

Format errors (opening parenthesis of free text at col. 12 etc.)

(N. Otsuka, 2025-01-16, Memo CP-D/1125)

I analysed the EXFOR contents by using EXFOR-2024 converted to JSON (J4) and validated it with a draft of the JSON schema. It checks a few basic format items for coded information (e.g., presence of (sub)fields, number or string), and I got some error messages.

1. They are mainly for presence of an **opening parenthesis “(“ at column 12 of free text.**

Example:

CORRECTION	Method 1 data corrected for detector efficiency and internal conversion.	1369800100055 1369800100056
	(APRVD) Approved by A. Ramayya, 28 August 1998.	1369800100057
HISTORY	(19980807C)	1369800100058

Both ZCHEX and JANIS Trans checker do not detect this error. I guess they do not check presence of an opening parenthesis if the keyword does not take coded information (i.e., TITLE, CORRECTION, COVARIANCE, COMMENT and CRITIQUE).

2. Other typical errors are for a **wrong field identifier under SAMPLE and wrong level energy value under LEVEL-PROP.**

Examples:

SAMPLE	(92-U-235, 93.) Square platelet of 93% enrichment,	2061600800013
LEVEL-PROP	(24-CR-49, E-LVL=2.578 MEV , SPIN=0.5, PARITY=+1.)	E093100200004

The wrong SAMPLE coding is detected by JANIS Trans Checker (but not by ZCHEX), and the wrong LEVEL-PROP coding is detected by ZCHEX (but not by JANIS Trans Checker).

All detected errors are listed in the appendix of this memo. The JSON schema file is still very preliminary, but I can share it with you if you are interested in it.

Subentry#	Keyword	Remark
10835.005	SAMPLE	Open paren of free text at col.12
10993.002	CORRECTION	Open paren of free text at col.12
11504.006	CRITIQUE	HISTORY record coded under CRITIQUE
11540.009	SAMPLE	ENR= missing
11540.010	SAMPLE	ENR= missing
11540.011	SAMPLE	ENR= missing
11934.001	TITLE	Open paren of free text at col.12
11954.001	TITLE	Open paren of free text at col.12
12866.178	COMMENT	Open paren of free text at col.12
13698.001	CORRECTION	STATUS record coded under CORRECTION
13733.002	SAMPLE	Open paren of free text at col.12
13733.003	SAMPLE	Open paren of free text at col.12
13901.001	CORRECTION	Open paren of free text at col.12
14248.001	COMMENT	Open paren of free text at col.12
14250.002	CRITIQUE	Open paren of free text at col.12
14273.001	CORRECTION	Open paren of free text at col.12
14319.002	SAMPLE	Open paren of free text at col.12
14319.003	SAMPLE	Open paren of free text at col.12
14744.001	COMMENT	Open paren of free text at col.12
14829.001	CORRECTION	Open paren of free text at col.12
20175.001	SAMPLE	ENR= missing
20352.017	CORRECTION	ERR-ANALYS ecord coded under CORRECTION
20385.001	SAMPLE	ENR= missing
20602.027	CORRECTION	STATUS record coded under CORRECTION
20616.008	SAMPLE	ENR= missing, normalized to 100 instead of 1
20616.009	SAMPLE	ENR= missing, normalized to 100 instead of 1
20616.010	SAMPLE	ENR= missing, normalized to 100 instead of 1
20616.011	SAMPLE	ENR= missing, normalized to 100 instead of 1
20996.001	SAMPLE	ENR= missing, normalized to 100 instead of 1
21532.002	SAMPLE	ENR= missing
21532.003	SAMPLE	ENR= missing
22121.029	COMMON	E-EXC-MX-A : empty number field
22186.081	COMMENT	STATUS record coded under COMMENT
22360.001	SAMPLE	ENR= missing
22882.010	COMMENT	Open paren of free text at col.12
23112.002	COMMENT	Open paren of free text at col.12
23112.003	COMMENT	Open paren of free text at col.12
23260.087	SAMPLE	NAT= missing
23286.002	COMMENT	STATUS record coded under COMMENT
23560.005	COMMENT	Open paren of free text at col.12
30330.002	COMMENT	STATUS record coded under COMMENT
31438.003	COMMENT	HISTORY record coded under COMMENT
31515.001	CORRECTION	Open paren of free text at col.12
32245.001	CORRECTOIN	Open paren of free text at col.12
32762.001	CORRECTION	Open paren of free text at col.12
32782.001	CORRECTION	Open paren of free text at col.12
32910.001	CORRECTION	Open paren of free text at col.12
33034.006	CORRECTION	Open paren of free text at col.12

33034.007	CORRECTION	Open paren of free text at col.12
33045.002	SAMPLE	Open paren of free text at col.12
33071.001	CORRECTION	Open paren of free text at col.12
33077.003	CORRECTION	Open paren of free text at col.12
40023.007	COMMENT	Open paren of free text at col.12
40023.013	COMMENT	Open paren of free text at col.12
40023.019	COMMENT	Open paren of free text at col.12
40023.025	COMMENT	Open paren of free text at col.12
40023.031	COMMENT	Open paren of free text at col.12
40054.002	SAMPLE	ENR= missing
40054.003	SAMPLE	ENR= missing
40071.001	COMMENT	Open paren of free text at col.12
40091.004	COMMENT	Open paren of free text at col.12
40112.001	CORRECTION	Open paren of free text at col.12
40334.002	CRITIQUE	Open paren of free text at col.12
40359.003	COMMENT	Open paren of free text at col.12
41502.002	COMMENT	Open paren of free text at col.12
41561.003	CORRECTION	Open paren of free text at col.12
A0059.003	COMMENT	Open paren of free text at col.12
A0092.007	COMMENT	Open paren of free text at col.12
A0383.002	COMMENT	Open paren of free text at col.12
A0566.009	COMMENT	Open paren of free text at col.12
A0596.001	CORRECTION	HISTORY record coded under CORRECTION
B0084.009	COMMENT	STATUS record coded under COMMENT
C0098.002	LEVEL-PROP	ISO-NUMB -> IAS-NUMB
C0098.003	LEVEL-PROP	ISO-NUMB -> IAS-NUMB
C0098.004	LEVEL-PROP	ISO-NUMB -> IAS-NUMB
C0098.005	LEVEL-PROP	ISO-NUMB -> IAS-NUMB
C0098.006	LEVEL-PROP	ISO-NUMB -> IAS-NUMB
C0244.005	SAMPLE	ENR+0.9984 -> ENR=0.984
C0244.006	SAMPLE	ENR+0.991 -> ENR=0.991
C0982.002	COMMENT	Open paren of free text at col.12
C0995.003	COMMENT	Open paren of free text at col.12
C1021.001	COMMENT	Open paren of free text at col.12
C1471.001	SAMPLE	Open paren of free text at col.12
C1790.002	COMMENT	Open paren of free text at col.12
C1858.001	SAMPLE	Open paren of free text at col.12
C1886.001	SAMPLE	Open paren of free text at col.12
C1919.001	SAMPLE	Open paren of free text at col.12
C1936.001	SAMPLE	Open paren of free text at col.12
C1964.001	SAMPLE	Open paren of free text at col.12
C2017.002	SAMPLE	Open paren of free text at col.12
C2017.003	SAMPLE	Open paren of free text at col.12
C2113.001	SAMPLE	Open paren of free text at col.12
C2271.004	CORRECTION	Open paren of free text at col.12
C2317.003	COMMENT	Open paren of free text at col.12
C2317.005	COMMENT	Open paren of free text at col.12
C2478.001	CORRECTION	Open paren of free text at col.12
C2535.004	LEVEL-PROP	Delete or move to COMMENT etc. Level energy absent.
C2535.005	LEVEL-PROP	Delete or move to COMMENT etc. Level energy absent.

C2536.004	LEVEL-PROP	Delete or move to COMMENT etc. Level energy absent.
D0658.001	SAMPLE	ENR= missing
D0933.003	CORRECTION	Open paren of free text at col.12
D4250.001	SAMPLE	Open paren of free text at col.12. Enrichment normalized to 100 instead of 1.
D4300.001	SAMPLE	Open paren of free text at col.12
D4308.001	SAMPLE	Open paren of free text at col.12
D4314.001	SAMPLE	Illegal field identifiers ENR< and ENR<
D6075.001	COMMENT	Open paren of free text at col.12
D6092.001	COMMENT	Open paren of free text at col.12
D6208.006	COMMENT	Open paren of free text at col.12
E0931.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1137.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1141.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1188.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1191.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1199.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1206.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1229.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1230.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1237.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1280.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1282.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1283.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1310.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1313.003	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1316.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1325.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1355.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1360.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1361.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1362.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries

E1364.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1366.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1371.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1388.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1407.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1413.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1416.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1419.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1423.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1425.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1436.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1441.001	NOSUBENT	N2: Add 19950425 in 002-004.
E1442.001	NOSBUENT	N2: Add 19950428 in 010-023.
E1440.001	LEVEL-PROP	Illegal characters "MEV" in the level energy field in data subentries
E1637.024	LEVEL-PROP	Illegal characters "MEV" in the level energy field
F0191.001	COMMENT	Open paren of free text at col.12
F0266.001	COMMENT	Open paren of free text at col.12
L0192.001	SAMPLE	Open paren of free text at col.12
L0207.002	SAMPLE	Open paren of free text at col.12
L0207.003	SAMPLE	Open paren of free text at col.12
M0122.001	COMMENT	Open paren of free text at col.12
M0347.002	COMMENT	ERR-ANALYS record coded under COMMENT?
M0347.004	COMMENT	ERR-ANALYS record coded under COMMENT?
M0347.005	COMMENT	ERR-ANALYS record coded under COMMENT?
P0028.003	SAMPLE	Open paren of free text at col.12
P0028.004	SAMPLE	Open paren of free text at col.12
P0028.005	SAMPLE	Open paren of free text at col.12
P0028.006	SAMPLE	Open paren of free text at col.12
P0028.007	SAMPLE	Open paren of free text at col.12
R0032.002	COMMENT	HISTORY record coded under COMMENT
R0032.003	COMMENT	HISTORY record coded under COMMENT
S0063.001	SAMPLE	Open paren of free text at col.12
S0102.001	COMMENT	Open paren of free text at col.12
T0011.002	SAMPLE	Chemical purity coded as isotopic enrichment? (Be is monoisotopic)
T0011.003	SAMPLE	Chemical purity coded as isotopic enrichment? (Be is monoisotopic)
V0016.221	CRITIQUE	HISTORY record coded under CRITIQUE