Figure 1a.

Figure 1b.

Figure 1c.

Figure 1d.

Figure 1e.

Figure 1f.

Table 1. Molecular Line Lists

FILE	NUMBER OF LINES	WAVELENGTH (NM) FIRST	LAST	COMMENT
H2	28486	84.4941	184.4573	Lyman and Werner
HYDRIDES	331268	203.6264	3245.1715	CH,NH,OH,MgH,SiH all isotopes
COAX	396004	111.3365	460.6524	CO 4th Pos all isotopes
COIR	118920	963.5078	9998.8853	CO vib-rot all isotopes
SIOAX	760378	177.3128	546.2833	SiO A-X all isotopes
SIOEX	947015	143.0468	462.4214	SiO E-X all isotopes
CNAX12	484709	292.5406	99912.800	^{12}C^{14}N Red
CNAX13	503631	295.1871	99924.784	^{13}C^{14}N Red
CNAX15	289887	341.5994	99776.188	^{12}C^{15}N Red
CNBX	323818	201.9947	715.7552	CN Violet all isotopes
C2AX	406236	271.8071	9999.6289	C_2 Phillips all isotopes
C2BA12	462803	389.6061	99957.754	^{12}C^{12}C Ballik-Ramsay
C2BA13	387809	511.6587	99980.746	^{12}C^{13}C Ballik-Ramsay
C2BA33	313319	527.1495	80319.395	^{13}C^{13}C Ballik-Ramsay
C2DA12	329771	344.9621	2541.6874	^{12}C^{12}C Swan
C2DA13	253014	374.0201	991.5625	^{12}C^{13}C Swan
C2DA33	217545	376.2757	959.4157	^{13}C^{13}C Swan
C2EA12	487232	176.0052	862.4585	^{12}C^{12}C Fox-Herzberg
C2EA13	332214	177.3769	560.9010	^{12}C^{13}C Fox-Herzberg
C2EA33	260883	178.6938	543.2282	^{13}C^{13}C Fox-Herzberg
TIOAX6	325116	528.5640	1875.4212	^{46}Ti^{16}O γ
TIOAX7	327496	528.7059	1771.6149	^{47}Ti^{16}O γ
TIOAX8	647203	490.4263	2146.0045	^{48}Ti^{16}O γ
TIOAX9	332113	528.9757	1864.4024	^{49}Ti^{16}O γ
TIOAX0	334222	529.1046	1860.9887	^{50}Ti^{16}O γ
TIOBX6	343598	246.6118	1232.9218	^{46}Ti^{16}O γ'
TIOBX7	345990	246.3570	1209.4093	^{47}Ti^{16}O γ'
TIOBX8	861488	235.9828	1362.8784	^{48}Ti^{16}O γ'
TIOBX9	350530	246.7795	1187.2650	^{49}Ti^{16}O γ'
TIOBX0	352802	247.3491	1186.9649	^{50}Ti^{16}O γ'
TIOCX6	232718	350.0947	1562.0368	^{46}Ti^{16}O α
TIOCX7	234318	350.0471	1554.5985	^{47}Ti^{16}O α
TIOCX8	503950	257.0800	1316.1735	^{48}Ti^{16}O α
TIOCX9	237430	350.0113	1540.7715	^{49}Ti^{16}O α
TIOCX0	238827	349.9744	1534.3348	^{50}Ti^{16}O α
TIOEX6	241398	630.6768	2002.6215	^{46}Ti^{16}O ϵ
TIOEX7	242954	631.0335	1997.7022	^{47}Ti^{16}O ϵ
TIOEX8	510074	549.4411	2273.1493	^{48}Ti^{16}O ϵ
TIOEX9	245978	631.7067	1988.4477	^{49}Ti^{16}O ϵ
TIOEX0	247466	632.0252	1984.0965	^{50}Ti^{16}O ϵ
TIOBA	310376	541.4458	2250.2486	TiO δ all isotopes
TIOCA	223850	446.7588	1669.0456	TiO β all isotopes
TIOFA	153496	432.0083	816.6252	TiO f-a all isotopes
TIOBD	158000	593.4372	2662.9648	TiO ϕ all isotopes
TIOED	102107	332.9690	562.5112	TiO e-d all isotopes