

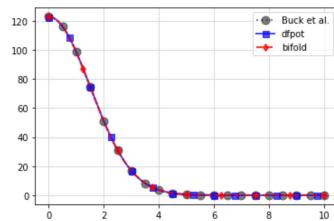
```
In [1]: # https://stackoverflow.com/a/34058279
from IPython.display import display, HTML
display(HTML("<style>.container { width:100% !important; }</style>"))
display(HTML("<style>.output_result { max-width:100% !important; }</style>"))
```

```
In [2]: import os

def print_title(title='', n_l='\n', omit=''):
    l_title = len(title)
    sides = (110-l_title)//2
    if sides<1:
        side_strip = '=' * (sides-1)
        print(f'{omit}{n_l}{omit}{side_strip}{title}{side_strip}{omit}{n_l}{omit}')
    else:
        print(f'{omit}{n_l}{omit}{title}{n_l}{omit}')

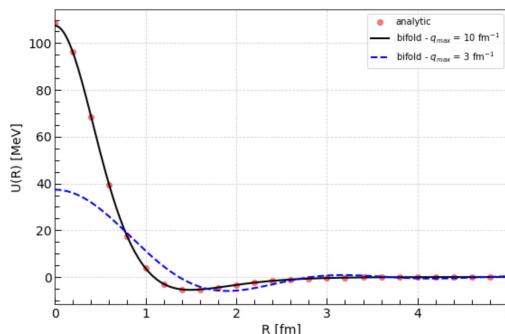
working_dir = os.getcwd()
for dirpath, dnames, fnames in os.walk("./"):
    for fname in fnames:
        if fname.endswith(".py") and 'run_test' not in fname:
            test_file = os.path.join(dirpath, fname)
            print_title(title=test_file)
            os.chdir(dirpath)
            #os.system(f'python {fname}')
            #!run -i $fname
            exec(open(fname).read())
            os.chdir(working_dir)
```

density/interaction	L	norm	renorm	vol2	vo14	msr	
R	u_R	R	u_R	R	u_R	R	u_R
u_R : u_direct	0	None	1.000	-6617.154	-45128.091	6.820	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	
rho_t : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	
vnn : f_2prm_gaussian	0	None	1.000	-413.516	-1053.275	2.547	
...	...						
0.000 : -12.606229692	2.500	-31.001990937	5.000	-0.501063039	7.500	-0.000995253	
0.050 : -12.538874844	2.550	-29.326746741	5.050	-0.448750076	7.550	-0.000922581	
0.100 : -12.2337031624	2.600	-27.711570889	5.100	-0.401479554	7.600	-0.000850141	
0.150 : -12.2.001362789	2.650	-26.156606999	5.150	-0.358814033	7.650	-0.000776637	
...	...						
2.300 : -38.293106119	4.800	-0.770700339	7.300	-0.001333255	9.800	-0.000275119	
2.350 : -36.383439518	4.850	-0.693145538	7.350	-0.001235661	9.850	-0.000245669	
2.400 : -34.51034302	4.900	-0.622735910	7.400	-0.001149112	9.900	-0.000210949	
2.450 : -32.736946863	4.950	-0.558889523	7.450	-0.001069971	9.950	-0.000172022	



density/interaction	L	norm	renorm	vol2	vo14	msr	
R	u_R	R	u_R	R	u_R	R	u_R
u_R : u_direct	0	None	1.000	-145.488	-1216.044	8.358	
rho_p : f_exp_decay	0	None	1.000	1.000	0.578	0.578	
rho_t : f_exp_decay	0	None	1.000	1.000	0.578	0.578	
vnn : f_yukawa	0	None	1.000	1570.599	588.973	0.375	
vnn : f_yukawa	0	None	1.000	-1716.379	-1645.245	0.959	
...	...						
0.000 : 107.48921626	1.240	-3.694698227	2.480	-1.382528224	3.720	-0.074939810	
0.020 : 107.367933178	1.260	-4.008470991	2.500	-1.326534968	3.740	-0.071721403	
0.040 : 107.0044778963	1.280	-4.285190397	2.520	-1.272299498	3.760	-0.06853177	
0.060 : 106.402381381	1.300	-4.527068555	2.540	-1.219504084	3.780	-0.065390321	
...	...						
1.160 : -2.024108688	2.400	-1.624512127	3.640	-0.088711084	4.880	-0.003291572	
1.180 : -2.508617224	2.420	-1.561157133	3.660	-0.085071277	4.900	-0.003531626	
1.200 : -2.947032703	2.440	-1.499764858	3.680	-0.081585858	4.920	-0.003760878	
1.220 : -3.341636750	2.460	-1.440248289	3.700	-0.078219169	4.940	-0.003963190	

density/interaction	L	norm	renorm	vol2	vo14	msr	
R	u_R	R	u_R	R	u_R	R	u_R
u_R : u_direct	0	None	1.000	-178.127	-1917.184	10.763	
rho_p : f_exp_decay	0	None	1.000	1.000	0.578	0.578	
rho_t : f_exp_decay	0	None	1.000	1.000	0.578	0.578	
vnn : f_yukawa	0	None	1.000	1570.599	588.973	0.375	
vnn : f_yukawa	0	None	1.000	-1716.379	-1645.245	0.959	
...	...						
1.160 : 37.358140060	1.240	3.386506137	2.480	-2.438851292	3.720	-0.113693820	
0.020 : 37.343824417	1.260	2.818014925	2.500	-2.270057372	3.740	-0.158081490	
0.040 : 37.300899303	1.280	2.265475705	2.520	-2.103151572	3.760	-0.201264736	
0.060 : 37.229430114	1.300	1.729327003	2.540	-1.938516011	3.780	-0.243098186	
...	...						
1.160 : 5.810038154	2.400	-3.124672394	3.640	0.072704011	4.880	0.187101247	
1.180 : 5.182798194	2.420	-2.952484524	3.660	0.025116932	4.900	0.210737814	
1.200 : 4.569420501	2.440	-2.780489098	3.680	-0.021928696	4.920	0.233196706	
1.220 : 3.970476732	2.460	-2.609133920	3.700	-0.068255557	4.940	0.254418027	

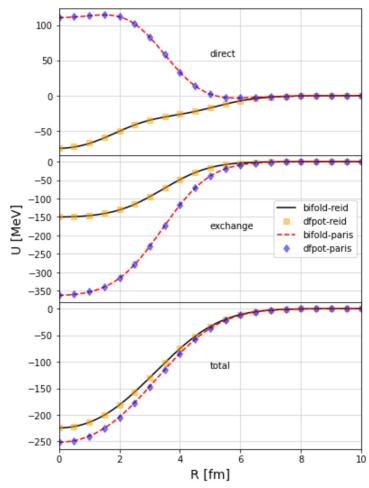


||./bifold_vs_dfpot\alpha_40Ca_m3y_reid_paris\alpha_40Ca_141_7MeV.py||

alpha + 40Ca @ Elab = 141.7 MeV using M3Y-Reid/ZR							
density/interaction	L	norm	renorm	vol2	vol4	msr	
total	- - -	- - -	- - -	- - -	- - -	- - -	- - -
u_R	: u_m3y_reid_zr	0	None	1.000	-59536.369	-982867.435	16.509
direct	- - -	- - -	- - -	- - -	- - -	- - -	- - -
u_R	: u_direct	0	None	1.000	-23281.698	-486747.595	20.907
rho_p	: f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t	: f_2prm_fermi	0	None	1.000	39.908	461.090	11.554
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960
exchange	- - -	- - -	- - -	- - -	- - -	- - -	- - -
u_R	: u_exchange_zr	0	None	1.000	-36254.671	-496119.839	13.684
rho_p	: f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t	: f_2prm_fermi	0	None	1.000	39.908	461.090	11.554
vnn	: f_dirac_delta	0	None	1.000	-227.114	0.000	0.000
R	u_R	R	u_R	R	u_R	R	u_R
0.000	-224.563777930	2.500	-157.142066795	5.000	-33.591208394	7.500	-1.204808998
0.050	-224.538321638	2.550	-154.527402844	5.050	-32.017487457	7.550	-1.195281574
0.100	-224.461927612	2.600	-151.883273787	5.100	-30.494524735	7.600	-1.102914234
0.150	-224.334520705	2.650	-149.211853425	5.150	-29.022094350	7.650	-1.017241001
...
2.300	-167.264509414	4.800	-40.395194794	7.300	-1.7748803787	9.800	-0.024215202
2.350	-164.788336069	4.850	-38.617908474	7.350	-1.641421697	9.850	-0.022006969
2.400	-162.274568092	4.900	-36.891404132	7.400	-1.517343458	9.900	-0.019982663
2.450	-159.725143659	4.950	-35.215828978	7.450	-1.401981918	9.950	-0.018129146

||alpha + 40Ca @ Elab = 141.7 MeV using M3Y-Paris/ZR||

density/interaction	L	norm	renorm	vol2	vol4	msr	
total	- - -	- - -	- - -	- - -	- - -	- - -	- - -
u_R	: u_m3y_paris_zr	0	None	1.000	-66569.587	-1092680.164	16.414
direct	- - -	- - -	- - -	- - -	- - -	- - -	- - -
u_R	: u_direct	0	None	1.000	20940.650	104836.284	5.006
rho_p	: f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t	: f_2prm_fermi	0	None	1.000	39.908	461.090	11.554
vnn	: f_yukawa	0	None	1.000	2171.888	814.472	0.375
vnn	: f_yukawa	0	None	1.000	-2848.770	-1959.145	0.960
exchange	- - -	- - -	- - -	- - -	- - -	- - -	- - -
u_R	: u_exchange_zr	0	None	1.000	-87518.237	-1197516.448	13.684
rho_p	: f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t	: f_2prm_fermi	0	None	1.000	39.908	461.090	11.554
vnn	: f_dirac_delta	0	None	1.000	-548.198	0.000	0.000
R	u_R	R	u_R	R	u_R	R	u_R
0.000	-251.445608601	2.500	-177.387614183	5.000	-37.086751315	7.500	-1.435634649
0.050	-251.417721638	2.550	-174.461325894	5.050	-35.329192645	7.550	-1.325936395
0.100	-251.334038212	2.600	-171.497339621	5.100	-33.630578632	7.600	-1.224107258
0.150	-251.194490920	2.650	-168.498038440	5.150	-31.996459916	7.650	-1.129635240
...
2.300	-188.671378754	4.800	-44.711575482	7.300	-1.964396682	9.800	-0.027183235
2.350	-185.917842338	4.850	-42.715921062	7.350	-1.817506908	9.850	-0.024803989
2.400	-183.118020970	4.900	-40.779930272	7.400	-1.680832884	9.900	-0.022627196
2.450	-180.273911837	4.950	-38.903583689	7.450	-1.553743101	9.950	-0.020636062



|| ./NPA384_1982_65\alpha_58Ni_172_5MeV.py ||

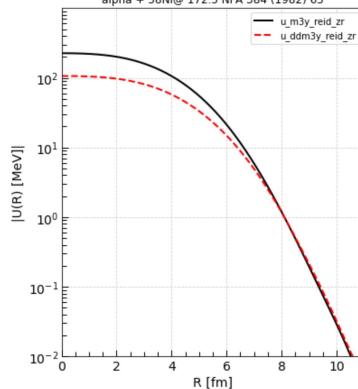
|| DDM3Y - ZR - alpha + 58Ni@ 172.5 NPA 384 (1982) 65 ||

density/interaction	L	norm	renorm	vol2	vo14	msr
<hr/>						
total	-	-	-	-	-	-
<hr/>						
u_R : u_ddm3y_reid_zr	0	None	1.000	-48316.255	-1022869.507	21.154
direct	-	-	-	-	-	-
u_R : u_ddm3y_reid_d	0	None	1.000	-19446.655	-495385.386	25.474
part1	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	-33813.468	-784412.380	23.198
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t : f_nudat	0	None	1.000	57.956	800.713	13.816
vnn : f_yukawa	0	None	1.000	1570.599	588.975	0.375
vnn : f_yukawa	0	None	1.000	-1716.466	-1647.807	0.960
part2	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	-8631.681	-230881.391	26.748
rho_p : f_rho_dd	0	None	1.000	1.939	5.897	3.042
rho_t : f_rho_dd	0	None	1.000	30.533	503.258	16.482
vnn : f_yukawa	0	None	1.000	1570.599	588.975	0.375
vnn : f_yukawa	0	None	1.000	-1716.466	-1647.807	0.960
exchange	-	-	-	-	-	-
u_R : u_ddm3y_reid_ex_zr	0	None	1.000	-28869.600	-526684.120	18.244
part1	-	-	-	-	-	-
u_R : u_exchange_zr	0	None	1.000	-50189.774	-800607.727	15.952
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t : f_nudat	0	None	1.000	57.956	800.713	13.816
vnn : f_dirac_delta	0	None	1.000	-216.488	0.000	0.000
part2	-	-	-	-	-	-
u_R : u_exchange_zr	0	None	1.000	-12815.354	-250236.634	19.526
rho_p : f_rho_dd	0	None	1.000	1.939	5.897	3.042
rho_t : f_rho_dd	0	None	1.000	30.533	503.258	16.482
vnn : f_dirac_delta	0	None	1.000	-216.488	0.000	0.000
R	u_R	R	u_R	R	u_R	R
0.000	-106.206442945	2.740	-86.069432190	5.480	-23.345762786	8.220
0.020	-106.205872753	2.760	-85.700294643	5.500	-22.974609314	8.240
0.040	-106.204161646	2.780	-85.327695204	5.520	-22.606855844	8.260
0.060	-106.201308034	2.800	-84.951659266	5.540	-22.242521405	8.280
...
2.660	-87.510889577	5.400	-24.863958312	8.140	-0.936717414	10.880
2.680	-87.155834098	5.420	-24.479416725	8.160	-0.906582916	10.900
2.700	-86.79724881	5.440	-24.098188222	8.180	-0.877326622	10.920
2.720	-86.435083420	5.460	-23.720296152	8.200	-0.848927507	10.940
R	u_R	R	u_R	R	u_R	R

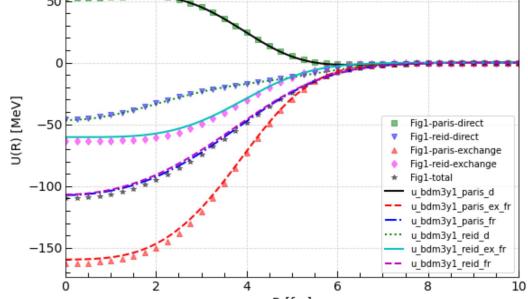
|| M3Y - ZR - alpha + 58Ni@ 172.5 NPA 384 (1982) 65 ||

density/interaction	L	norm	renorm	vol2	vo14	msr
<hr/>						
total	-	-	-	-	-	-
<hr/>						
u_R : u_m3y_reid_zr	0	None	1.000	-84003.241	-1585620.107	18.869
direct	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	-33813.468	-784412.380	23.198
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t : f_nudat	0	None	1.000	57.956	800.713	13.816
vnn : f_yukawa	0	None	1.000	1570.599	588.975	0.375
vnn : f_yukawa	0	None	1.000	-1716.466	-1647.807	0.960
exchange	-	-	-	-	-	-
u_R : u_exchange_zr	0	None	1.000	-50189.774	-800607.727	15.952
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t : f_nudat	0	None	1.000	57.956	800.713	13.816
vnn : f_dirac_delta	0	None	1.000	-216.488	0.000	0.000
R	u_R	R	u_R	R	u_R	R
0.000	-225.6112231224	2.740	-172.447946248	5.480	-36.338140994	8.220
0.020	-225.609428229	2.760	-171.535145618	5.500	-35.656916109	8.240
0.040	-225.608018148	2.780	-170.615215862	5.520	-34.983896639	8.260
0.060	-225.594997691	2.800	-169.688252017	5.540	-34.319098017	8.280
...
2.660	-176.026043067	5.400	-39.145014318	8.140	-0.937289697	10.880
2.680	-175.142659897	5.420	-38.431036224	8.160	-0.904868876	10.900
2.700	-174.251792244	5.440	-37.725222456	8.180	-0.873569212	10.920
2.720	-173.353525161	5.460	-37.027589118	8.200	-0.843280694	10.940
R	u_R	R	u_R	R	u_R	R

alpha + 58Ni@ 172.5 NPA 384 (1982) 65



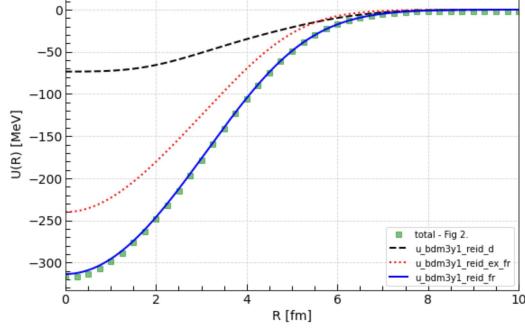
./PhysLettB342_1995_6/a_40Ca_bdm3y1_141_7MeV.py											
density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total	-	-	-	-	-	-	-	-	-	-	-
u_R : u_bdm3y1_paris_fr	0	None	1.000	-37368.997	-693796.712	18.566	-	-	-	-	-
direct	-	-	-	-	-	-	-	-	-	-	-
u_R : u_bdm3y1_paris_d	0	None	1.000	13076.532	87955.135	6.726	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000
part1	-	-	-	-	-	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	20948.650	104836.284	5.006	-	-	-	-	-
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	-	-	-	-	-
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960	-	-	-	-	-
part3	-	-	-	-	-	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	3129.462	12175.420	3.891	-	-	-	-	-
rho_p : f_rho_bd	0	None	1.000	0.598	0.639	1.068	n = 1.000	-	-	-	-
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960	-	-	-	-	-
part4	-	-	-	-	-	-	-	-	-	-	-
u_R : u_bdm3y1_paris_ex_fr	0	None	1.000	-80445.529	-781751.847	15.497	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	-	-	-	-	-
rho_t : f_rho_bd	0	None	1.000	4.143	32.635	7.877	n = 1.000	-	-	-	-
vnn : f_yukawa	0	None	1.000	-299.278	-112.231	0.375	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-417.202	-400.515	0.960	-	-	-	-	-
k_f_p : k_fermi	0	None	1.000	34298.858	2299872.662	67.031	-	-	-	-	-
k_f_t : k_fermi	0	None	1.000	5939.150	358618.850	60.382	-	-	-	-	-
u_coul : u_coul_ucs	0	None	1.000	32633.172	1772053.491	54.302	-	-	-	-	-
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R
0.000	-107.305235135	2.500	-83.588232311	5.000	-23.902834686	7.500	-1.206273919	-	-	-	-
0.050	-107.296493633	2.550	-82.584790259	5.050	-22.922313015	7.550	-1.117610079	-	-	-	-
0.100	-107.278403141	2.600	-81.561377505	5.100	-21.965372650	7.600	-1.034936021	-	-	-	-
0.150	-107.226902877	2.650	-80.518385603	5.150	-21.032418522	7.650	-0.957902528	-	-	-	-
...
2.300	-87.39576414	4.800	-28.050604977	7.300	-1.628346466	9.800	-0.024568020	-	-	-	-
2.350	-86.475374864	4.850	-26.980964721	7.350	-1.511925328	9.850	-0.022409242	-	-	-	-
2.400	-85.533823963	4.900	-25.932710109	7.400	-1.4030404848	9.900	-0.020437865	-	-	-	-
2.450	-84.571349371	4.950	-24.906474142	7.450	-1.301291980	9.950	-0.018638827	-	-	-	-
density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total	-	-	-	-	-	-	-	-	-	-	-
u_R : u_bdm3y1_reid_fr	0	None	1.000	-36320.303	-670579.539	18.463	-	-	-	-	-
direct	-	-	-	-	-	-	-	-	-	-	-
u_R : u_bdm3y1_reid_d	0	None	1.000	-16347.299	-363200.712	22.218	c = 1.225	alpha = 0.000	beta = 0.000	gamma = 1.512	n = 1.000
part1	-	-	-	-	-	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	-23281.698	-486747.595	28.907	-	-	-	-	-
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	-	-	-	-	-
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	1570.558	588.970	0.375	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960	-	-	-	-	-
part3	-	-	-	-	-	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	-3482.209	-69183.506	19.868	-	-	-	-	-
rho_p : f_rho_bd	0	None	1.000	0.598	0.639	1.068	n = 1.000	-	-	-	-
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	1570.558	588.970	0.375	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960	-	-	-	-	-
part4	-	-	-	-	-	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	-2417.627	-41717.853	17.256	-	-	-	-	-
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	-	-	-	-	-
rho_t : f_rho_bd	0	None	1.000	4.143	32.635	7.877	n = 1.000	-	-	-	-
vnn : f_yukawa	0	None	1.000	1570.558	588.970	0.375	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960	-	-	-	-	-
exchange	-	-	-	-	-	-	-	-	-	-	-
u_R : u_bdm3y1_reid_ex_fr	0	None	1.000	-19973.004	-307378.827	15.390	c = 1.225	alpha = 0.000	beta = 0.000	gamma = 1.512	n = 1.000
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	-	-	-	-	-
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	909.345	341.011	0.375	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960	-	-	-	-	-
vnn : f_yukawa	0	None	1.000	-276.901	-3083.649	11.136	-	-	-	-	-
k_f_p : k_fermi	0	None	1.000	34298.858	2299872.662	67.031	-	-	-	-	-
k_f_t : k_fermi	0	None	1.000	5939.150	358618.850	60.382	-	-	-	-	-
u_coul : u_coul_ucs	0	None	1.000	32633.172	1772053.491	54.302	-	-	-	-	-
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R
0.000	-106.834806602	2.500	-81.736597765	5.000	-23.217123152	7.500	-1.138838058	-	-	-	-
0.050	-106.825085439	2.550	-80.718734260	5.050	-22.264381666	7.550	-1.054443167	-	-	-	-
0.100	-106.795775992	2.600	-79.683058007	5.100	-21.334225929	7.600	-0.975815061	-	-	-	-
0.150	-106.747053732	2.650	-78.630083984	5.150	-20.427058411	7.650	-0.902607801	-	-	-	-
...
2.300	-85.622258619	4.800	-27.244077565	7.300	-1.541572274	9.800	-0.023139627	-	-	-	-
2.350	-84.679405723	4.850	-26.206053742	7.350	-1.430326083	9.850	-0.021124689	-	-	-	-
2.400	-83.717294698	4.900	-25.188491086	7.400	-1.326392949	9.900	-0.019281016	-	-	-	-
2.450	-82.736243188	4.950	-24.191995218	7.450	-1.229361851	9.950	-0.017586446	-	-	-	-



./PhysRevC49_1994_1652\fig2\o16o16_bdm3y1.py											
density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_bdm3y1_reid_fr</td><td>0</td><td>None</td><td>1.000</td><td>-84613.064</td><td>-1467539.918</td><td>17.344</td><td>-</td><td>-</td><td>-</td><td>-</td></u_r<>	: u_bdm3y1_reid_fr	0	None	1.000	-84613.064	-1467539.918	17.344	-	-	-	-
direct	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_bdm3y1_reid_d</td><td>0</td><td>None</td><td>1.000</td><td>-31074.296</td><td>-668050.022</td><td>21.498</td><td>c = 1.225</td><td>alpha = 0.000</td><td>beta = 0.000</td><td>gamma = 1.512</td></u_r<>	: u_bdm3y1_reid_d	0	None	1.000	-31074.296	-668050.022	21.498	c = 1.225	alpha = 0.000	beta = 0.000	gamma = 1.512
part1	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_direct</td><td>0</td><td>None</td><td>1.000</td><td>-37482.361</td><td>-766478.383</td><td>28.449</td><td>-</td><td>-</td><td>-</td><td>-</td></u_r<>	: u_direct	0	None	1.000	-37482.361	-766478.383	28.449	-	-	-	-
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375	-	-	-	-
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.885	0.960	-	-	-	-
part3	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_direct</td><td>0</td><td>None</td><td>1.000</td><td>-3737.013</td><td>-67333.185</td><td>18.018</td><td>-</td><td>-</td><td>-</td><td>-</td></u_r<>	: u_direct	0	None	1.000	-3737.013	-67333.185	18.018	-	-	-	-
rho_p	: f_rho_bd	0	None	1.000	1.598	6.623	4.146	n = 1.000	-	-	-
rho_t	: f_rho_bd	0	None	1.000	16.033	106.186	6.623	-	-	-	-
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375	-	-	-	-
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.885	0.960	-	-	-	-
part4	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_direct</td><td>0</td><td>None</td><td>1.000</td><td>-3737.013</td><td>-67333.185</td><td>18.018</td><td>-</td><td>-</td><td>-</td><td>-</td></u_r<>	: u_direct	0	None	1.000	-3737.013	-67333.185	18.018	-	-	-	-
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375	-	-	-	-
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960	-	-	-	-
kf_p	: k_fermi	0	None	1.000	6908.621	416828.466	60.335	-	-	-	-
kf_t	: k_fermi	0	None	1.000	6908.621	416828.466	60.335	-	-	-	-
u_coul	: u_coul_ucs	0	None	1.000	54502.363	2873804.783	52.728	-	-	-	-
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R
0.000	-313.533057266	2.500	-212.637780162	5.000	-48.93872408	7.500	-2.409898164	-	-	-	-
0.050	-313.487269209	2.550	-209.111179914	5.050	-46.788085491	7.550	-2.237166728	-	-	-	-
0.100	-313.351087169	2.600	-205.557989950	5.100	-44.688271719	7.600	-2.075830813	-	-	-	-
0.150	-313.123976186	2.650	-201.980277412	5.150	-42.660675821	7.650	-1.925233573	-	-	-	-
...
2.300	-226.431879586	4.800	-58.216677051	7.300	-3.229018335	9.800	-0.053675683	-	-	-	-
2.350	-223.034711902	4.850	-55.800428604	7.350	-3.003503967	9.850	-0.048961732	-	-	-	-
2.400	-219.601812294	4.900	-53.4448389529	7.400	-2.792330773	9.900	-0.044647836	-	-	-	-
2.450	-216.135416225	4.950	-51.160948632	7.450	-2.594712954	9.950	-0.040704118	-	-	-	-

BiFold vs literature for BDMY1/Reid

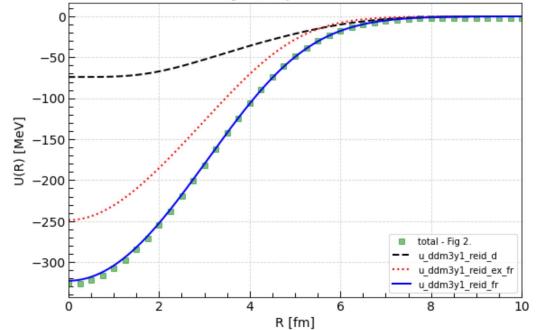
Reference: Fig. 2. @ Phys. Rev. C 49 (1994) 1652.



./PhysRevC49_1994_1652\fig2\o16o16_ddm3y1.py											
density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_ddm3y1_reid_fr</td><td>0</td><td>None</td><td>1.000</td><td>-86178.218</td><td>-1492570.654</td><td>17.320</td><td>-</td><td>-</td><td>-</td><td>-</td></u_r<>	: u_ddm3y1_reid_fr	0	None	1.000	-86178.218	-1492570.654	17.320	-	-	-	-
direct	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_ddm3y1_reid_d</td><td>0</td><td>None</td><td>1.000</td><td>-31745.757</td><td>-680788.853</td><td>21.445</td><td>c = 0.284</td><td>alpha = 3.639</td><td>beta = 2.961</td><td>gamma = 0.000</td></u_r<>	: u_ddm3y1_reid_d	0	None	1.000	-31745.757	-680788.853	21.445	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
part1	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_direct</td><td>0</td><td>None</td><td>1.000</td><td>-37482.361</td><td>-766478.383</td><td>28.449</td><td>-</td><td>-</td><td>-</td><td>-</td></u_r<>	: u_direct	0	None	1.000	-37482.361	-766478.383	28.449	-	-	-	-
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375	-	-	-	-
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.885	0.960	-	-	-	-
part2	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_direct</td><td>0</td><td>None</td><td>1.000</td><td>-21351.850</td><td>-468151.983</td><td>21.926</td><td>-</td><td>-</td><td>-</td><td>-</td></u_r<>	: u_direct	0	None	1.000	-21351.850	-468151.983	21.926	-	-	-	-
rho_p	: f_rho_dd	0	None	1.000	12.103	89.291	7.378	beta = 2.961	-	-	-
rho_t	: f_rho_dd	0	None	1.000	12.103	89.291	7.378	beta = 2.961	-	-	-
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375	-	-	-	-
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.885	0.960	-	-	-	-
exchange	-	-	-	-	-	-	-	-	-	-	-
<u_r< td=""><td>: u_ddm3y1_reid_ex_fr</td><td>0</td><td>None</td><td>1.000</td><td>-54432.461</td><td>-81781.801</td><td>14.914</td><td>c = 0.284</td><td>alpha = 3.639</td><td>beta = 2.961</td><td>gamma = 0.000</td></u_r<>	: u_ddm3y1_reid_ex_fr	0	None	1.000	-54432.461	-81781.801	14.914	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623	-	-	-	-
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375	-	-	-	-
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960	-	-	-	-
kf_p	: k_fermi	0	None	1.000	6908.621	416828.466	60.335	-	-	-	-
kf_t	: k_fermi	0	None	1.000	6908.621	416828.466	60.335	-	-	-	-
u_coul	: u_coul_ucs	0	None	1.000	54502.363	2873804.783	52.728	-	-	-	-
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R
0.000	-322.773399339	2.500	-217.728389706	5.000	-49.491075180	7.500	-2.479877776	-	-	-	-
0.050	-322.72589004	2.550	-214.061952636	5.050	-47.308276409	7.550	-2.303445983	-	-	-	-
0.100	-322.584492610	2.600	-210.368698543	5.100	-45.192123867	7.600	-2.138547535	-	-	-	-
0.150	-322.348896703	2.650	-206.651919866	5.150	-43.142416145	7.650	-1.984524010	-	-	-	-
...
2.300	-232.079577001	4.800	-58.080611006	7.300	-3.315205036	9.800	-0.056539059	-	-	-	-
2.350	-228.543827632	4.850	-56.439590318	7.350	-3.085425600	9.850	-0.051592825	-	-	-	-
2.400	-224.971768834	4.900	-54.056828299	7.400	-2.876130291	9.900	-0.047869668	-	-	-	-
2.450	-221.365812097	4.950	-51.740664306	7.450	-2.668532205	9.950	-0.042928092	-	-	-	-

BiFold vs literature for ddm3y1/Reid

Reference: Fig. 2. @ Phys. Rev. C 49 (1994) 1652.



||0^16 + 0^16 @ Elab = 160.0 MeV||

density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total	- - -	- - -	- - -	- - -	- - -	- - -					
u_R	: u_ddm3y1_reid_fr	0	None	1.000	-89881.392	-1552386.776	17.272				
u_R	: u_ddm3y1_reid_d	0	None	1.000	-3214.359	-688693.506	21.445	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
<hr/>											
u_R	: u_direct	0	None	1.000	-37482.299	-766469.263	20.449				
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375				
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960				
<hr/>											
u_R	: u_direct	0	None	1.000	-21351.809	-468151.026	21.926				
rho_p	: f_rho_dd	0	None	1.000	12.103	89.291	7.378	beta = 2.961			
rho_t	: f_rho_dd	0	None	1.000	12.103	89.291	7.378	beta = 2.961			
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375				
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960				
<hr/>											
u_R	: u_ddm3y1_reid_ex_fr	0	None	1.000	-57767.033	-863693.271	14.951	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375				
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960				
vnn	: f_yukawa	0	None	1.000	-276.901	-3083.649	11.136				
kf_p	: k_fermi	0	None	1.000	6908.621	416828.466	60.335				
kf_t	: k_fermi	0	None	1.000	6908.621	416828.466	60.335				
u_coul	: u_coul_ucs	0	None	1.000	53668.850	2862825.456	53.327				
R	u_R	R	u_R	R	u_R	R	u_R				
0.000	-336.694091899	2.500	-227.447657654	5.000	-51.609339584	7.500	-2.545647586				
0.050	-336.547132804	2.550	-223.634543471	5.050	-49.319798870	7.550	-2.363984621				
0.100	-336.400173709	2.600	-219.793225538	5.100	-47.100488308	7.600	-2.194243150				
0.150	-336.155311720	2.650	-215.926239293	5.150	-44.951223703	7.650	-2.035738734				
<hr/>											
...											
...											
2.300	-242.367963914	4.800	-61.468969224	7.300	-3.406364671	9.800	-0.057662430				
2.350	-238.692673529	4.850	-58.899253728	7.350	-3.169504313	9.850	-0.052595746				
2.400	-234.979214750	4.900	-56.399206751	7.400	-2.947639334	9.900	-0.047953205				
2.450	-231.230084670	4.950	-53.969166815	7.450	-2.739948842	9.950	-0.043703864				

||0^16 + 0^16 @ Elab = 480 MeV||

density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total	- - -	- - -	- - -	- - -	- - -	- - -	17.487				
u_R	: u_ddm3y1_reid_fr	0	None	1.000	-77118.966	-1348446.542					
u_R	: u_ddm3y1_reid_d	0	None	1.000	-30803.568	-660583.567	21.445	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
<hr/>											
u_R	: u_direct	0	None	1.000	-37482.299	-766469.263	20.449				
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375				
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960				
vnn	: f_yukawa	0	None	1.000	-276.901	-3083.649	11.136				
<hr/>											
u_R	: u_ddm3y1_reid_ex_fr	0	None	1.000	-46307.398	-687862.976	14.854	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375				
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960				
vnn	: f_yukawa	0	None	1.000	-276.901	-3083.649	11.136				
<hr/>											
u_R	: u_ddm3y1_reid_ucs	0	None	1.000	53668.850	2862825.456	53.327				
R	u_R	R	u_R	R	u_R	R	u_R				
0.000	-287.176656592	2.500	-193.309452616	5.000	-44.457733582	7.500	-2.322502441				
0.050	-287.050977124	2.550	-190.035543823	5.050	-42.532668570	7.550	-2.158502063				
0.100	-286.925297656	2.600	-186.738841181	5.100	-40.665207482	7.600	-2.085118597				
0.150	-286.715884656	2.650	-183.421658405	5.150	-38.855147064	7.650	-1.861754695				
<hr/>											
...											
...											
2.300	-206.131338417	4.800	-52.7348087319	7.300	-3.097564102	9.800	-0.053754665				
2.350	-202.971469632	4.850	-50.579179781	7.350	-2.884581566	9.850	-0.049125478				
2.400	-199.7796494872	4.900	-48.481022085	7.400	-2.684877136	9.900	-0.044884659				
2.450	-196.558265555	4.950	-46.440512984	7.450	-2.497743731	9.950	-0.041002201				

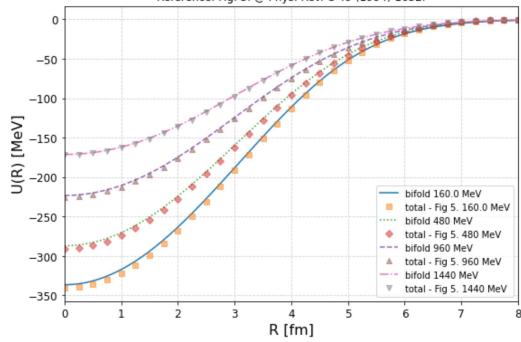
||0^16 + 0^16 @ Elab = 960 MeV||

density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total	- - -	- - -	- - -	- - -	- - -	- - -	17.893				
u_R	: u_ddm3y1_reid_fr	0	None	1.000	-61354.009	-1097822.325					
u_R	: u_ddm3y1_reid_d	0	None	1.000	-28837.383	-618418.658	21.445	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
<hr/>											
u_R	: u_direct	0	None	1.000	-37482.299	-766469.263	20.449				
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375				
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960				
vnn	: f_yukawa	0	None	1.000	-276.901	-3083.649	11.136				
<hr/>											
u_R	: u_ddm3y1_reid_ex_fr	0	None	1.000	-32516.626	-479403.666	14.743	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375				
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960				
vnn	: f_yukawa	0	None	1.000	-276.901	-3083.649	11.136				
<hr/>											
u_R	: u_coul_ucs	0	None	1.000	53668.850	2862825.456	53.327				
R	u_R	R	u_R	R	u_R	R	u_R				
0.000	-223.406651453	2.500	-150.586077346	5.000	-35.000146499	7.500	-2.036324477				
0.050	-223.310983785	2.550	-148.02991301	5.050	-34.312490424	7.550	-1.894597237				
0.100	-223.215316118	2.600</td									

density/interaction	L	norm	renorm	vol2	vol4	msr						
<hr/>												
total	-	-	-	1.000	-48951.871	-900168.639	18.389					
u_R	: u_ddm3yl_reid_fr	0	None	1.000	-26871.198	-57653.750	21.445	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000	n = 0.000
u_R	: u_ddm3yl_reid_d	0	None	1.000	-26871.198	-57653.750	21.445	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000	gE = 0.820
part1	-	-	-									
u_R	: u_direct	0	None	1.000	-37482.299	-766469.263	20.449					
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623					
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623					
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375					
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960					
part2	-	-	-									
u_R	: u_direct	0	None	1.000	-21351.809	-468151.026	21.926					
rho_p	: f_rho_dd	0	None	1.000	12.103	89.291	7.378	beta = 2.961				
rho_t	: f_rho_dd	0	None	1.000	12.103	89.291	7.378	beta = 2.961				
vnn	: f_yukawa	0	None	1.000	1570.558	588.970	0.375					
vnn	: f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960					
exchange	-	-	-									
u_R	: u_ddm3yl_reid_ex_fr	0	None	1.000	-22080.673	-323906.889	14.669	c = 0.284	alpha = 3.639	beta = 2.961	gamma = 0.000	n = 0.000
rho_p	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623					
rho_t	: f_2prm_fermi	0	None	1.000	16.033	106.186	6.623					
vnn	: f_yukawa	0	None	1.000	909.345	341.011	0.375					
vnn	: f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960					
vnn	: f_yukawa	0	None	1.000	-276.901	-3083.649	11.136					
kf_p	: k_fermi	0	None	1.000	6908.621	416828.466	66.335					
kf_t	: k_fermi	0	None	1.000	6908.621	416828.466	66.335					
u_coul	: u_coul_ucs	0	None	1.000	53668.850	2862825.456	53.327					
R	u_R	R	u_R	R	u_R	R	u_R					
0.000	-171.377754462	2.500	-116.691320465	5.000	-29.078573700	7.500	-1.795273927					
0.050	-171.308531586	2.550	-114.737752850	5.050	-27.924595653	7.550	-1.671919287					
0.100	-171.239308710	2.600	-112.770754888	5.100	-26.801180386	7.600	-1.556256483					
0.150	-171.123925392	2.650	-110.791945082	5.150	-25.707992835	7.650	-1.447879284					
...												
2.300	-124.339168170	4.800	-34.000073489	7.300	-2.374221417	9.800	-0.043753794					
2.350	-122.45531878	4.850	-32.723868342	7.350	-2.215760327	9.850	-0.040143179					
2.400	-120.551718614	4.900	-31.478196921	7.400	-2.066753635	9.900	-0.036839160					
2.450	-118.629844043	4.950	-30.263097460	7.450	-1.926740685	9.950	-0.033815156					

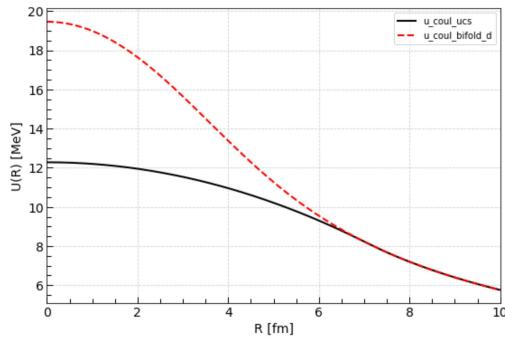
BiFold vs literature for DDM3Y1/Reid

Reference: Fig. 5 @ Phys. Rev. C 49 (1994) 1652.



./PhysRevC56_1997_954\fig5\`a_40Ca_bdm3y1_104MeV.py

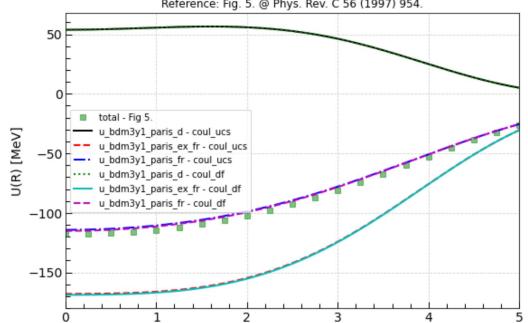
Coulomb potential using double folding model.							
density/interaction	L	norm	renorm	vol2	vol4	msr	
u_R	: u_coul_bifold_d	0	None	1.000	34028.065	1763293.163	51.819
rho_p	: f_sog	0	None	1.000	2.000	5.621	2.810
rho_t	: f_3prm_fermi	0	None	1.000	20.002	242.448	12.121
vnn	: v_coulomb	0	None	1.000	904.756	45237.820	50.000
R	u_R	R	u_R	R	u_R	R	u_R
0.000	19.468875472	2.500	16.701561249	5.000	11.267828844	7.500	7.680564923
0.050	19.457310637	2.550	16.600076173	5.050	11.171749669	7.550	7.629709255
0.100	19.453745803	2.600	16.497424083	5.100	11.076769707	7.600	7.579504858
0.150	19.447805625	2.650	16.393657656	5.150	10.982719438	7.650	7.529965611
...							
2.300	17.894811671	4.800	11.662272513	7.300	7.892337354	9.800	5.877983359
2.350	16.998501963	4.850	11.562173135	7.350	7.838586591	9.850	5.848145881
2.400	16.900824382	4.900	11.463055844	7.400	7.785388734	9.900	5.818609798
2.450	16.801827570	4.950	11.364935185	7.450	7.732721210	9.950	5.78937845



exchange part using analytical Coulomb potential												
density/interaction	L	norm	renorm	vol2	vol4	msr						
total	-	-	-	-	-	-						
u_R : u_bdm3yl_paris_fr	0	None	1.000	-39862.763	-736836.945	18.484						
direct	-	-	-	-	-	-						
u_R : u_bdm3yl_paris_d	0	None	1.000	13490.242	90737.500	6.726	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000 gE = 0.922	
part1	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	20948.658	104835.743	5.006						
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136						
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554						
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
part3	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	3129.463	12175.333	3.891						
rho_p : f_rho_bd	0	None	1.000	0.598	0.639	1.068	n = 1.000					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554						
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
part4	-	-	-	-	-	-						
u_R : u_bdm3yl_paris_ex_fr	0	None	1.000	-53353.005	-827574.445	15.511	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000 gE = 0.922	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136						
rho_t : f_rho_bd	0	None	1.000	4.143	32.635	7.877	n = 1.000					
vnn : f_yukawa	0	None	1.000	-299.278	-112.231	0.375						
vnn : f_yukawa	0	None	1.000	-417.202	-400.515	0.960						
vnn : f_yukawa	0	None	1.000	-276.901	-3083.649	11.136						
kf_p : k_fermi	0	None	1.000	34298.858	2299872.662	67.031						
kf_t : k_fermi	0	None	1.000	5939.150	358618.850	60.382						
u_coul	: u_coul_ucs	0	None	1.000	32607.718	1771515.450	54.328					
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	
0.000	-114.287112057	2.500	-89.484461047	5.000	-25.467179577	7.500	-1.259198420					
0.050	-114.260279174	2.550	-88.423887849	5.050	-24.418621147	7.550	-1.166359993					
0.100	-114.233446290	2.600	-87.341416477	5.100	-23.379928155	7.600	-1.079822627					
0.150	-114.188704826	2.650	-86.237426926	5.150	-22.375551190	7.650	-0.999217299					
...	
2.300	-93.501568999	4.800	-29.940698663	7.300	-1.701517231	9.800	-0.025346892					
2.350	-92.531592577	4.850	-28.785276784	7.350	-1.579455769	9.850	-0.023103100					
2.400	-91.538593982	4.900	-27.655751324	7.400	-1.465336176	9.900	-0.021058732					
2.450	-90.522796424	4.950	-26.549084848	7.450	-1.358723213	9.950	-0.019197838					
exchange part using folded Coulomb potential												
density/interaction	L	norm	renorm	vol2	vol4	msr						
total	-	-	-	-	-	-						
u_R : u_bdm3yl_paris_fr	0	None	1.000	-39986.587	-73864.305	18.458						
direct	-	-	-	-	-	-						
u_R : u_bdm3yl_paris_d	0	None	1.000	13490.242	90737.500	6.726	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000 gE = 0.922	
part1	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	20948.658	104835.743	5.006						
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136						
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554						
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
part3	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	3129.463	12175.333	3.891						
rho_p : f_rho_bd	0	None	1.000	0.598	0.639	1.068	n = 1.000					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554						
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
part4	-	-	-	-	-	-						
u_R : u_bdm3yl_paris_ex_fr	0	None	1.000	-53476.829	-828801.805	15.498	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000 gE = 0.922	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136						
rho_t : f_rho_bd	0	None	1.000	39.908	461.090	11.554						
vnn : f_yukawa	0	None	1.000	-299.278	-112.231	0.375						
vnn : f_yukawa	0	None	1.000	-417.202	-400.515	0.960						
vnn : f_yukawa	0	None	1.000	-276.901	-3083.649	11.136						
kf_p : k_fermi	0	None	1.000	34298.858	2299872.662	67.031						
kf_t : k_fermi	0	None	1.000	5939.150	358618.850	60.382						
u_coul	: u_coul_bifold_d	0	None	1.000	34028.065	1763293.163	51.819					
rho_p : f_sog	0	None	1.000	2.000	5.621	2.818						
rho_t : f_3prm_fermi	0	None	1.000	20.002	242.448	12.121						
vnn : v_coulomb	0	None	1.000	904.756	45237.820	50.000						
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	
0.000	-115.135310751	2.500	-90.003470013	5.000	-25.493212109	7.500	-1.259198752					
0.050	-115.108126618	2.550	-88.929945867	5.050	-24.433910833	7.550	-1.166360293					
0.100	-115.080942485	2.600	-87.834394844	5.100	-23.406706429	7.600	-1.079822896					
0.150	-115.035614938	2.650	-86.717209735	5.150	-22.394036592	7.650	-0.999217542					
...	
2.300	-94.070805024	4.800	-29.980269676	7.300	-1.701518602	9.800	-0.025346892					
2.350	-93.088534877	4.850	-28.822394401	7.350	-1.579456972	9.850	-0.023103100					
2.400	-92.083058687	4.900	-27.688014895	7.400	-1.465337137	9.900	-0.021058731					
2.450	-91.054612261	4.950	-26.578104469	7.450	-1.358723878	9.950	-0.019197837					

BiFold vs literature for BDM3Y1/Paris, Cs = 1/4

Reference: Fig. 5. @ Phys. Rev. C 56 (1997) 954.

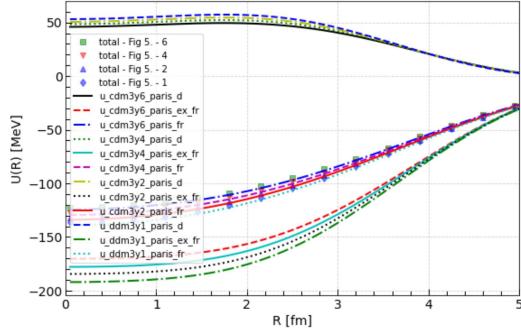


./PhysRevC56_1997_954\fig5\`a_40Ca_cdm3y6_104MeV.py													
density/interaction	L	norm	renorm	vol2	vol4	msr							
total													
<u_r :="" td="" u_ddm3y1_paris_fr<=""><td>0</td><td>None</td><td>1.000</td><td>-44162.763</td><td>-635804.850</td><td>14.397</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	-44162.763	-635804.850	14.397							
direct													
<u_r :="" td="" u_ddm3y1_paris_d<=""><td>0</td><td>None</td><td>1.000</td><td>11166.122</td><td>-1435.052</td><td>-0.129</td><td>c = 0.296</td><td>alpha = 3.723</td><td>beta = 3.738</td><td>gamma = 0.000</td><td>n = 0.000</td><td>gE = 0.922</td></u_r>	0	None	1.000	11166.122	-1435.052	-0.129	c = 0.296	alpha = 3.723	beta = 3.738	gamma = 0.000	n = 0.000	gE = 0.922	
part1													
<u_r :="" td="" u_direct<=""><td>0</td><td>None</td><td>1.000</td><td>15772.415</td><td>-22243.362</td><td>-1.410</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	15772.415	-22243.362	-1.410							
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136							
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.157	11.555							
vnn : f_yukawa	0	None	1.000	2124.246	814.407	0.383							
vnn : f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969							
part2													
<u_r :="" td="" u_direct<=""><td>0</td><td>None</td><td>1.000</td><td>6741.934</td><td>4563.506</td><td>0.677</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	6741.934	4563.506	0.677							
rho_p : f_rho_dd	0	None	1.000	2.472	6.697	2.710	beta = 3.738						
rho_t : f_rho_dd	0	None	1.000	27.613	360.578	13.058	beta = 3.738						
vnn : f_yukawa	0	None	1.000	2124.246	814.407	0.383							
vnn : f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969							
exchange													
<u_r :="" td="" u_ddm3y1_paris_ex_fr<=""><td>0</td><td>None</td><td>1.000</td><td>-55328.885</td><td>-634369.797</td><td>11.465</td><td>c = 0.296</td><td>alpha = 3.723</td><td>beta = 3.738</td><td>gamma = 0.000</td><td>n = 0.000</td><td>gE = 0.922</td></u_r>	0	None	1.000	-55328.885	-634369.797	11.465	c = 0.296	alpha = 3.723	beta = 3.738	gamma = 0.000	n = 0.000	gE = 0.922	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136							
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.157	11.555							
vnn : f_yukawa	0	None	1.000	-292.713	-112.222	0.383							
vnn : f_yukawa	0	None	1.000	-413.479	-400.510	0.969							
kf_p : k_fermi	0	None	1.000	186228.951	28469512.546	152.874							
kf_t : k_fermi	0	None	1.000	20337.290	2769812.715	136.154							
u_coul : u_coul_ucs	0	None	1.000	78389.292	9245415.519	117.942							
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	
0.050	-139.008077431	3.800	-64.912655623	7.550	-1.145375281	11.300	0.095064793						
0.100	-138.972645597	3.850	-63.192129830	7.600	-1.053347875	11.350	0.095189423						
0.150	-138.913652101	3.900	-61.476415214	7.650	-0.967608254	11.400	0.095301960						
0.200	-138.830992003	3.950	-59.767156576	7.700	-0.887779746	11.450	0.095403208						
...													
...													
3.600	-71.810235786	7.350	-1.584541560	11.100	0.094423623	14.850	0.093069444						
3.650	-70.086748514	7.400	-1.463226333	11.150	0.094607954	14.900	0.092999173						
3.700	-68.361588444	7.450	-1.349891532	11.200	0.094775277	14.950	0.092929397						
3.750	-66.636352110	7.500	-1.244085340	11.250	0.094927119	15.000	0.092860298						
density/interaction	L	norm	renorm	vol2	vol4	msr							
total													
<u_r :="" td="" u_cdm3y2_paris_fr<=""><td>0</td><td>None</td><td>1.000</td><td>-43142.078</td><td>-625288.939</td><td>14.494</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	-43142.078	-625288.939	14.494							
direct													
<u_r :="" td="" u_cdm3y2_paris_d<=""><td>0</td><td>None</td><td>1.000</td><td>10887.340</td><td>-232.819</td><td>-0.021</td><td>c = 0.335</td><td>alpha = 3.036</td><td>beta = 3.068</td><td>gamma = 1.000</td><td>n = 1</td><td>gE = 0.922</td></u_r>	0	None	1.000	10887.340	-232.819	-0.021	c = 0.335	alpha = 3.036	beta = 3.068	gamma = 1.000	n = 1	gE = 0.922	
part1													
<u_r :="" td="" u_direct<=""><td>0</td><td>None</td><td>1.000</td><td>15772.415</td><td>-22243.362</td><td>-1.410</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	15772.415	-22243.362	-1.410							
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136							
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.157	11.555							
vnn : f_yukawa	0	None	1.000	2124.246	814.407	0.383							
vnn : f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969							
part2													
<u_r :="" td="" u_direct<=""><td>0</td><td>None</td><td>1.000</td><td>7745.856</td><td>2330.911</td><td>0.301</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	7745.856	2330.911	0.301							
rho_p : f_rho_dd	0	None	1.000	2.666	6.963	2.612	beta = 3.068						
rho_t : f_rho_dd	0	None	1.000	29.409	375.826	12.779	beta = 3.068						
vnn : f_yukawa	0	None	1.000	2124.246	814.407	0.383							
vnn : f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969							
part3													
<u_r :="" td="" u_direct<=""><td>0</td><td>None</td><td>1.000</td><td>2358.769</td><td>-5749.726</td><td>-2.438</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	2358.769	-5749.726	-2.438							
rho_p : f_rho_bd	0	None	1.000	0.598	0.639	1.068	n = 1						
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.157	11.555							
vnn : f_yukawa	0	None	1.000	2124.246	814.407	0.383							
vnn : f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969							
part4													
<u_r :="" td="" u_direct<=""><td>0</td><td>None</td><td>1.000</td><td>1636.661</td><td>-8663.013</td><td>-5.293</td><td data-cs="6" data-kind="parent"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td><td data-kind="ghost"></td></u_r>	0	None	1.000	1636.661	-8663.013	-5.293							
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136							
rho_t : f_rho_bd	0	None	1.000	4.143	32.635	7.877							
vnn : f_yukawa	0	None	1.000	2124.246	814.407	0.383							
vnn : f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969							
exchange													
<u_r :="" td="" u_cdm3y2_paris_ex_fr<=""><td>0</td><td>None</td><td>1.000</td><td>-54829.418</td><td>-625056.120</td><td>11.569</td><td>c = 0.335</td><td>alpha = 3.036</td><td>beta = 3.068</td><td>gamma = 1.000</td><td>n = 1</td><td>gE = 0.922</td></u_r>	0	None	1.000	-54829.418	-625056.120	11.569	c = 0.335	alpha = 3.036	beta = 3.068	gamma = 1.000	n = 1	gE = 0.922	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136							
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.157	11.555							
vnn : f_yukawa	0	None	1.000	-292.713	-112.222	0.383							
vnn : f_yukawa	0	None	1.000	-413.479	-400.510	0.969							
kf_p : k_fermi	0	None	1.000	186228.951	28469512.546	152.874							
kf_t : k_fermi	0	None	1.000	20337.290	2769812.715	136.154							
u_coul : u_coul_ucs	0	None	1.000	78389.292	9245415.519	117.942							
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	
0.050	-133.935448366	3.800	-63.352016836	7.550	-1.129155843	11.300	0.092588368						
0.100	-133.902878464	3.850	-61.694312317	7.600	-1.038295984	11.350	0.092721043						
0.150	-133.846520820	3.900	-60.049341546	7.650	-0.953669342	11.400	0.092841717						
0.200	-133.768676005	3.950	-58.391676870	7.700	-0.874891923	11.450	0.092905941						
...													
...													
3.600	-69.989065854	7.350	-1.562937688	11.100	0.09192135	14.850	0.090642488						
3.650	-68.331941325	7.400	-1.443082733	11.150	0.092110632	14.900	0.090573234						
3.700	-66.672376968	7.450	-1.331128631	11.200	0.092284105	14.950	0.090505312						
3.750	-65.011889643	7.500	-1.226629163	11.250	0.092443085	15.000	0.090438615						
density/interaction	L	norm	renorm	vol2	vol4	msr							
total													
<u_r :="" td="" u_cdm3y4_paris_fr<=""><td>0</td><td>None</td><td>1.000</td><td>-42</td></u_r>	0	None	1.000	-42									

0.050	-129.491250125	3.800	-62.007081015	7.550	-1.116244297	11.300	0.090465634
0.100	-129.459713094	3.850	-68.494198269	7.600	-1.026339444	11.350	0.090605543
0.150	-129.487211806	3.900	-58.804070992	7.650	-0.942609772	11.400	0.090733412
0.200	-129.333648717	3.950	-57.208209964	7.700	-0.864685027	11.450	0.090849578
...							
3.600	-68.416368255	7.350	-1.545642258	11.100	0.089773914	14.850	0.088559870
3.650	-66.817320347	7.400	-1.426977855	11.150	0.0895968267	14.900	0.088491989
3.700	-65.215120843	7.450	-1.316148658	11.200	0.089147700	14.950	0.088425833
3.750	-63.611217783	7.500	-1.212712130	11.250	0.089031324	15.000	0.088361541
density/interaction							
	L	norm	renorm	vol2	vol4	msr	
total	-	-	-	-	-	-	-
u_R	: u_cdm3y6_paris_fr	0	None	1.000	-41282.793	-606848.954	14.700
u_R	: u_cdm3y6_paris_d	0	None	1.000	10383.320	2150.610	0.207
part1	-	-	-	-	-	-	-
u_R	: u_direct	0	None	1.000	15772.415	-22423.362	-1.418
rho_p	: f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t	: f_2prm_fermi	0	None	1.000	39.908	461.157	11.555
vnn	: f_yukawa	0	None	1.000	2124.246	814.407	0.383
vnn	: f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969
part2	-	-	-	-	-	-	-
u_R	: u_direct	0	None	1.000	11195.150	-7802.344	-0.625
rho_p	: f_rho_dd	0	None	1.000	3.278	7.731	2.359
rho_t	: f_rho_dd	0	None	1.000	34.570	418.483	12.105
vnn	: f_yukawa	0	None	1.000	2124.246	814.407	0.383
vnn	: f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969
part3	-	-	-	-	-	-	-
u_R	: u_direct	0	None	1.000	2358.769	-5749.726	-2.438
rho_p	: f_rho_bd	0	None	1.000	0.598	0.639	1.068
rho_t	: f_2prm_fermi	0	None	1.000	39.908	461.157	11.555
vnn	: f_yukawa	0	None	1.000	2124.246	814.407	0.383
vnn	: f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969
part4	-	-	-	-	-	-	-
u_R	: u_direct	0	None	1.000	1636.661	-8663.013	-5.293
rho_p	: f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t	: f_rho_bd	0	None	1.000	4.143	32.635	7.877
vnn	: f_yukawa	0	None	1.000	2124.246	814.407	0.383
vnn	: f_yukawa	0	None	1.000	-2022.559	-1959.119	0.969
exchange	-	-	-	-	-	-	-
u_R	: u_cdm3y6_paris_ex_fr	0	None	1.000	-51666.113	-688999.564	11.787
rho_p	: f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136
rho_t	: f_2prm_fermi	0	None	1.000	39.908	461.157	11.555
vnn	: f_yukawa	0	None	1.000	-292.713	-112.222	0.383
vnn	: f_yukawa	0	None	1.000	-413.479	-400.510	0.969
vnn	: f_yukawa	0	None	1.000	-278.524	-3323.356	11.932
kf_p	: k_fermi	0	None	1.000	186228.951	28469512.546	152.874
kf_t	: k_fermi	0	None	1.000	20337.290	2769812.715	136.154
u_coul	: u_coul_ucs	0	None	1.000	78389.292	9245415.519	117.942
R	u_R	R	u_R	R	u_R	R	u_R
0.050	-124.377234511	3.800	-60.503198723	7.550	-1.103782310	11.300	0.088108764
0.100	-124.347861935	3.850	-58.963052653	7.600	-1.014828909	11.350	0.088257452
0.150	-124.298964451	3.900	-57.424476232	7.650	-0.931999211	11.400	0.088393788
0.200	-124.230452200	3.950	-55.888911927	7.700	-0.854926059	11.450	0.088517880
...							
3.600	-66.651147294	7.350	-1.528785098	11.100	0.087384055	14.850	0.086240433
3.650	-65.118840485	7.400	-1.411316340	11.150	0.087585783	14.900	0.086174769
3.700	-63.582496207	7.450	-1.301615198	11.200	0.087773361	14.950	0.086111496
3.750	-62.043484444	7.500	-1.199243774	11.250	0.087947516	15.000	0.086050707

BiFold vs literature for CDM3Y6/Paris, Cs = 1/4

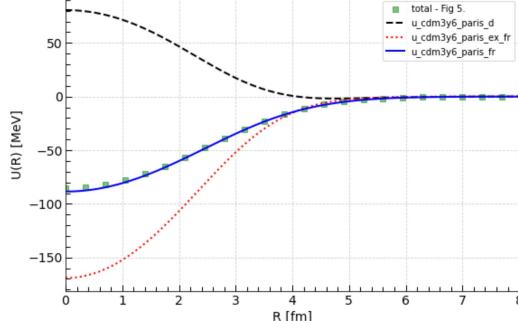
Reference: Fig. 5. @ Phys. Rev. C 56 (1997) 954.



./PhysRevC63_2001_034007\alpha_12C_cdm3y6_120MeV.py												
density/interaction	L	norm	renorm	vol2	vol4	msr						
total	-	-	-	-	-	-						
u_R : u_cdm3y6_paris_fr	0	None	1.000	-12837.727	-151986.557	11.839						
direct	-	-	-	-	-	-						
u_R : u_cdm3y6_paris_d	0	None	1.000	4389.928	203.491	0.046	c = 0.266	alpha = 3.803	beta = 1.410	gamma = 4.000	n = 1	
part1	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	6294.862	-5301.093	-0.842						
rho_p : f_2prm_gaussian	0	None	1.000	4.000	9.613	2.403						
rho_t : f_2prm_fermi	0	None	1.000	12.000	65.235	5.436						
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
part2	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	4622.562	-1700.067	-0.368						
rho_p : f_rho_dd	0	None	1.000	3.380	8.836	2.614	beta = 1.410					
rho_t : f_rho_dd	0	None	1.000	18.430	59.965	5.749	beta = 1.410					
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
part3	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	789.228	-1386.286	-1.757						
rho_p : f_2prm_gaussian	0	None	1.000	0.501	0.602	1.202	n = 1					
rho_t : f_2prm_fermi	0	None	1.000	12.000	65.235	5.436						
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
exchange	-	-	-	-	-	-						
u_R : u_cdm3y6_paris_ex_fr	0	None	1.000	-17229.040	-152190.048	8.834	c = 0.266	alpha = 3.803	beta = 1.410	gamma = 4.000	n = 1	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	9.613	2.403						
rho_t : f_2prm_fermi	0	None	1.000	12.000	65.235	5.436						
vnn : f_yukawa	0	None	1.000	-299.278	-112.231	0.375						
vnn : f_yukawa	0	None	1.000	-417.202	-400.515	0.960						
kf_p : k_fermi	0	None	1.000	159804.209	24285449.445	151.469						
kf_t : k_fermi	0	None	1.000	24804.771	3353282.760	135.187						
u_coul : u_coul_ucs	0	None	1.000	23784.181	2744101.698	115.375						
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	
0.000	-88.558957047	3.750	-18.707804132	7.500	-0.062022319	11.250	-0.000220314					
0.050	-88.538844536	3.800	-17.833839548	7.550	-0.056206691	11.300	-0.000256598					
0.100	-88.478641277	3.850	-16.986386763	7.600	-0.058974903	11.350	-0.000286899					
0.150	-88.378359388	3.900	-16.165590656	7.650	-0.046051229	11.400	-0.000310599					
...												
...												
3.550	-22.463374887	7.300	-0.091382110	11.050	-0.000032888	14.800	0.000176392					
3.600	-21.486247424	7.350	-0.083011476	11.100	-0.000088407	14.850	0.000164388					
3.650	-20.534326268	7.400	-0.075369380	11.150	-0.000133036	14.900	0.000148870					
3.700	-19.608045439	7.450	-0.068392304	11.200	-0.000178821	14.950	0.000130238					

BiFold vs literature for CDM3Y6/Paris, Cs = 1/4

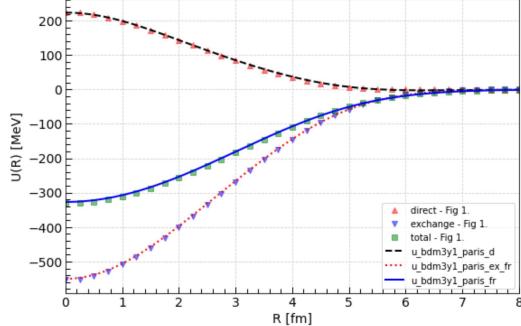
Reference: Fig. 2 @ Phys. Rev. C 63 (2001) 034007.



./PhysRevLett74_1995_34\o16o16_bdm3y1.py												
density/interaction	L	norm	renorm	vol2	vol4	msr						
total	-	-	-	-	-	-						
u_R : u_bdm3y1_paris_fr	0	None	1.000	-87330.722	-1525183.955	17.464						
direct	-	-	-	-	-	-						
u_R : u_bdm3y1_paris_d	0	None	1.000	26256.900	155818.119	5.934	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000	
part1	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	33725.375	154556.106	4.583						
rho_p : f_2prm_fermi	0	None	1.000	16.033	106.186	6.623						
rho_t : f_2prm_fermi	0	None	1.000	16.033	106.186	6.623						
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375						
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960						
part3	-	-	-	-	-	-						
u_R : u_direct	0	None	1.000	3358.858	6873.256	2.046						
rho_p : f_rho_dd	0	None	1.000	1.598	6.623	4.146	n = 1.000					
rho_t : f_rho_dd	0	None	1.000	16.033	106.186	6.623						
vnn : f_yukawa	0	None	1.000	-417.202	-400.515	0.960						
vnn : f_yukawa	0	None	1.000	-276.901	-3083.649	11.136						
kf_p : k_fermi	0	None	1.000	6908.621	416828.466	60.335						
kf_t : k_fermi	0	None	1.000	6908.621	416828.466	60.335						
u_coul : u_coul_ucs	0	None	1.000	52898.092	283289.394	54.375						
R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	R	u_R	
0.000	-326.872991054	2.500	-218.540272811	5.000	-50.504720599	7.500	-2.598415098					
0.050	-326.822575526	2.550	-214.844826395	5.050	-48.309568242	7.550	-2.414333209					
0.100	-326.671742657	2.600	-211.126166557	5.100	-46.179649757	7.600	-2.242199339					
0.150	-326.420471430	2.650	-207.386710013	5.150	-44.114839380	7.650	-2.081339846					
...												
...												
2.300	-233.041798457	4.800	-59.936300380	7.300	-3.468797386	9.800	-0.059844721					
2.350	-229.463250694	4.850	-57.481177529	7.350	-3.229550545	9.850	-0.054602681					
2.400	-225.851886447	4.900	-55.09657623	7.400	-3.005273265	9.900	-0.049798039					
2.450	-222.210094562	4.950	-52.765122416	7.450	-2.795149634	9.950	-0.045399019					

BiFold vs literature for BDM3Y1/Paris

Reference: Fig. 1. @ Phys. Rev. Lett. 74 (1995) 34.

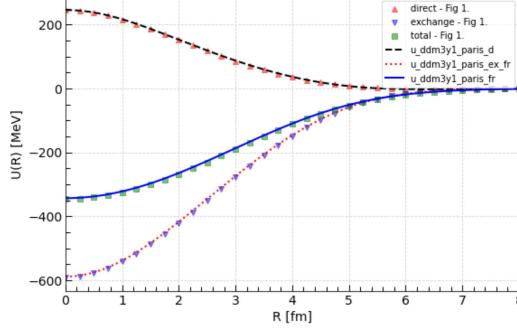


||./PhysRevLett74_1995_34\o16c16_ddm3y1.py||

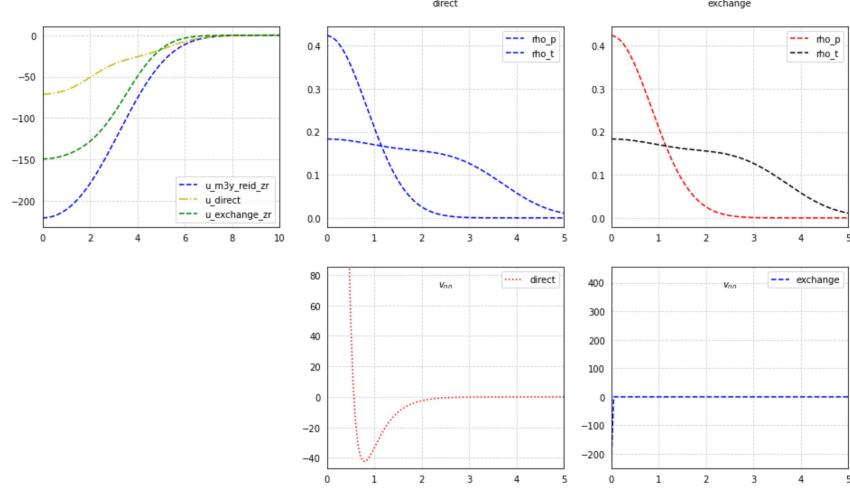
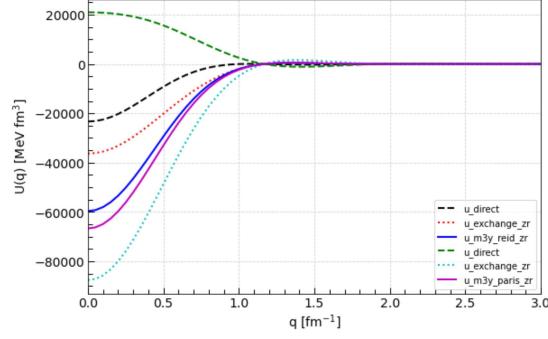
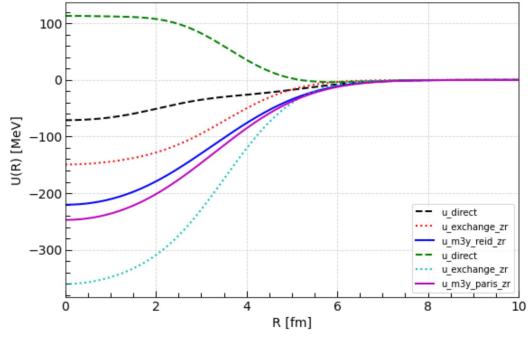
density/interaction	L	norm	renorm	vol2	vo14	msr				
total	- - -									
u_R : u_ddm3y1_paris_fr	0	None	1.000	-89894.426	-1565887.477	17.419				
direct	- - -									
u_R : u_ddm3y1_paris_d	0	None	1.000	27127.478	159841.850	5.863	c = 0.296	alpha = 3.723	beta = 3.738	gamma = 0.000
part1	- - -									
u_R : u_direct	0	None	1.000	33725.375	154556.106	4.583				
rho_p : f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t : f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375				
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960				
part2	- - -									
u_R : u_direct	0	None	1.000	16741.796	109747.648	6.555				
rho_p : f_rho_dd	0	None	1.000	11.293	85.626	7.582	beta = 3.738			
rho_t : f_rho_dd	0	None	1.000	11.293	85.626	7.582	beta = 3.738			
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375				
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960				
exchange	- - -						c = 0.296	alpha = 3.723	beta = 3.738	gamma = 0.000
u_R : u_ddm3y1_paris_ex_fr	0	None	1.000	-117021.904	-1724929.326	14.740				
rho_p : f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
rho_t : f_2prm_fermi	0	None	1.000	16.033	106.186	6.623				
vnn : f_yukawa	0	None	1.000	-299.278	-112.231	0.375				
vnn : f_yukawa	0	None	1.000	-417.202	-400.515	0.960				
vnn : f_yukawa	0	None	1.000	-276.901	-3083.649	11.136				
kf_p : k_fermi	0	None	1.000	6908.621	416828.466	60.335				
kf_t : k_fermi	0	None	1.000	6908.621	416828.466	60.335				
u_coul : u_coul_ucs	0	None	1.000	52898.092	2832839.394	54.375				
R	u_R	R	u_R	R	u_R	R	u_R			
0.000	-343.329076823	2.500	-226.967821656	5.000	-51.396314841	7.500	-2.713115989			
0.050	-343.274817505	2.550	-223.024364447	5.050	-49.162545169	7.550	-2.523049952			
0.100	-343.112473739	2.600	-219.058710509	5.100	-46.996492989	7.600	-2.345153516			
0.150	-342.842023478	2.650	-215.073740039	5.150	-44.897610236	7.650	-2.178749167			
...										
...										
2.300	-242.467016402	4.800	-61.009951043	7.300	-3.609726634	9.800	-0.064747403			
2.350	-238.638842830	4.850	-58.504880236	7.350	-3.363575598	9.850	-0.059131266			
2.400	-234.777790421	4.900	-56.067416272	7.400	-3.132622103	9.900	-0.053972761			
2.450	-230.886530615	4.950	-53.697910306	7.450	-2.916059854	9.950	-0.049238868			

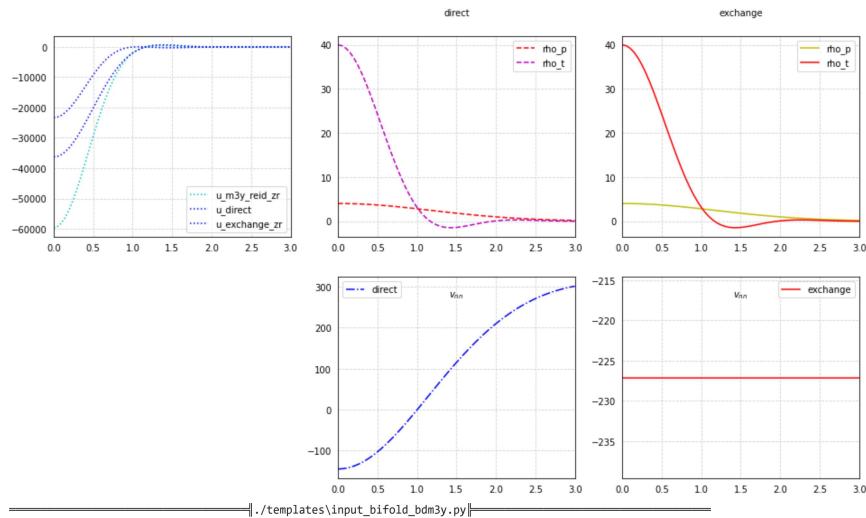
BiFold vs literature for DDM3Y1/Paris

Reference: Fig. 1. @ Phys. Rev. Lett. 74 (1995) 34.

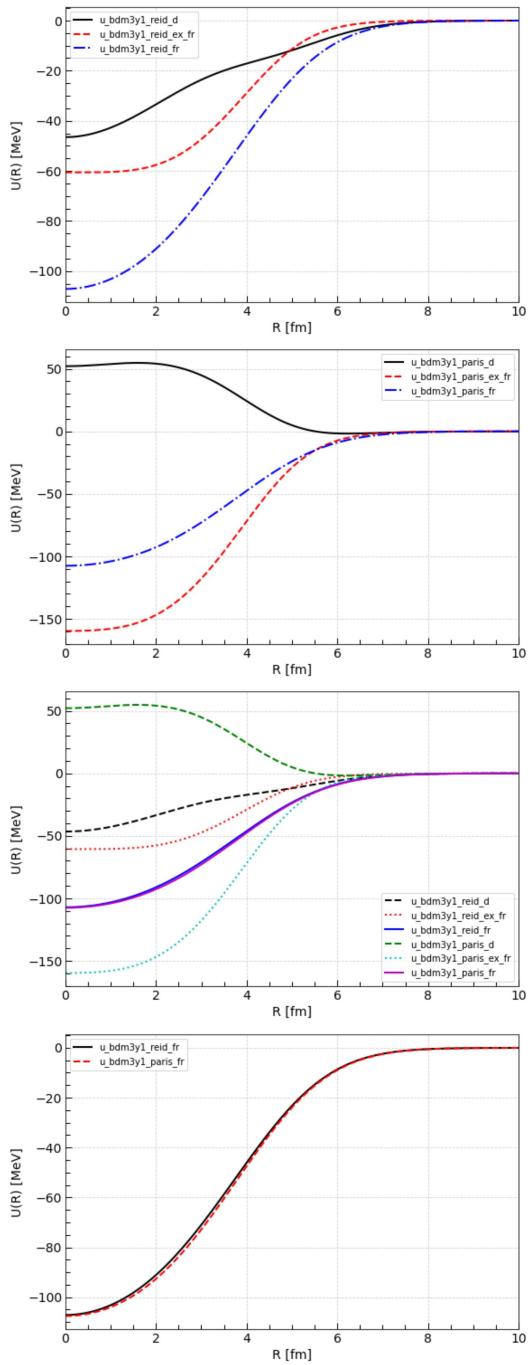


./templates\input_bifold.py							
density/interaction	L	norm	renorm	vol2	vol4	msr	
<hr/>							
total	-	-	-	-	-	-	-
u_R : u_m3y_reid_zr	0	None	1.000	-59632.709	-981694.619	16.462	
<hr/>							
direct	-	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	-23321.461	-486686.172	28.869	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	
rho_t : f_nudat	0	None	1.000	39.970	459.660	11.500	
vnn : f_yukawa	0	None	1.000	1570.558	588.970	0.375	
vnn : f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960	
<hr/>							
exchange	-	-	-	-	-	-	-
u_R : u_exchange_zr	0	None	1.000	-36311.248	-495088.447	13.632	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	
rho_t : f_nudat	0	None	1.000	39.970	459.660	11.500	
vnn : f_dirac_delta	0	None	1.000	-227.114	0.000	0.000	
<hr/>							
R	u_R	R	u_R	R	u_R	R	u_R
0.000	-220.417739583	2.500	-156.069768217	5.000	-34.286415064	7.500	-1.178257371
0.050	-220.393644925	2.550	-153.549646656	5.050	-32.685291962	7.550	-1.081720909
0.100	-220.321336535	2.600	-150.999105317	5.100	-31.133963948	7.600	-0.992545529
0.150	-220.280741445	2.650	-148.420159580	5.150	-29.632349905	7.650	-0.910228057
<hr/>							
<hr/>							
2.300	-165.807732581	4.800	-41.187489813	7.300	-1.649131265	9.800	-0.016543646
2.350	-163.428297867	4.850	-39.388087978	7.350	-1.517514140	9.850	-0.014962047
2.400	-161.010965364	4.900	-37.637946297	7.400	-1.395575108	9.900	-0.013516115
2.450	-158.557508732	4.950	-35.937329714	7.450	-1.282687690	9.950	-0.012195121
<hr/>							
density/interaction	L	norm	renorm	vol2	vol4	msr	
<hr/>							
total	-	-	-	-	-	-	-
u_R : u_m3y_paris_zr	0	None	1.000	-66677.314	-1091359.357	16.368	
<hr/>							
direct	-	-	-	-	-	-	-
u_R : u_direct	0	None	1.000	20969.486	183474.452	4.935	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	
rho_t : f_nudat	0	None	1.000	39.970	459.660	11.500	
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375	
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960	
<hr/>							
exchange	-	-	-	-	-	-	-
u_R : u_exchange_zr	0	None	1.000	-87646.800	-1194833.809	13.632	
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136	
rho_t : f_nudat	0	None	1.000	39.970	459.660	11.500	
vnn : f_dirac_delta	0	None	1.000	-548.198	0.000	0.000	

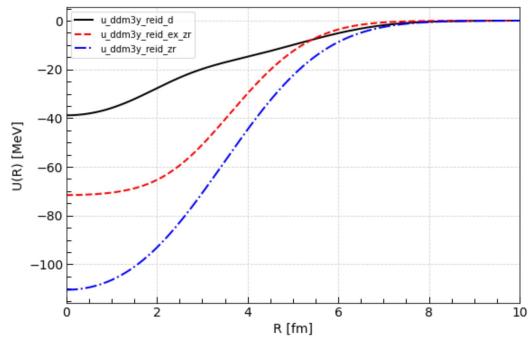




density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total											
u_R : u_bdm3yl_paris_fr	0	None	1.000	-37418.526	-694385.823	18.557					
direct											
u_R : u_bdm3yl_paris_d	0	None	1.000	13076.532	87955.189	6.726	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000 gE = 0.894
part1											
u_R : u_direct	0	None	1.000	20940.648	184836.120	5.006					
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554					
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375					
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960					
part3											
u_R : u_direct	0	None	1.000	3129.461	12175.311	3.891					
rho_p : f_2prm_gaussian	0	None	1.000	0.598	0.639	1.068 n = 1.000					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554					
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375					
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960					
part4											
u_R : u_direct	0	None	1.000	2173.705	2858.407	1.315					
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136					
rho_t : f_rho_bd	0	None	1.000	4.143	32.635	7.877 n = 1.000					
vnn : f_yukawa	0	None	1.000	2171.888	814.472	0.375					
vnn : f_yukawa	0	None	1.000	-2040.770	-1959.145	0.960					
exchange											
u_R : u_bdm3yl_paris_ex_fr	0	None	1.000	-50495.058	-782341.012	15.493	c = 1.252	alpha = 0.000	beta = 0.000	gamma = 1.745	n = 1.000 gE = 0.894
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554					
vnn : f_yukawa	0	None	1.000	-299.278	-112.231	0.375					
vnn : f_yukawa	0	None	1.000	-417.202	-400.515	0.960					
vnn : f_yukawa	0	None	1.000	-276.901	-3083.649	11.136					
kf_p : k_fermi	0	None	1.000	34298.858	2299872.662	67.031					
kf_t : k_fermi	0	None	1.000	5939.150	358618.850	60.382					
u_coul : u_coul_ucs	0	None	1.000	33576.888	1789293.205	53.289					
R u_R R u_R R u_R R u_R											
0.000 -107.532965084	2.500	-83.760091490	5.000	-23.921737871	7.500	-1.206273984					
0.050 -107.524182232	2.550	-82.753967434	5.050	-22.939611392	7.550	-1.117619167					
0.100 -107.498049752	2.600	-81.727682823	5.100	-21.981615163	7.600	-1.034936130					
0.150 -107.454479284	2.650	-80.681810551	5.150	-21.046791265	7.650	-0.957902655					
...											
...											
2.300 -87.577865128	4.800	-28.076910202	7.300	-1.628346435	9.800	-0.024568195					
2.350 -86.655030493	4.850	-27.005269978	7.350	-1.511925320	9.850	-0.022409430					
2.400 -85.710953222	4.900	-25.955115528	7.400	-1.403044065	9.900	-0.020438062					
2.450 -84.745879560	4.950	-24.927079212	7.450	-1.301292021	9.950	-0.018639029					
density/interaction	L	norm	renorm	vol2	vol4	msr					
<hr/>											
total											
u_R : u_bdm3yl_reid_fr	0	None	1.000	-36382.967	-671317.766	18.451					
direct											
u_R : u_bdm3yl_reid_d	0	None	1.000	-16347.299	-363200.701	22.218	c = 1.225	alpha = 0.000	beta = 0.000	gamma = 1.512	n = 1.000 gE = 0.929
part1											
u_R : u_direct	0	None	1.000	-23281.609	-486747.684	20.907					
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554					
vnn : f_yukawa	0	None	1.000	1578.558	588.970	0.375					
vnn : f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960					
part3											
u_R : u_direct	0	None	1.000	-3482.209	-69183.565	19.868					
rho_p : f_rho_bd	0	None	1.000	0.598	0.639	1.068 n = 1.000					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554					
vnn : f_yukawa	0	None	1.000	1570.558	588.970	0.375					
vnn : f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960					
part4											
u_R : u_direct	0	None	1.000	-2417.627	-41717.859	17.256					
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136					
rho_t : f_rho_bd	0	None	1.000	4.143	32.635	7.877 n = 1.000					
vnn : f_yukawa	0	None	1.000	1570.558	588.970	0.375					
vnn : f_yukawa	0	None	1.000	-1716.459	-1647.805	0.960					
exchange											
u_R : u_bdm3yl_ex_fr	0	None	1.000	-20035.667	-308117.065	15.378	c = 1.225	alpha = 0.000	beta = 0.000	gamma = 1.512	n = 1.000 gE = 0.929
rho_p : f_2prm_gaussian	0	None	1.000	4.000	8.543	2.136					
rho_t : f_2prm_fermi	0	None	1.000	39.908	461.090	11.554					
vnn : f_yukawa	0	None	1.000	909.345	341.011	0.375					
vnn : f_yukawa	0	None	1.000	-1437.289	-1379.802	0.960					
vnn : f_yukawa	0	None	1.000	-276.901	-3083.649	11.136					
kf_p : k_fermi	0	None	1.000	34298.858	2299872.662	67.031					
kf_t : k_fermi	0	None	1.000	5939.150	358618.850	60.382					
u_coul : u_coul_ucs	0	None	1.000	33576.888	1789293.205	53.289					
R u_R R u_R R u_R R u_R											
0.000 -107.123562743	2.500	-81.956878207	5.000	-23.240283122	7.500	-1.138837962					
0.050 -107.113709774	2.550	-80.935519973	5.050	-22.285463416	7.550	-1.054443051					
0.100 -107.0884429135	2.600	-79.896250972	5.100	-21.353432611	7.600	-0.975814928					
0.150 -107.035621338	2.650	-78.839507945	5.150	-20.444510109	7.650	-0.92607652					
...											
...											
2.300 -85.855513866	4.800	-27.276428714	7.300	-1.541572270	9.800	-0.023130437					
2.350 -84.909569504	4.850	-26.235891811	7.350	-1.430326055	9.850	-0.021124481					
2.400 -83.944265133	4.900	-25.215947206	7.400	-1.326392897	9.900	-0.019280795					
2.450 -82.959918908	4.950	-24.217199230	7.450	-1.229361777	9.950	-0.017586216					



===== ./templates\input_bifield_ddm3y.py =====							
density/interaction	L	norm	renorm	vol1	vol2	vol4	msr
<u>_R : u_ddm3y_reid_zr</u>							
<u>_R : u_ddm3y_reid_d</u>	0	None	1.000	-36264.659	-676369.207	18.651	
<u>_R : u_ddm3y_reid_ex_zr</u>							
<u>_R : u_ddm3y_reid_ex_fr</u>	0	None	1.000	-14176.285	-326339.654	23.020	c = 0.279 alpha = 5.175 beta = 7.135
<u>_R : u_ddm3y_reid_ex_fr</u>							
<u>_R : u_bdm3y1_reid_d</u>	0	None	1.000	-23281.699	-486747.684	20.907	
<u>rho_p : f_2prm_gaussian</u>	0	None	1.000	4.000	8.543	2.136	
<u>rho_t : f_2prm_fermi</u>	0	None	1.000	39.908	461.090	11.554	
<u>vnn : f_yukawa</u>	0	None	1.000	1570.558	588.970	0.375	
<u>vnn : f_yukawa</u>	0	None	1.000	-1716.459	-1647.805	0.960	
<u>_R : u_ddm3y_reid_zr</u>							
<u>_R : u_ddm3y_reid_d</u>	0	None	1.000	-5316.867	-131981.182	24.808	
<u>rho_p : f_rho_dd</u>	0	None	1.000	1.782	5.637	3.162 beta = 7.135	
<u>rho_t : f_rho_dd</u>	0	None	1.000	28.475	297.199	14.515 beta = 7.135	
<u>vnn : f_yukawa</u>	0	None	1.000	1570.558	588.970	0.375	
<u>vnn : f_yukawa</u>	0	None	1.000	-1716.459	-1647.805	0.960	
<u>_R : u_ddm3y_reid_ex_zr</u>							
<u>_R : u_ddm3y_reid_ex_fr</u>	0	None	1.000	-22888.374	-350029.553	15.847	c = 0.279 alpha = 5.175 beta = 7.135
<u>_R : u_ddm3y_reid_ex_fr</u>							
<u>_R : u_exchange_zr</u>	0	None	1.000	-36254.670	-496119.772	13.684	
<u>rho_p : f_2prm_gaussian</u>	0	None	1.000	4.000	8.543	2.136	
<u>rho_t : f_2prm_fermi</u>	0	None	1.000	39.908	461.090	11.554	
<u>vnn : f_dirac_delta</u>	0	None	1.000	-227.114	0.000	0.000	
<u>_R : u_exchange_zr</u>							
<u>_R : u_exchange_d</u>	0	None	1.000	-8288.391	-146492.664	17.674	
<u>rho_p : f_rho_dd</u>	0	None	1.000	1.782	5.637	3.162 beta = 7.135	
<u>rho_t : f_rho_dd</u>	0	None	1.000	28.475	297.199	14.515 beta = 7.135	
<u>vnn : f_dirac_delta</u>	0	None	1.000	-227.114	0.000	0.000	
R	u_R	R	u_R	R	u_R	R	u_R
0.000	-118.432111071	2.500	-82.776900632	5.000	-22.515273921	7.500	-1.286668829
0.050	-110.422534874	2.550	-81.637568442	5.050	-21.615701486	7.550	-1.194880467
0.100	-110.393790052	2.600	-80.480775942	5.100	-20.736725263	7.600	-1.109049215
0.150	-110.345828065	2.650	-79.307293961	5.150	-19.884483506	7.650	-1.028851569
...							
...							
2.300	-87.145225307	4.800	-26.335277909	7.300	-1.720247136	9.800	-0.027470032
2.350	-86.082858441	4.850	-25.347551659	7.350	-1.601176621	9.850	-0.025136592
2.400	-85.000243266	4.900	-24.381443426	7.400	-1.489466083	9.900	-0.023018522
2.450	-83.898029923	4.950	-23.437262217	7.450	-1.384748877	9.950	-0.021096636



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