Here you will find the pulse programs and parameter sets related to our manuscript titled

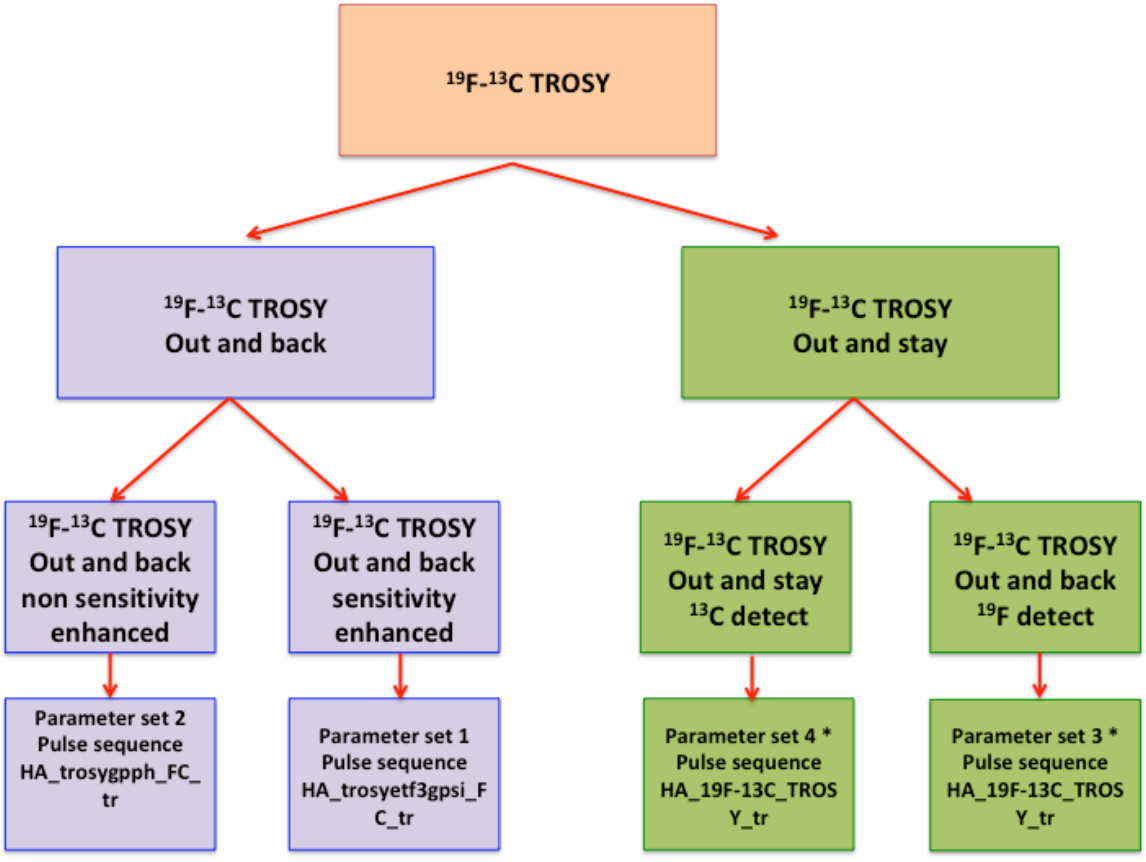
Aromatic 19F-13C TROSY: A background-free approach to probe biomolecular structure, function and dynamics
Boeszoermenyi, Chhabra et. al Nature Methods 2019

These parameter sets and pulse programs are for Bruker spectrometers. A probe that can pulse on 19F and 13C nuclei is required.

Harvard Medical School and DFCI are not responsible for any damage in instrument and/or sample that arise from using these methods. Check your power levels and instrument tolerance before using these methods.

The parameter sets and pulse programs available are listed in the table below.

The methods can be broadly divided into two groups as outlined below.



* Make sure your channel routing (edasp) is correct. The detected nuclei should be on logical channel F1.

If there is a need to detect any of other three non-TROSY components of the coupled ^{13}C-^{19}F spin pair, use the other pulse sequences (HA_19F-13C_TROSY_bl; HA_19F-13C_TROSY_tl; HA_19F-13C_TROSY_br) with the same parameter set (either #3 and #4), depending on whether it is a 13C or 19F detect experiment.

For the use of 19F-13C TROSY, our recommendation is to use the ^{13}C detect out and stay experiment (parameter set #4).
If you are using a room temperature probe and/or have a sample that is concentration limited you can try the ^{19}F detect out and stay experiment (parameter set #3)

Table of parameter sets and pulse programs available for download.

#	Parameter set	Pulse Program	Description
1	AB_19F19F_SETROSY	HA_trosyetf3gpsi_FC_tr	19F-start 19F-detected TROSY with sensitivity enhancement
2	AB_19F19F_TROSY	HA_trosygpph_FC_tr	19F-start 19F-detected TROSY
3	AB_13C19F_TROSY	HA_19F-13C_TROSY_tr	13C-start 19F-detected TROSY
4	AB_19F13C_TROSY	HA_19F-13C_TROSY_tr	19F-start 13C-detected TROSY
5	AB_19F13C_TROSY	HA_19F-13C_TROSY_bl	19F-start 13C-detected Anti-TROSY
6	AB_19F13C_TROSY	HA_19F-13C_TROSY_tl	19F-start 13C-detected Anti-TROSY on Carbon, TROSY on Fluorine
7	AB_19F13C_TROSY	HA_19F-13C_TROSY_br	19F-start 13C-detected TROSY on Carbon, Anti-TROSY on Fluorine

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