

Errata and comments on S. Helgason: Integral Geometry and Radon Transforms

Page and line in $\begin{cases} \text{above} \\ \text{below} \end{cases}$	Instead of:	Read:
3 ⁷	function	functions
4 ²	w	u
17 ₁	$((\widehat{f}))^\vee$	$(\widehat{f})^\vee$
35 ¹⁶	\mathcal{D}	\mathcal{D}_H
39 ¹	$G(d, n)$	$\mathcal{D}(G(d, n))$
60 ²	\mathcal{D}_H	D
122 ₁₄	spheres	sphere
125 ⁹	IV	V
134 ⁹	(3)	(14)
134 ¹⁵	1.9	1.10
136 ⁷	(64)	(32)
162 ¹²	the	the plane through (x', r) parallel to the
162 ¹³	$r \sin \theta$	$x' + r \sin \theta$
173	[1966]	[1966b]
178 ¹⁸	Theorem 1.26	Theorem 1.25
183 ₅	Theorem 1.9	remove
183 ₂	Theorem 1.8	Theorems 1.8, 1.9
206 ₇	$\frac{1}{2}$	$-\frac{1}{2}$
207 ₉	u	$u(o)$
209 ₁₀	1.5	1.2
210 ⁴	$L^1(X)$	$L^1(X) \cap C(X)$
216 ₉	VI, 1	VI, 2
217 ⁶	t	t^2
222 ¹¹	of	of products of
226 ₈	=	$dx =$
250 ¹²	G abelian	G abelian and not totally disconnected

Page and line in $\begin{cases} \text{above} \\ \text{below} \end{cases}$	Instead of:	Read:
255 ₃	(\tilde{Z}_σ, Z)	$(\tilde{Z}_\sigma, 0)$
255 ₃	\mathfrak{g}	\mathfrak{g}_Z
261 ¹⁰	$(\lambda(\tilde{Y}))$	$(\lambda(\tilde{Y})f)$
261 ⁹	$([Y_1, Y_2]^-)$	$([Y_1, Y_2]^-g)$
269 ¹	automorphism	automorphism φ
269 ²	arbitrary	involutive
289 ¹⁸	219	239

- 204² Add: For $n = 2| (M^r f)(y) | \leq C | \log r | \sup |f|$. This justifies 206⁴.
- Page 178 Correction to Theorem 1.9 page 178: For X not a sphere the theorem is proved in Klein, Thorbergsson and Verhóczy [2009], even without assumption (ii).
For $X = S^n$, (11) should be replaced by
- (11') $f(x) = 0$ for x outside the balls $\mathcal{B}_\delta(o)$ and $\mathcal{B}_\delta(o')$, o' being antipodal to o on S^n . Since $\hat{f} \equiv 0$ for f skew f can be taken symmetric and by (ii) its derivatives vanish at the equator so (11') follows from Theorem 1.25 in Chapter III.

Comment on Theorem 2.2, Ch. VI.

While the proof is only given for X noncompact the theorem holds also for M compact, because of Theorem 2.1. For this define the mean value operator

$$(M^y f)(g \cdot 0) = \int_K f(gk \cdot y) dk.$$

Then the proof holds with (23) replaced by $L_y - L_x$.

Integral Geometry and Radon Transforms

Helgason, S.

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