Supplementary information for Heavy fermion behavior in the quasi-one-dimensional Kondo lattice $CeCo_2Ga_8$

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Table S1: Crystallographic data and structure refinement for $CeCo_2Ga_8$

empirical formula	$CeCo_2Ga_8$
formula weight	815.74 g/mol
temperature	213(2) K
wavelength	Mo K_α (0.71073 Å)
crystal system	orthorhombic
space group	Pbam (55)
unit cell dimensions	$a = 12.3792(7)$Å
	$b = 14.3053(9)$Å
	$c = 4.0492(3)$Å
cell volume	717.07(8) Å^3
Z	4
density, calculated	7.55573 g/cm^3
crystal size (mm)	$0.099 \times 0.050 \times 0.035$
$h\ k\ l$ range	$-25 \leq h \leq 25, -20 \leq k \leq 29, -6 \leq l \leq 8$
$2\theta_{max}$	92.54
linear absorption coeff.	40.119 mm^{-1}
absorption correction	multi-scan
T_{min}/T_{max}	0.1200/0.2894
no. of reflections	18374
R_{int}	0.0548
no. independent reflections	3398
no. observed reflections	$3021[F_o > 4\sigma(F_o)]$
$F(000)$	1440
R values$^\alpha$	4.91 % ($R_1[F_o > 4\sigma(F_o)]$) 12.02 % (wR_2)
weighting scheme	$w = 1/[\sigma^2(F_o^2) + (0.0676P)^2 + 1.6858P]$, where $P = (F_o^2 + 2F_c^2)/3$
diff. Fourier residues	[-3.474,14.794] e/Å^3
refinement software	SHELXL-2014/7

$^\alpha$More than double difference in the R values are probably due to the weighting scheme used in the analysis.

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Table S2: Structure parameters and anisotropic displacement parameters (Å^2) of $CeCo_2Ga_8$

Site	Wyckoff position	x	y	z	U_{eq}
Ce	4h	0.34193(2)	0.68065(2)	0.5000	0.00700(6)
Co1	4h	0.53441(4)	0.90574(4)	0.5000	0.00532(9)
Co2	4h	0.65323(4)	0.59633(4)	0.5000	0.00449(9)
Ga1	2c	0.5000	1.0000	0.0000	0.00677(10)
Ga2	4g	0.45038(4)	0.81869(3)	0.0000	0.00660(8)
Ga3	4g	0.66282(3)	0.87809(4)	0.0000	0.00640(8)
Ga4	4h	0.59690(3)	0.75312(3)	0.5000	0.00727(8)
Ga5	4g	0.52270(4)	0.63216(3)	0.0000	0.00616(8)
Ga6	4g	0.73769(4)	0.67549(3)	0.0000	0.00682(8)
Ga7	2b	0.5000	0.5000	0.5000	0.00804(11)
Ga8	4g	0.67005(4)	0.49036(4)	0.0000	0.00704(8)
Ga9	4h	0.83926(3)	0.54461(4)	0.5000	0.00821(9)

Atom	U11	U22	U33	U12	U13	U23
Ce	0.00621(9)	0.00855(11)	0.00625(9)	0.00067(5)	0.00000	0.00000
Co1	0.00544(16)	0.00402(19)	0.00651(18)	0.00023(13)	0.00000	0.00000
Co2	0.00418(16)	0.00320(19)	0.00611(19)	-0.00021(12)	0.00000	0.00000
Ga1	0.0091(2)	0.0054(2)	0.0058(2)	0.00188(17)	0.00000	0.00000
Ga2	0.00546(15)	0.00645(17)	0.00790(17)	-0.00113(11)	0.00000	0.00000
Ga3	0.00424(14)	0.00734(18)	0.00761(17)	0.00001(11)	0.00000	0.00000
Ga4	0.00674(16)	0.00413(16)	0.01095(18)	0.00070(12)	0.00000	0.00000
Ga5	0.00488(14)	0.00625(16)	0.00736(15)	0.00061(11)	.00000	0.00000
Ga6	0.00595(15)	0.00736(18)	0.00714(16)	-0.00183(12)	0.00000	0.00000
Ga7	0.0051(2)	0.0069(2)	0.0120(2)	-0.00142(17)	0.00000	0.00000
Ga8	0.00829(15)	0.00546(17)	0.00737(17)	0.00194(12)	0.00000	0.00000
Ga9	0.00499(15)	0.0093(2)	0.01039(19)	0.00204(12)	0.00000	0.00000

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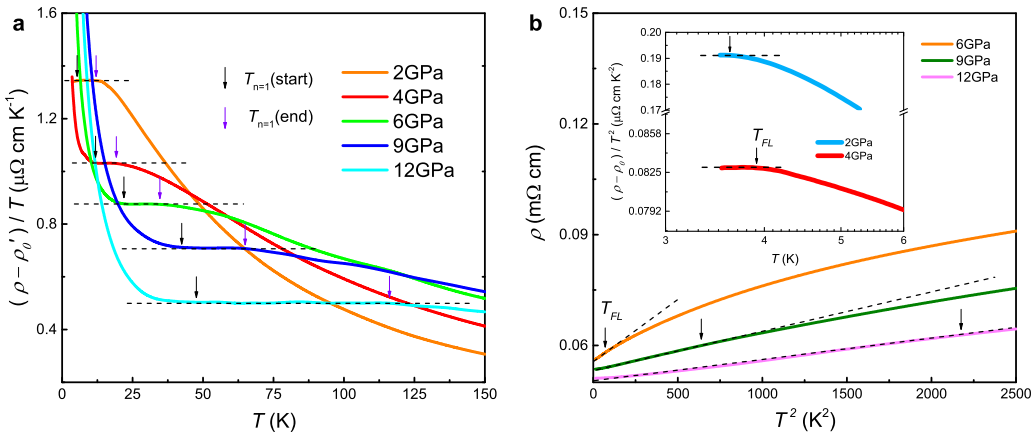

Figure S1: (Color online) (**a**) The curves of $(\rho - \rho_0')/T$ versus T where ρ_0' is obtained from the linear fit. The plateaus suggest the T-linear behavior corresponding to the region for $n = 1$. (**b**) The $\rho - T^2$ plot fitting with $\rho = \rho_0 + AT^2$ where ρ_0 is the residual resistivity at zero temperature. The inset shows the temperature dependence of $(\rho - \rho_0)/T^2$ with ρ_0 modified properly as the residual resistivity.