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## Corrected Summary of Crystal-Structure Types Enumerated by Computer

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### Abstract

The enumeration of crystal-structure types in a previous paper [M. Hosoya: Bull. Faculty of Science, Univ. of the Ryukyus, 44 (1987) 11-74] is revised. Three types were found to be redundant in Genus A3B3. The computer program which was used in the enumeration and presented in another paper [M. Hosoya & K. Takushi: Bull. Faculty of Science, Univ. of the Ryukyus, 47 (1989) 23-71] is debugged.

### Conclusion

Recently the Author's previous enumeration of crystal-structure types<sup>1)-6)</sup> was reassured in several papers of Fadda and Zanzotto<sup>7)-9)</sup>. However some erroneous results were also found which originates in the computer program used<sup>10)-11)</sup>. Fadda<sup>12)</sup> translated our BASIC program into one by FORTRAN and found that the following three species in Genus A3B3 are redundant.

Cm(8)\_13:ab2aaa  
I4mmm(107)\_6:ab2aaa  
P6mm(183)\_6:ab2aaa

He pointed out that each is equivalent to Cm(8)\_13:aaaab2, I4mmm(107)\_6:aaaab2, and P6mm(183)\_6:aaaab2, respectively. With his indication, the program<sup>10)</sup> was examined closely and its defective part was found. The following four lines should be put instead of the original ones. (Line 30255 is an additional one.)

```
11420 DATA -2,-2,-2,-3,1, 0
21120 DATA -2,-2,-6,-2,-2,-2,-2,1,1, 0
30250 B(KA)=B(KA-NL%(MG)): IF D%(B(KA))=0 THEN B(KA)=B(KA)+1:GOTO 30260
30255 KB=KB+1 : KA=KA+1 : IF KB<=NL%(MG) THEN 30250 ELSE 30480
```

This revision adds P-421c(114)\_3:a2d4 in Genus A6 and P-421c(114)\_3:a2d4 in Genus A2B4.

Then the corrected summary of enumeration is given as follows.

Family	Genus	Species
1	A	14
2	A2	29
2	AB	51
3	A3	114

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3	AB2	125
3	ABC	44
4	A4	366
4	A2B2	296
4	AB3	244
4	ABC2	234
4	ABCD	64
5	A5	374
5	A2B3	680
5	AB4	530
5	AB2C2	500
5	ABC3	369
5	ABCD2	237
5	ABCDE	52
6	A6	1142 (Revised from the wrong value 1141)
6	A3B3	887 (Revised from the wrong value 890)
6	A2B4	2102 (Revised from the wrong value 2101)
6	A2B2C2	910
6	AB5	958
6	AB2C3	1921
6	ABC4	986
6	ABC2D2	975
6	ABCD3	476
6	ABCDE2	313
6	ABCDEF	69

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