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CS studies of dense molecular cloud cores [Wu et al.(1987)].
A reexamination of the energetics of molecular clouds [Wu & Evans(1989)]

TABLE 3
DUST TEMPERATURE

Source Name	Position		Flux Densities				T_D		T_K
	α	δ	12 μm (Jy)	25 μm (Jy)	60 μm (Jy)	100 μm (Jy)	$\beta = 1$ (K)	$\beta = 2$ (K)	(K)
B35	$05^h41^m45^s.3$	09°07′40″	0.25:	2.37	24.0	73.0	$30 \pm >2$[a]	$26 \pm >2$[a]	19.3
NGC 7822	00 01 23.0	68 17 59	1.47	3.50	11:	<102	>22:	>20:	19.6
IC 5146	21 51 54.9	46 59 26	5.3:	>4.1	160	<740	>27	>23	38.5
S140	22 17 41.1	63 03 41	258	1250	10400	13400	42 ± 2	34 ± 1	30.5
NGC 7538	23 11 36.9	61 11 57	208	1460	6530	13900	34 ± 2	29 ± 1	28.6
GL 437	03 03 33.2	58 19 21	27.9	330	972	1290	41 ± 2	34 ± 1	38.0
Cep B	22 55 06.7	62 21 41	24.7	99.7	1500	2960	35 ± 3	30 ± 2	38.3
S88	19 44 41.4	25 05 17	83.7:	938	7920	13100	38 ± 3	31 ± 2	35.3

[a] The uncertainties are lower limits because only a lower limit to the uncertainty in the 100 μm flux density is given in the *IRAS Point Source Catalog.*

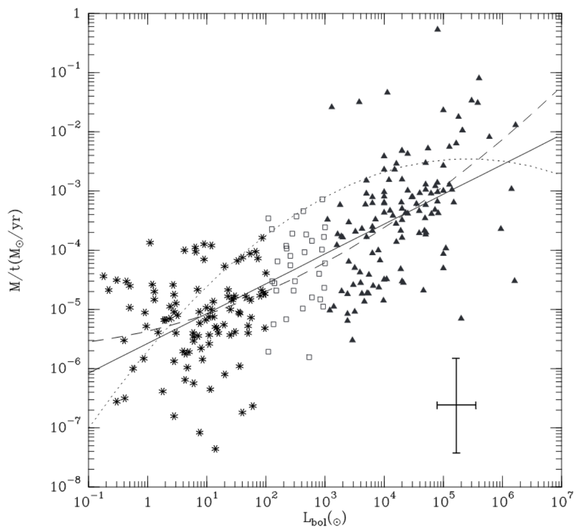
Possible explain for $T_k > T_d$

* effect of small grains. such as $T_{graphite} > T_{gas} > T_{silicate} \sim T_{dust}$
* shock heating
* photoelectric heated surface gas
* heating though H_2O absorption from $40\mu m - 80\mu m$

Outflows Near the Low Mass Young Stellar Objects[Wu(1990)]
Molecular Line Studies of Dense Core Motions(rp)[Wu(1992)] Observational studies of dense core motions[Wu(1993)]

* different line width for cores with/without sources while nearly same temperature.
* outflow happen rate; momentum contributes from outflow; outflow and shock chemistry of CS
* relation between rotations and outflows (collimation of outflows).

Surveys of dense cores for high-velocity gas[Wu et al.(1992)]
A catalogue of high velocity molecular outflows[Wu et al.(1996)].
A Mapping Study for Massive Dense Cores[Wu et al.(2000)].
A CO J=2-1 Mapping Study for Molecular Outflows Near Massive Young Stellar Objects[Wu et al.(2000)]
A search for massive dense cores with 13CO J = 1-0 line[Wu et al.(2001)]
A study of high velocity molecular outflows with an up-to-date sample[Wu et al.(2004)]
Objects earlier than precursors of UC HII regions: Inflow-signpost for a common way of star formation[Wu et al.(2005)]
CO J = 2-1 Maps of Bipolar Outflows in Massive Star-forming Regions[Wu et al.(2005)]



The Discovery of a Massive SCUBA Core with both Inflow and Outflow Motions[Wu et al.(2005)]
Ammonia cores in high mass star formation regions[Wu et al.(2006)]
SIGNATURES OF INFLOW MOTION IN CORES OF MASSIVE STAR FORMATION: POTENTIAL COLLAPSE CANDIDATES[Wu et al.(2007)]

TABLE 2
PROFILES OF THE OBSERVED SOURCES

Source Name[a]	α^b (J2000.0)	δ^b (J2000.0)	D^c (kpc)	Profile[d]	Ref.	Source Name[a]	α^b (J2000.0)	δ^b (J2000.0)	D^c (kpc)	Profile[d]	Ref.
W3-W$^{\rm I}$	02 25 32.4	+62 06 01	1.95	B	1	18488+0000SE$^{\rm I}$	18 51 25.6	+00 04 07	5.4	BRL	3, 7
W3-C$^{\rm II}$	02 25 39.5	+62 05 51	2.3	BRS	1	G34.26+0.15$^{\rm II}$	18 53 18.4	+01 14 56	3.7	In, B	6
W3-SE$^{\rm I}$	02 25 54.5	+62 04 11	2.3	B	1	18521+0134$^{\rm I}$	18 54 40.8	+01 38 02	5.0	B	3, 7
05358+3543$^{\rm I}$	05 39 10.4	+35 45 19	1.8	BRS	3, 7	18530+0215$^{\rm I}$	18 55 34.2	+02 19 08	5.1	S	3, 7
05490+2658$^{\rm I}$	05 52 12.9	+26 59 33	2.1	...	3, 7	S76E$^{\rm II}$	18 56 11.0	+07 53 28	2.1	S?	4, 9
G10.47+0.03$^{\rm II}$	18 08 38.2	−19 51 50	5.8	B	10	18553+0414NE$^{\rm I}$	18 57 53.4	+04 18 15	0.6	B	3, 7
G12.42+0.50$^{\rm II}$	18 10 51.8	−17 55 56	2.1	B	2	19012+0536$^{\rm I}$	19 03 45.1	+05 40 40	4.6	B	3, 7
G12.89+0.49$^{\rm II}$	18 11 51.3	−17 31 29	3.5	BRL	2, 3, 9	19092+0841SW$^{\rm I}$	19 11 36.7	+08 46 20	4.48	BRL	5
G13.87+0.28$^{\rm II}$	18 14 35.4	−16 45 37	4.4	S?	10	G43.89−0.79$^{\rm II}$	19 14 26.2	+09 22 34	4.2	B	10
18144−1723NW$^{\rm I}$	18 17 23.8	−17 22 09	4.33	R	5	19217+1651N$^{\rm I}$	19 23 58.8	+16 57 45	10.5	B	3, 7
18182−1433$^{\rm I}$	18 21 07.9	−14 31 53	4.5	B	3, 7	19266+1745$^{\rm I}$	19 28 54.0	+17 51 56	0.3	...	3, 7
G19.61$^{\rm II}$	18 27 37.9	−11 56 07	4.0	S?	2	19410+2336$^{\rm I}$	19 43 11.4	+23 44 06	2.1	B	3, 7
18264−1152$^{\rm I}$	18 29 14.3	−11 50 26	3.5	R	3, 7	S86SE$^{\rm I}$	19 43 49.7	+23 28 41	1.9	BRS	4
18306−0835$^{\rm I}$	18 33 21.8	−08 33 38	4.9	R	3, 7	S87N$^{\rm I}$	19 46 20.6	+24 36 04	2.3	S?	4
G24.49−0.04$^{\rm II}$	18 36 05.3	−07 31 23	3.5	B	2, 11	20126+4104$^{\rm I}$	20 14 26.0	+41 13 32	1.7	S?	3, 7
18337−0743NE$^{\rm I}$	18 36 40.9	−07 39 20	4.0	BRL	3	20216+4107$^{\rm I}$	20 23 23.8	+41 17 40	1.7	S	3, 7
18355−0650$^{\rm II,*}$	18 38 14.2	−06 47 47	4.2	B	8	20319+3958$^{\rm I}$	20 33 49.3	+40 08 45	1.6	S	3, 7
18372−0541$^{\rm I}$	18 39 56.0	−05 38 49	1.8	B	3, 7	22134+5834$^{\rm I}$	22 15 09.1	+58 49 09	2.6	BRS	3, 7
18385−0512E$^{\rm I}$	18 41 13.3	−05 09 06	2.0	R	3, 7	23033+5951$^{\rm I}$	23 05 25.7	+60 08 08	3.5	S?	3, 7
G31.41+0.31$^{\rm II}$	18 47 34.7	−01 12 46	7.9	...	10	NGC7538-11$^{\rm I}$	23 13 44.7	+61 26 54	2.8	B	2
18454-3$^{\rm I}$	18 47 55.9	−01 53 35	5.6	...	3, 7	NGC7538-N$^{\rm II}$	23 13 45.4	+61 28 12	2.8	B	2
18454-4$^{\rm I}$	18 48 01.4	−01 52 37	5.6	...	3, 7	23139+5939$^{\rm I}$	23 16 09.3	+59 55 23	4.8	BRS	3, 7
18470−0044$^{\rm I}$	18 49 36.7	+00 41 05	8.2	R	3, 7	23151+5912$^{\rm I}$	23 17 21.0	+59 28 49	5.7	BRS?	3, 7

[a] Indices I and II attached to the source names denote groups I and II, respectively (see § 1); the asterisk (*) denotes the optical thin line as quoted from X. Luo & Y. Wu (2007, in preparation).

[b] The positions are taken from the references. Units of right ascension are hours, minutes, and seconds, and units of declination are degrees, arcminutes, and arcseconds.

[c] If there is no distance available for a core, the distance is calculated using the Galactic rotation curve of Brand & Blitz (1993). If there is a distance ambiguity, the nearer one is chosen.

[d] Type of detected line profile (see § 3.1 for definitions).

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TABLE 3
BLUE-EXCESS STATISTICS

Line/Source	N_B	N_R	N_T	E	p
Results from Selected Lines					
HCO^+(1–0)	16	4	41	0.29	0.006
HCO^+(3–2)	8	5	28	0.11	0.29
CS(3–2)	9	1	28	0.29	0.01
HCO^+(1–0) Line Results with Respect to Source Properties					
Group I	9	4	29	0.17	0.13
Group II	7	0	12	0.58	0.008
Total	16	4	41	0.29	0.006

NOTES.—N_B, number of blue profiles; N_R, number of red profiles; N_T, total number of observed sources; E, excess; p, statistical likelihood that the result is caused by random fluctuations (see § 3.2). Note that only 15 of the 17 inflow candidates show blue profiles in the HCO^+(1–0) line. The other two are identified by their CS(3–2) and HCO^+(3–2) spectra. One of the 16 HCO^+(1–0) blue profiles is a BRL source (see § 3.1).

Gas Emissions in Planck Cold Dust Clumps-A Survey of the J = 1-0 Transitions of 12CO, 13CO, and C18O[Wu et al.(2012)]
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