Importance of Correlation and Scalar Relativistic effects

	TM Multiplet Splitting	HF	CCSD	CCSD(T)	ΛCCSD(T)	CCSDT-3	Experiment
Fe	$^5F(d^6s^{2)})-^5D\ (d^7s^1)$	2.106	1.103	0.993	0.975	0.954	0.87
Co	$^4F(d^7s^2)-^4F(d^8s^1)$	1.864	0.680	0.532	0.505	0.479	0.42
Ni	$^3F(d^8s^2)-^3D\ (d^9s^1)$	1.201	−0.044	−0.168	−0.210	−0.135	−0.03
	$^3F(d^8s^2)-^1S\ (d^{10})$	5.694	2.180	1.658	1.487	1.299	1.71
Cu	$^2D(d^9s^2)-^2S(d^{10}s^1)$	0.153	−1.208	−1.383	−1.434	−1.459	−1.49