10	2016-01	358 ^d	357^{d}	359^{d}
INCN ¹⁰	359.2 0.1	0.6 0.4	94 90	359.2 359.7	2009–10	2012–10	0 ^d	35/"	339"
JEO2	2.7	0.4	89	3	2013-10 2012-08	2016-01 2015-01	0"		
JJB	237.1	0.7	94	236.5	2007–10	2013-01	235.8 ^a	237.6^{b}	
JJB	233.8	1.2	82	233.3	2014–01	2016-01	255.0	257.0	
JJU	1.9	0.6	100	1.8	2005-01	2015-01			
JRB	194.7	0.3	99	194.7	2006–10	2015-01	193.7 ^a	191.6 ^c	192.5^{b}
JSB	245.0	0.3	99	245.2	2006-10	2015-01	245.5a	245.3 ^c	243.0^{b}
KOHB	256.3	4.7	93	251.7	2009-08	2013-12	190.4 ^c		
KOHB	-	-	-	-	2014-04	2014-06 ^c	3.5 ^c		
KSA	4.4	0.3	99	4.2	2005-01	2015-01	0.7^{a}	1.2^{b}	
MGB	134.7	0.5	96	134.8	2005-03	2009-08	134.2 ^a	133.2^{b}	
MGB	10.8	0.9	87	10.8	2010-11	2012-12			
MGB	359.2	0.7	73	359.2	2013-06 ^c	2014–06 ^c	356.0^{c}		
NAWB	148.6	0.7	90	148.8	2012-08	2015-01	151.2^{c}		
NPR	2.9	1.0	100	3.2	2005-01	2015-01	4.3 ^a	4.2^{b}	
OKCB	251.1	0.5	92	250.9	2012-08	2015-01	253.5 ^c		
OKEB	35.2	1.1	96	34.8	2011–10	2015-01	18.2 ^c		
SEHB	264.5	0.5	92	264.2	2008-11	2011-01			
SEHB	3.5	1.7	59	1.2	2011-02	2012-07	74.00		
SEHB SEO	77.2 358.1	0.4 0.3	93 100	77.2 358.1	2012-08 2005-01	2015-01 2015-01	74.9 ^c		
SEO2	0.9	0.3	93	1.2	2010-08	2015-01			
SES2	7.3	0.4	89	7.2	2010-08	2015-01			
SHHB	326.3	0.4	92	326.2	2011–10	2015-01	325.6 ^c		
SMKB	355.0	3.8	63	355.9	2011–10 2013–09 ^c	2013–01 2014–03 ^c	2.4 ^c		
SMKB	172.6	0.9	44	172.3	2014–04 ^c	2014–06 ^c	165.4 ^c		
SND	0.9	0.2	99	0.9	2005-01	2015-01	359.0 ^a	358.4^{b}	
SNU	3.8	0.6	92	3.8	2005-01	2007-09	5.5 ^a ,†	5.2 ^b ,†	
SNU	=	-	-	=	2007-11	2008-01			
SNU	3.5	0.3	96	3.9	2008-03	2015-01			
TJN	1.6	0.4	99	1.5	2005-01	2015-01	0.1^{a}	355.0^{b}	
ULJ2	358.0	0.3	94	358.1	2010-08	2015-01			
ULL	9.7	0.9	96	9.4	2005-01	2009-12			
ULLB	10.4	0.5	99	10.2	2006-10	2015-01	9.4^{a}	20.0^{c}	2.5^{b}
YKB	194.9	0.3	97	194.9	2006-10	2015-01	191.0^{a}	187.0^{c}	195.7 ^b
YNCB	309.0	0.7	90	309.1	2008-10	2010-08			
YNCB	21.0	0.5	94	20.8	2011-01	2015-01	28.4^{c}		
YSB	13.6	0.4	94	13.8	2009-02	2015-01	13.8^{c}		

Notes: The orientation angle ranges from 0° to 360° with clockwise direction, and our values indicate the angles that we need to correct from the misaligned north. We note that we apply this correction scheme to previous estimates (Ekström & Busby 2008; Shin et al. 2009; Lee & Rhie 2015; Lee & Sheen 2015). '00' and '10': location code given for the station INCN (http://ds.iris.edu/mda/IU/INCN) by the Data Management Center (DMC) of the Incorporated Research Institutions for Seismology (IRIS).

^aShin et al. (2009).

^bLee & Rhie (2015).

^cLee & Sheen (2015).

 $^{{\}it d} {\it Ekstr\"om~\&~Busby~(2008);~http://www.ldeo.columbia.edu/}{\sim} ekstrom/Projects/WQC/COMB_QC/POL_IU_S_ALL_EPO.html.$

[†]Their periods of used data (January 2007 to September 2008) contain the replacement dates of sensors: 23 October 2007 and 18 February 2008 (Supporting Information Table S1).