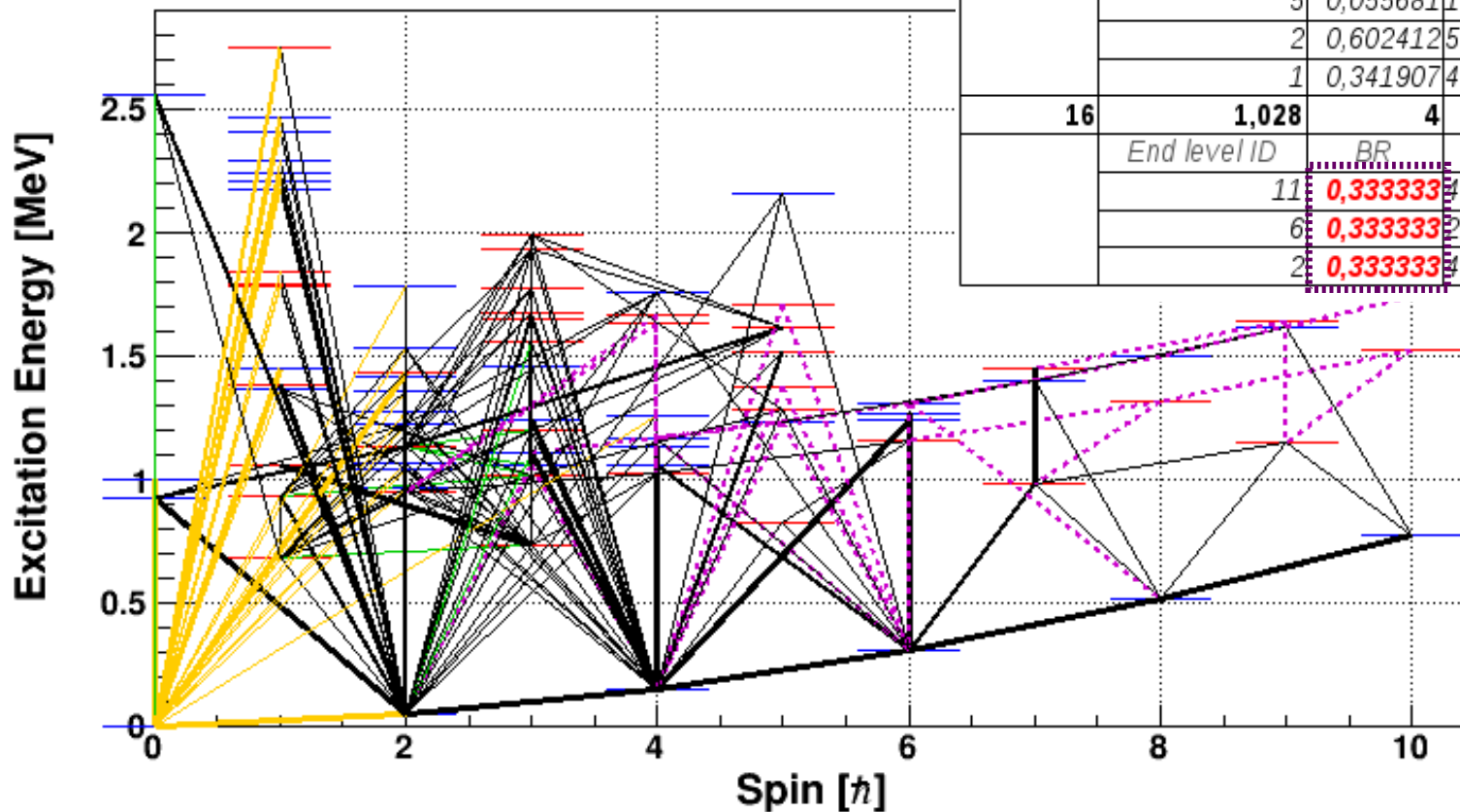


The ^{238}U level scheme used by reaction codes is incomplete:

- Transition with probability = 0.00000
- Even-split branching ratios (TALYS)
- No off bands levels above $5 \hbar$

From talys1.6/structure/levels/final/z092

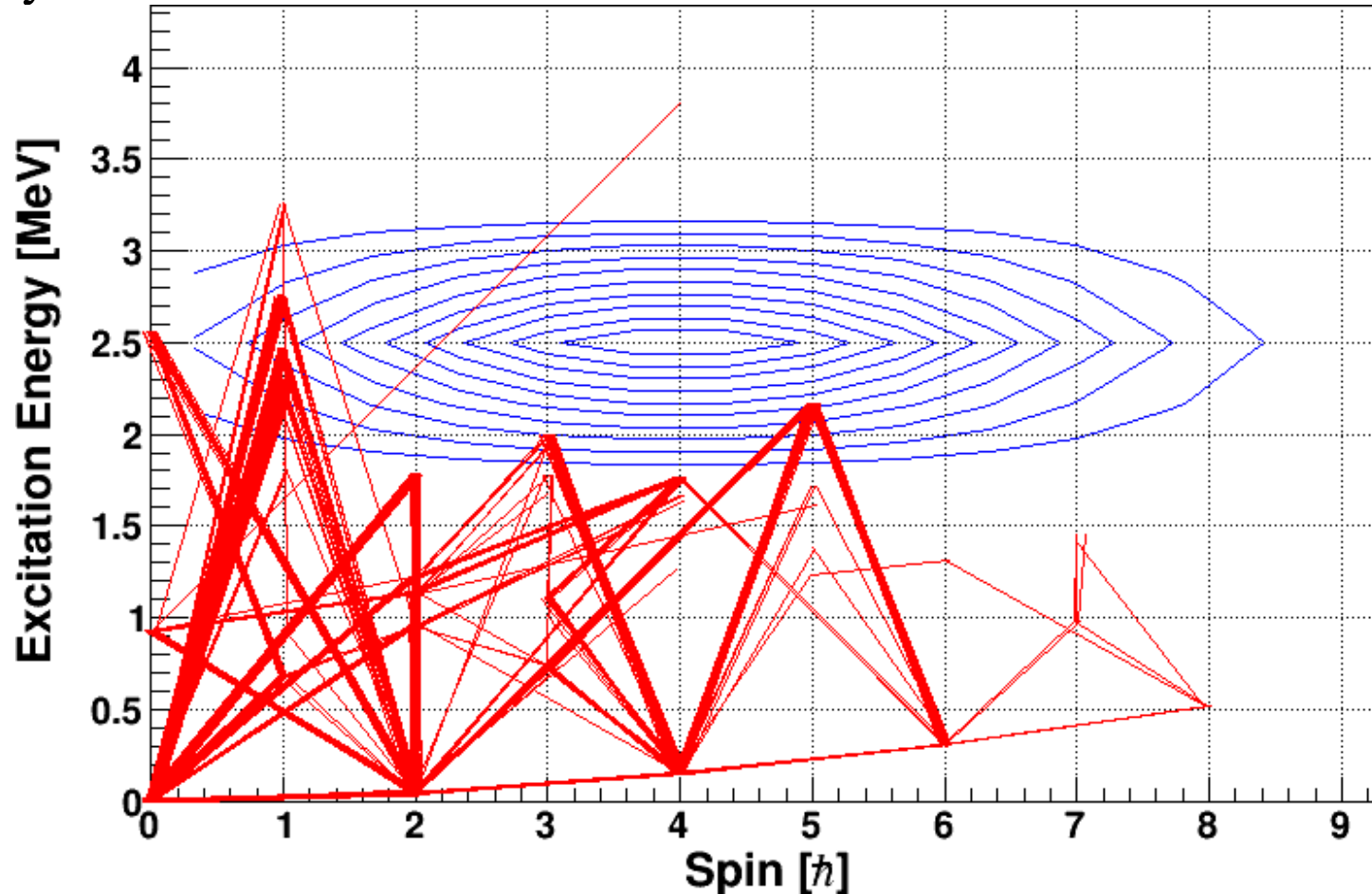
ID level	E level [MEV]	Spin	Parity	N gammas	
14	0,99723	0	1	1	0+
End level ID		BR	ICC		
	0	10.000E+00			
15	1,01279	3	-1	5	3-
End level ID		BR	ICC		
	10	0.981E+01			
	6	0.2840E-01			
	5	0,055681	1.610E-01		
	2	0,602412	5.020E-03		
	1	0,341907	4.090E-03		
16	1,028	4	-1	3	4-
End level ID		BR	ICC		
	11	0,333333	4.382E+01		
	6	0,333333	2.008E-01		
	2	0,333333	4.492E-03		



→ What is the impact of those BR on decay path and calculated transition cross-sections ?

Test with Monte Carlo decays

- Arbitrary entry distribution (2D binomial distribution)
- Decay only from discrete levels



Tracking three *outcomes*

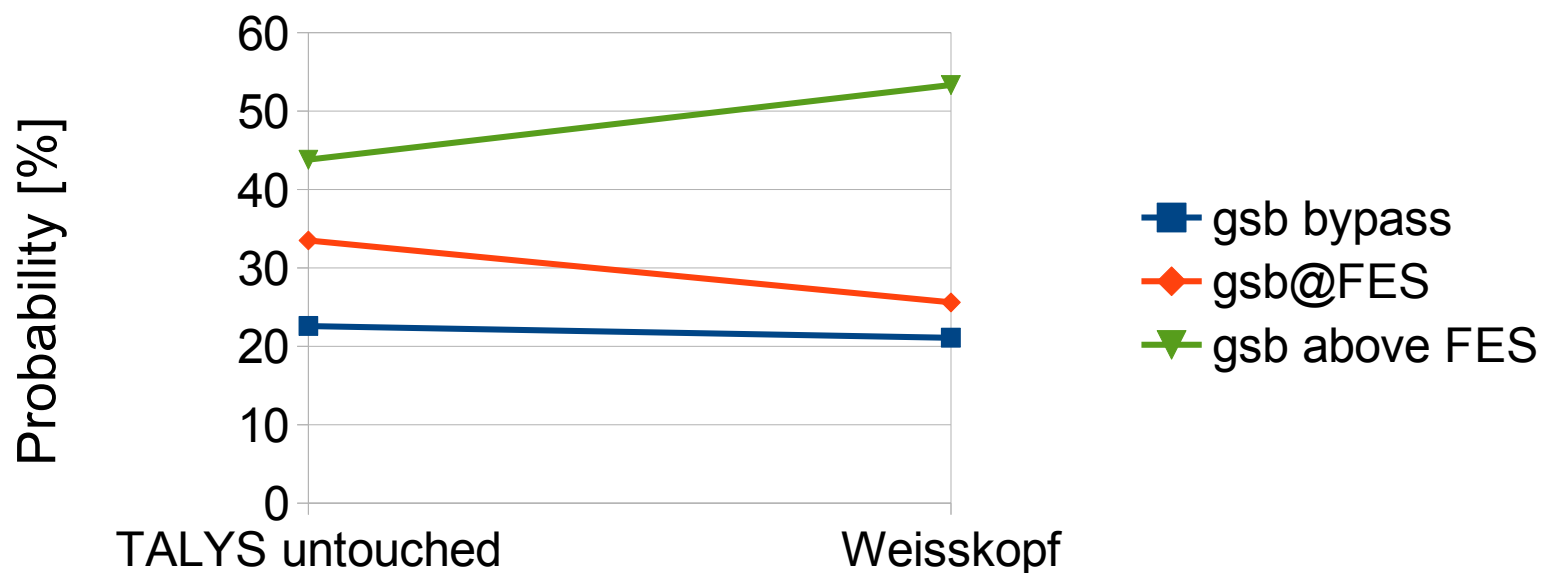
- Bypass of gsb
- Connect to the gsb at the FES
- Connect to the gb above the FES

Two branching ratio schemes

- Untouched (even splits)
- Weisskopf estimates replace even splits

Results

- No significant impact on gsb bypass
- ~ 10 % change on the connection point to the gsb



Qualitative result.

Show the importance of those transitions BR.

Follow up:

- Bibliographical work : experimental information on those transitions
- Experimental measurement
- Track the portion of *flux* going through those transitions in codes + starting point
- Run codes with Weisskopf estimates