The IFM scales all experimental errors by the same fractional amount, resulting in equal internal and external errors on the mean.

As the method maintains the relative precision of discrepant data sets, it apportions a larger absolute fraction of the identified systematic error to the less precise data sets. This is consistent with naive expectations that a large, unidentified systematic error is more likely to "hide" within a low-precision data set than within a high-precision one, given the advantages a high-precision data set offers an experimentalist who does "due-diligence" cross checks to identify systematic errors.

Data set	ν	χ^2	A	Eres(keV)	Γ_p(keV)	Γ_γ(meV)	$S_{17}(0)$(eV · b)
Filippone [14]	21	22.6	0.762±0.015	631.6±0.6	38.1±1.5	25.9±0.9	18.80±0.37
Hass [19]	1	0.03	0.79±0.03	[a]	[a]	[a]	19.59±0.79
Gialanella [4]	[b]	[b]	0.60±0.16	[a]	[a]	[a]	14.8±4.0
Hammache 1 [17]	11	4.9	0.73±0.02	[a]	[a]	[a]	18.05±0.37
Hammache 2 [18]	2	0.85	0.77±0.07	[a]	[a]	[a]	19.05±1.6
Strieder [20]	9	13.1	0.69±0.02	630[c]	35.7[c]	25.2[c]	17.05±0.36
Baby [15,16]	33	18.9	0.833±0.012	635.4±0.6	37.8±2.2	26.6±1.1	20.58±0.30
Junghans BE1[21-23]	25	21.3	0.872±0.006	629.8±0.3	35.3±0.9	25.7±0.4	21.52±0.15
Junghans BE3[22-23]	7	4.4	0.872±0.008	[a]	[a]	[a]	21.53± 0.21
Junghans BE3S[22-23]	9	8.1	0.881±0.005	[a]	[a]	[a]	21.93± 0.12
Present work	6	3.8	0.67±0.09	630[c]	33±6	20±4	16.6± 2.1

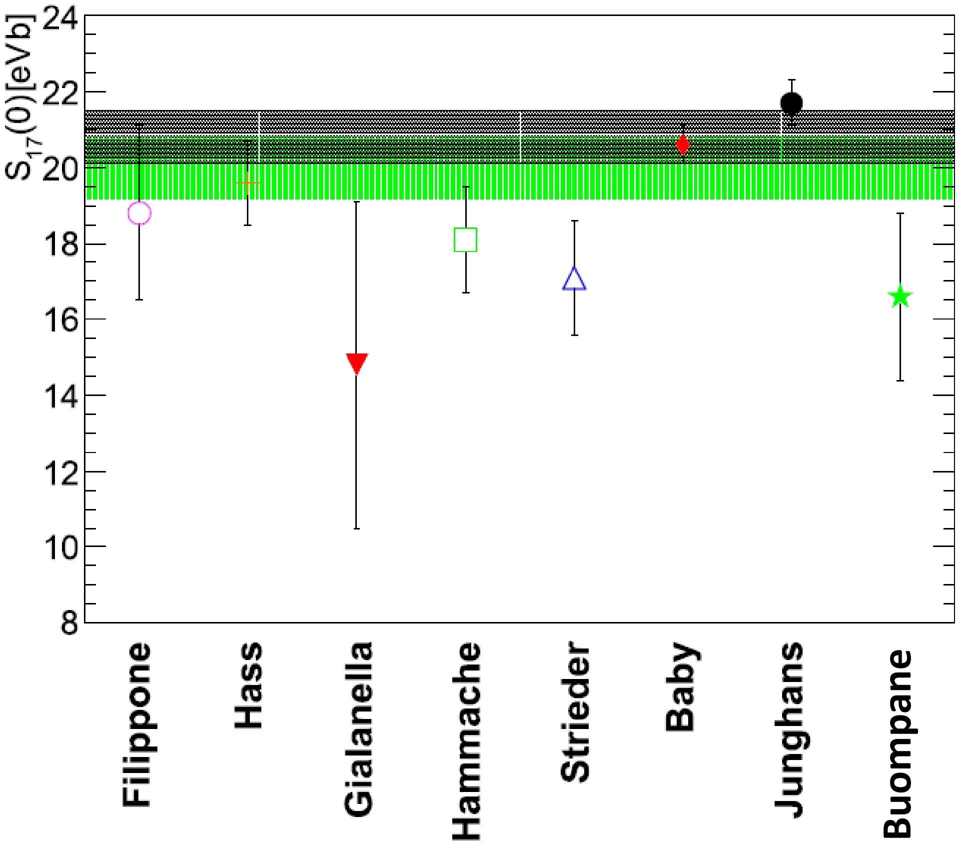
[a] No data on resonance. Fitted with scaled Sfactor(MN).

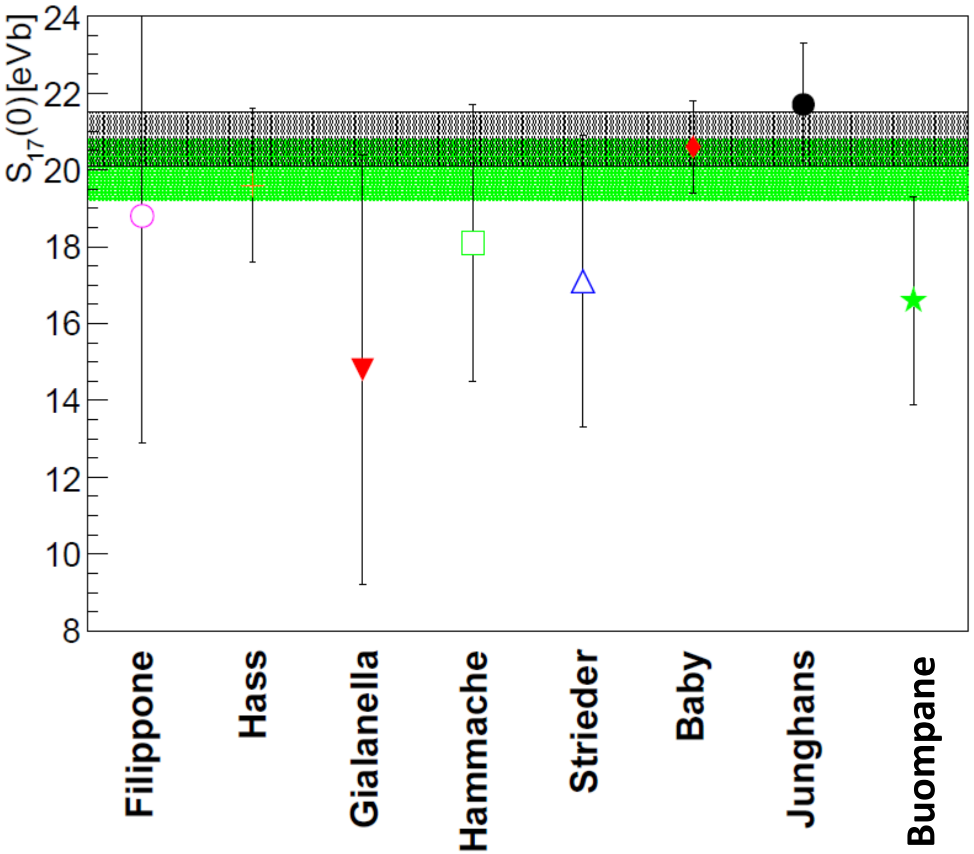
[b] One point on dataset.

[c] Fixed from [Tilley04].

Data set	$\delta_{\text{sys}}(\%)$
Filippone [14]	11.9
Hass [19]	3.6
Gialanella [4]	10.0
Hammache [17,18]	7.5
Strieder [20]	8.3
Baby [15,16]	2.2
Junghans [21-23]	2.7
Present work	4.0

We scaled the systematic uncertainties alone until the internal and external errors get equal


$S_{17}(0)$[eVb]
24
22
20
18
16
14
12
10
8
Filippone
Hass
Gialanella
Hammache
Strieder
Baby
Junghans
Buompane


$S_{17}(0)$[eVb]
24
22
20
18
16
14
12
10
8
Filippone
Hass
Gialanella
Hammache
Strieder
Baby
Junghans
Buompane

Proposal:

1. Fit single data sets
2. If needed inflate the statistical errors of single data sets independently
3. Perform a global fit
4. If needed inflate systematic errors until internal and external errors on the mean are equal

If models are uncertain, then a Bayesian approach could be the best way to go. Similarly if different sources of data are available, e.g indirect measurements.