4s4f 8F levels S.E. Johansson (2007, personal communication to
Castelli) SEJ.
Described but not listed in Physica Scripta T134, 2009, 014013, 8pp.

-------- Original Message --------
Subject: Re: Fwd: Re: Fe 2 energy levels
Date: Wed, 05 Dec 2012 10:25:07 +0100
From: Fiorella Castelli <castelli@oats.inaf.it>
To: Robert Kurucz <rkurucz@cfa.harvard.edu>

If I well remember the Table comes from a talk he had in
Aveiro-Portugal in 2006, but the table is not included in
the Proceedings. He also showed the energy levels in
Lund, but also in this case the tables (two) are not in the
Proceedings. I have these determinations because he sent me a copy
of the slides he showed in Lund. The levels are:

8F	13/2	132158.38
	11/2	132154.82
	9/2	132151.83
	7/2	132149.44
	5/2	132147.57
	3/2	132146.32
	1/2	132145.52

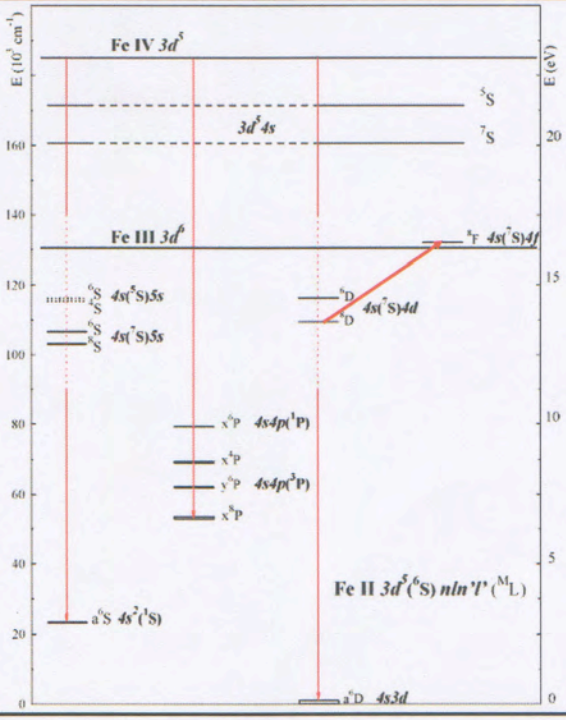
The 8D even levels are:

	11/2	109486.54
	9/2	109474.09
	7/2	109463.66
	5/2	109455.62
	3/2	109449.89

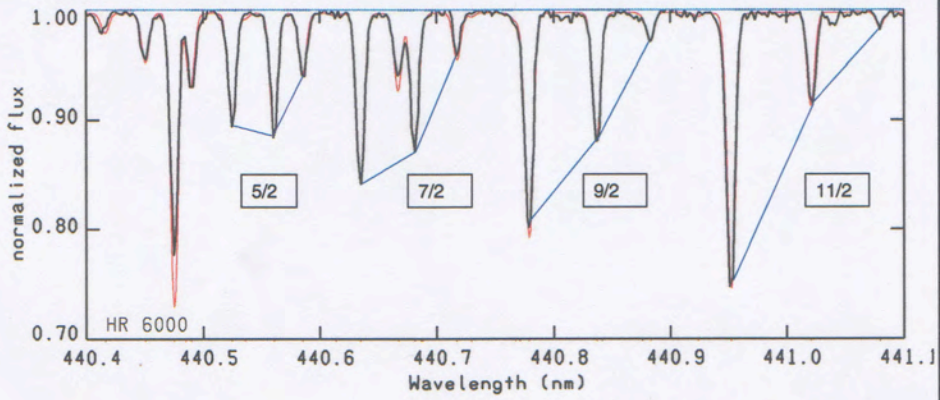
There is also a table with 15 lines of the 8D-8F multiplet.

He was going to write a letter for some Journal on this multiplet.
I believe that for this reason he did not write anything on it.

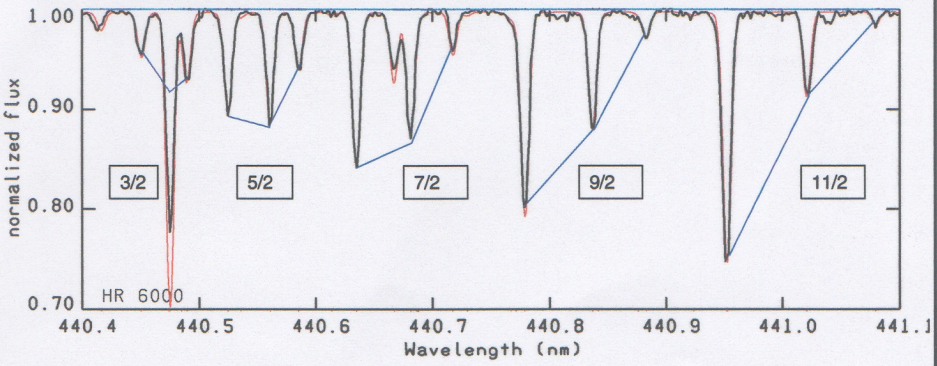
ciao,
Fiorella



Fe II, 4s4d ^8D_J – 4s4f $^8F_{J+1,J,J-1}$

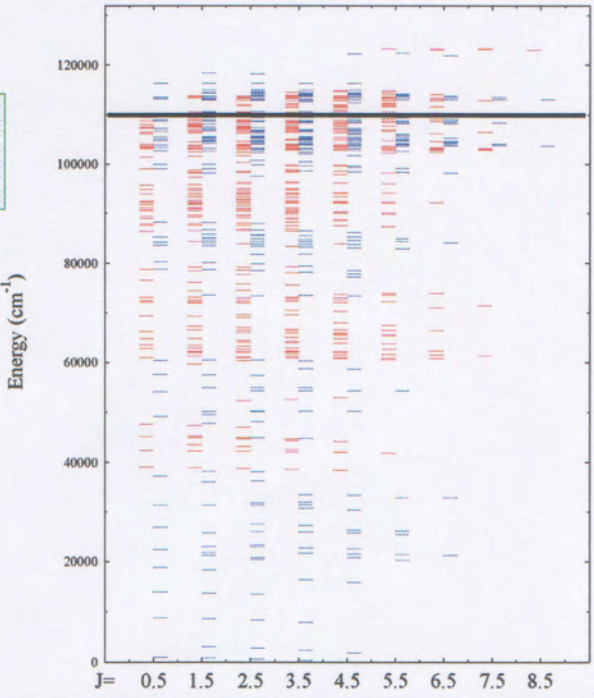


Fe II, 4s4d ^8D_j – 4s4f $^8F_{J+1,J,J-1}$



	^8F	13/2	11/2	9/2	7/2	5/2	3/2	1/2
^8D	cm^{-1}	132158.38	132154.82	132151.83	132149.44	132147.57	132146.32	132145.52
11/2	109486.54	**4409.52** 0.91	**4410.21** 0.17	**4410.79** -0.83				
9/2	109474.09		**4407.79** 0.74	**4408.37** 0.36	**4408.79** -0.41			
7/2	109463.66			**4406.35** 0.54	**4406.82** 0.39	**4407.17** -0.17		
5/2	109455.62				**4405.24** 0.27	**4405.61** 0.33	**4405.83** -0.03	
3/2	109449.89					**4404.50** -0.15	**4404.74** 0.15 **bl. Fe I**	**4404.90** 0.07

All levels below the dark line could be thermally populated in HR6000.



^{8}D					^{8}F				
J	Energy (cm^{-1})	ΔE (cm-1)	$\Delta E_J / \Delta E_{J-1}$ exp	theory	J	Energy (cm^{-1})	ΔE (cm^{-1})	$\Delta E_J / \Delta E_{J-1}$ exp	theory
11/2	109486.54				*13/2*	132158.38			
		12.45					3.56		
9/2	109474. 09		1.19	1.23	*11/2*	132154.82		1.19	1.18
		10.43					2.99		
7/2	109463.66		1.30	1.29	*9/2*	132151.83		1.25	1.23
		8.04					2.39		
5/2	109455.62		1.40	1.40	*7/2*	132149.44		1.28	1.29
		5.73					1.87		
3/2	109449.89				*5/2*	132147.57		1.50	1.40
							1.25		
					3/2	132146.32		1.56	1.67
							0.80		
					1/2	132145.52			