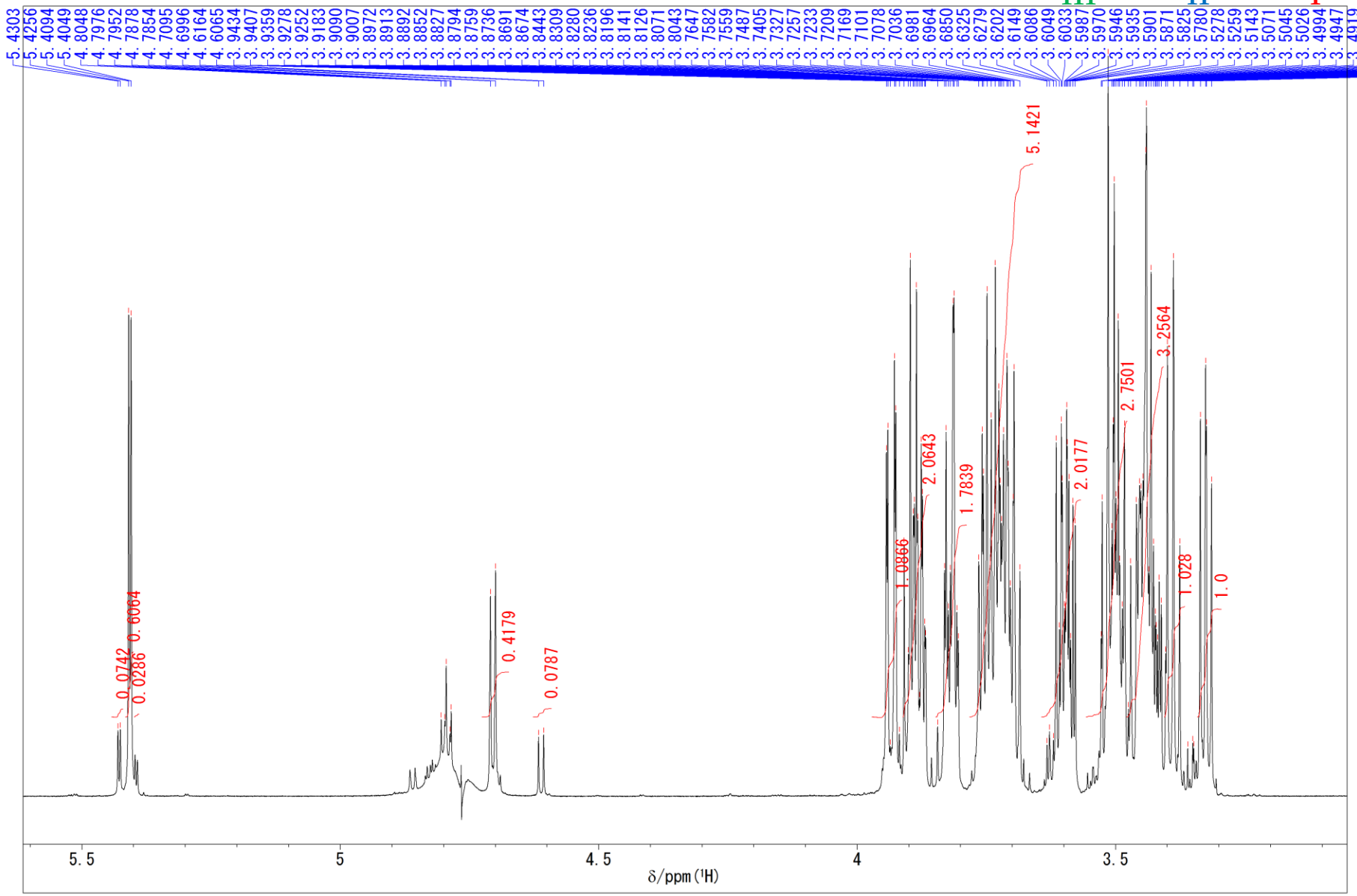
Figure S1. NMR specta of Sop_3.
(A) ^{1}H-NMR, (B) ^{13}C-NMR, (C) DQF-COSY, (D) TOCSY, (E) HSQC and (F) HMBC. I, II, and III denote first, second, and third glucose residues from reducing end, respectively. Letters in parenthesis represent position of hydroxyl group on the anomeric carbon. Arabic numbers shown with roman numbers represent positions of carbons and protons in sugar rings.

(A) ^{1}H 1D

Glcβ1,2Glcβ1,2Glc

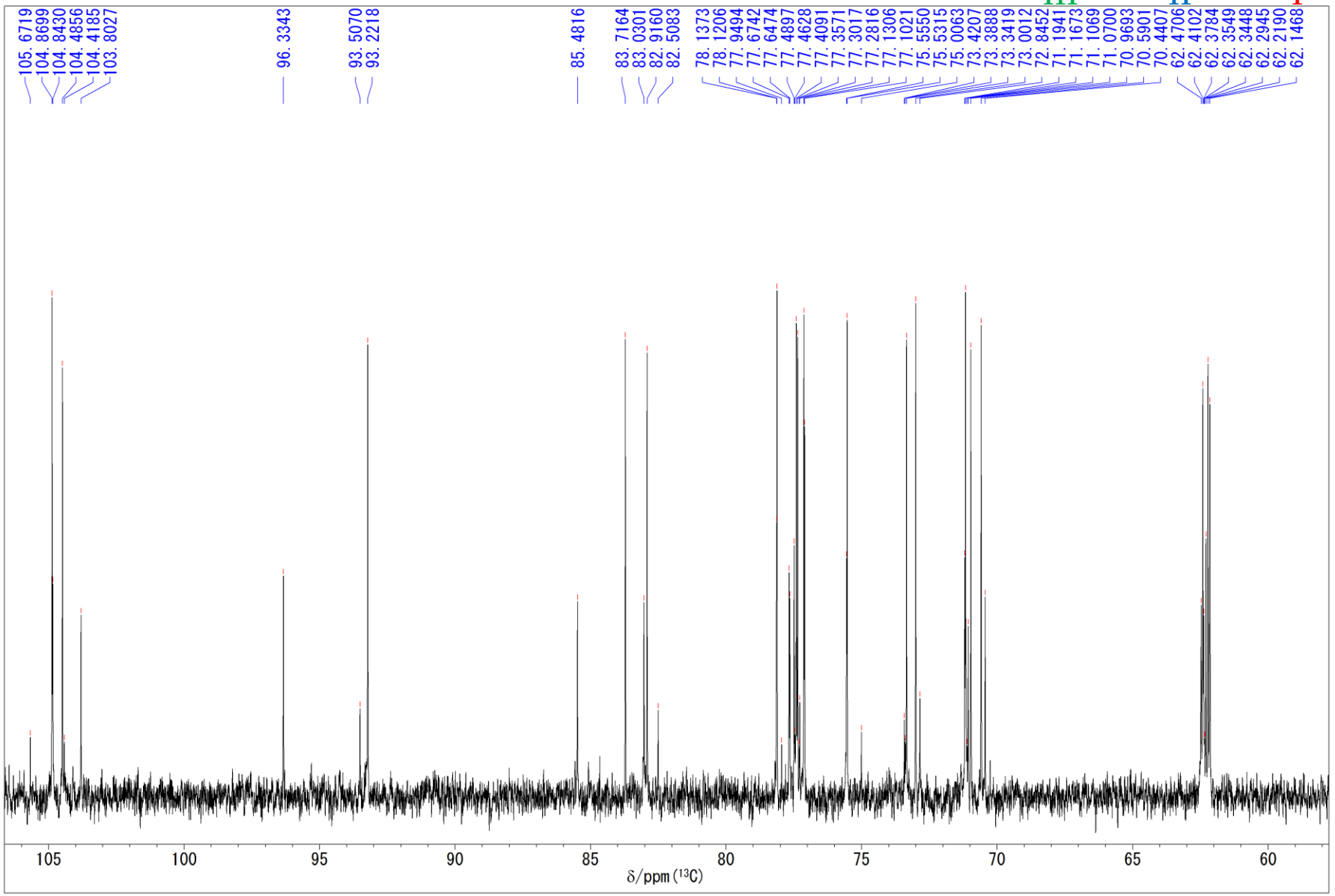
III II I



(B) ^{13}C 1D

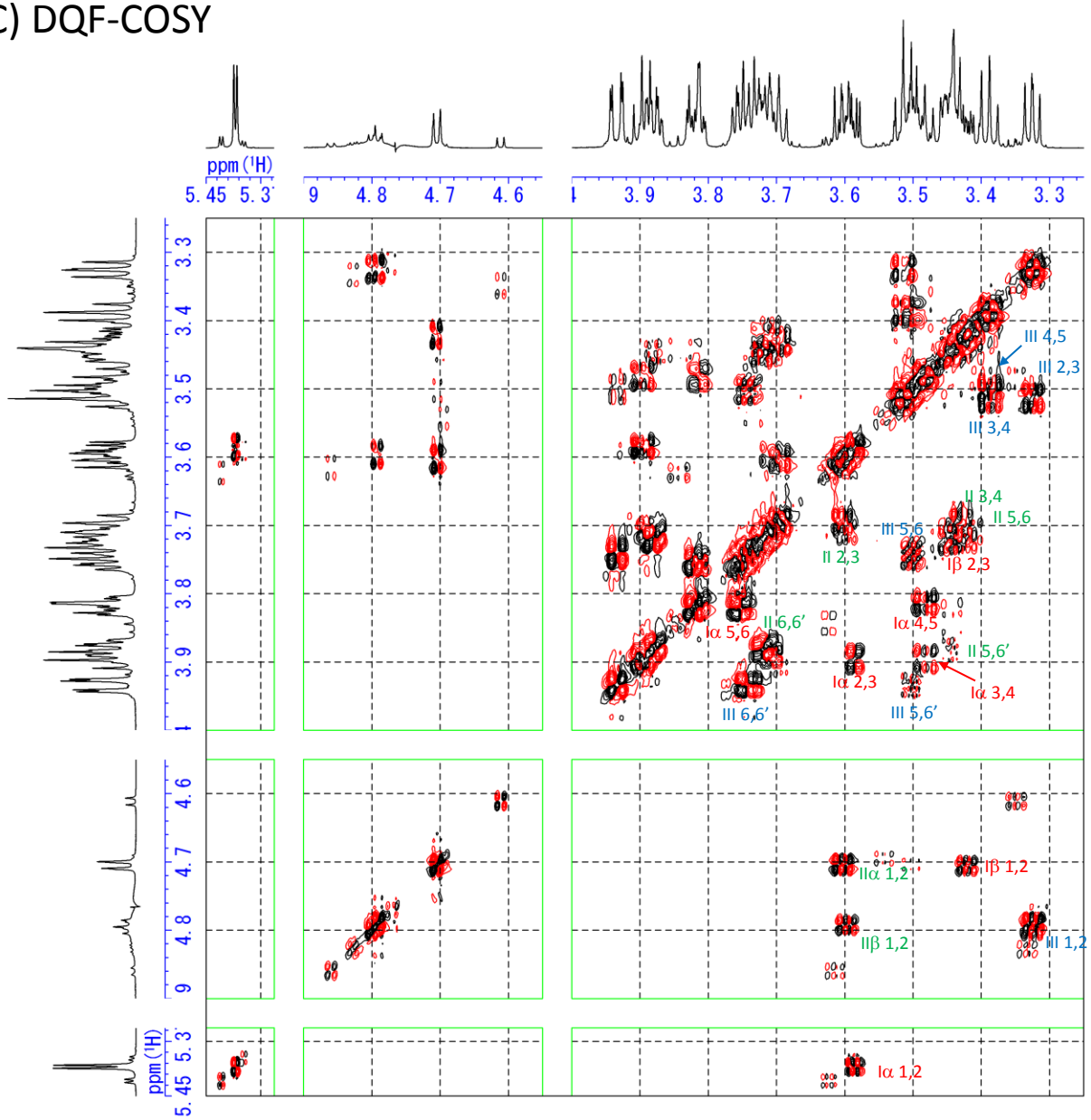
Glcβ1,2Glcβ1,2Glc

III II I



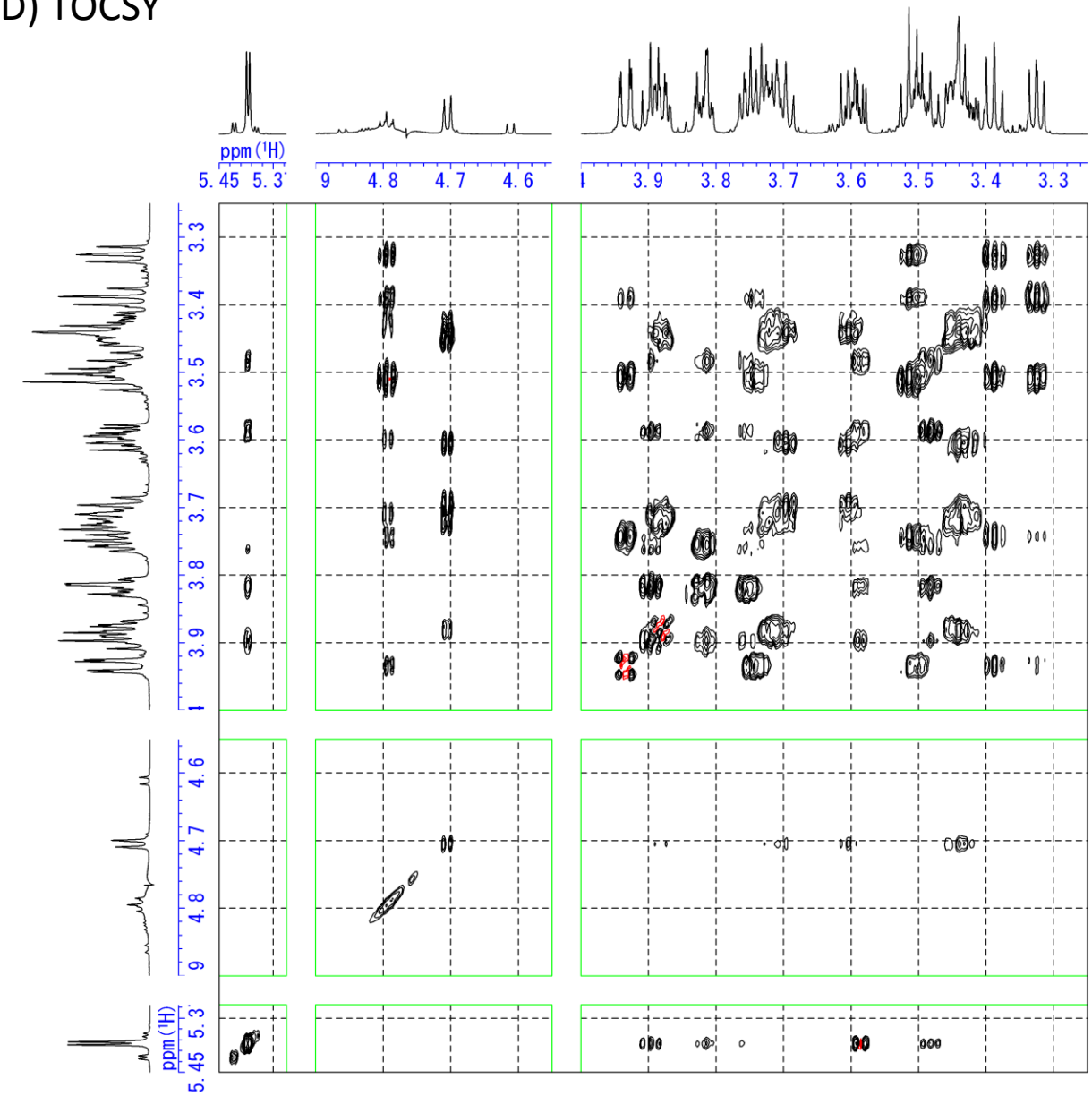
(C) DQF-COSY

Glcβ1,2Glcβ1,2Glc
III II I



(D) TOCSY

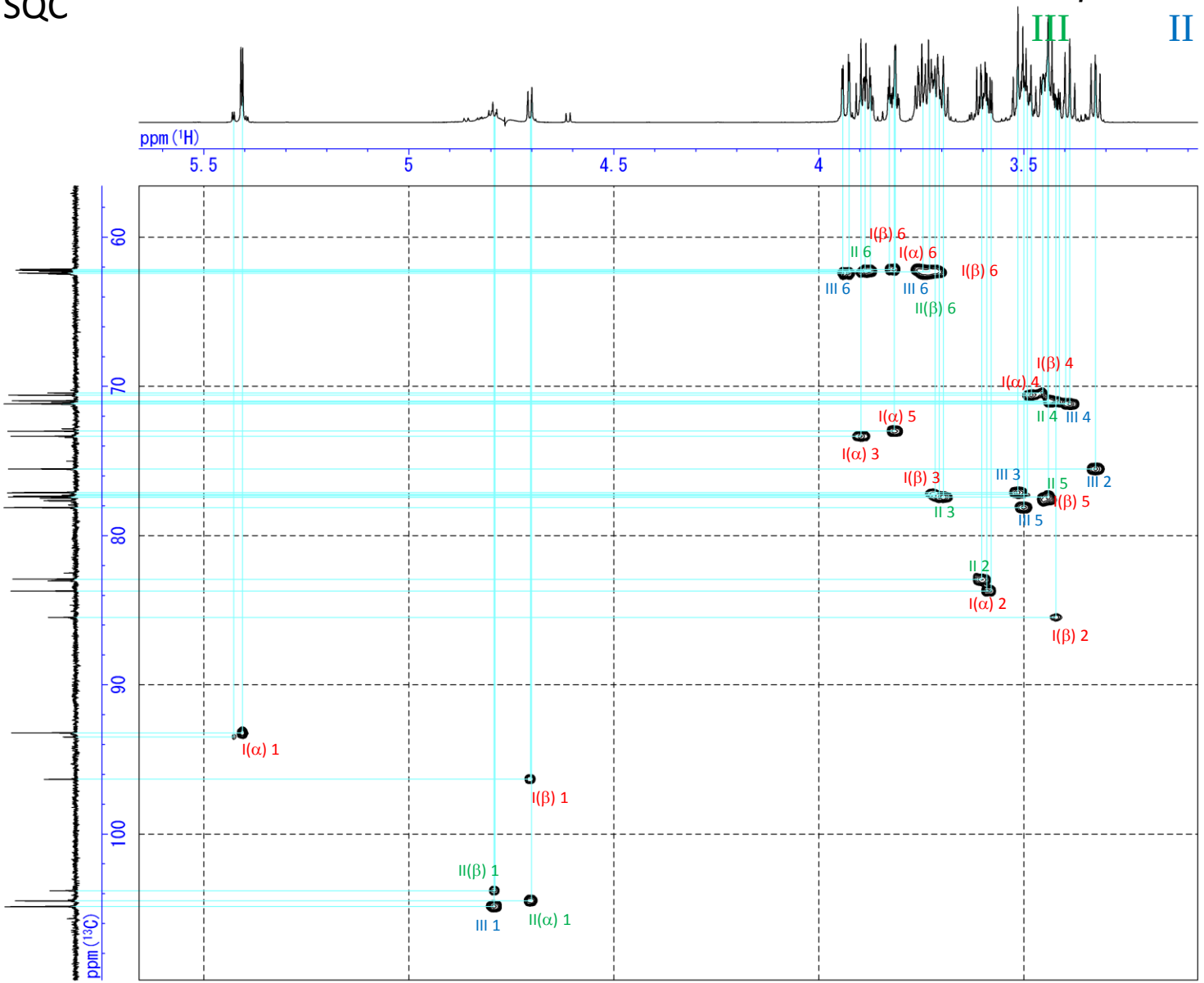
Glcβ1,2Glcβ1,2Glc
III II I



(E) HSQC

Glcβ1,2Glcβ1,2Glc

III II I



(F) HMBC

Glcβ1,2Glcβ1,2Glc
III II I