sharp_combine version 4 pipeline: start with sharpinteg_2 output (e.g. 3 files):

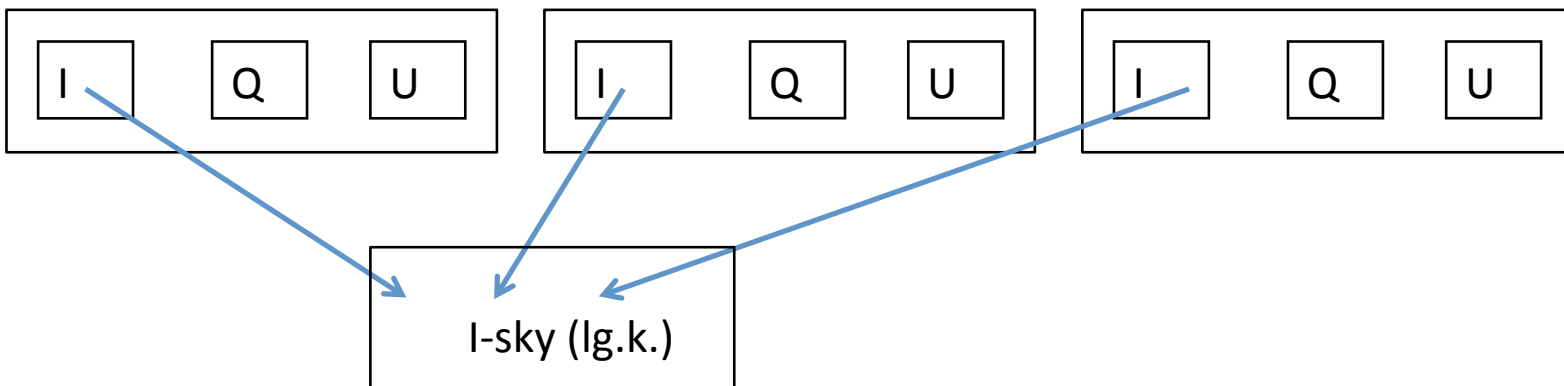| I | Q | U |

| I | Q | U |

| I | Q | U |
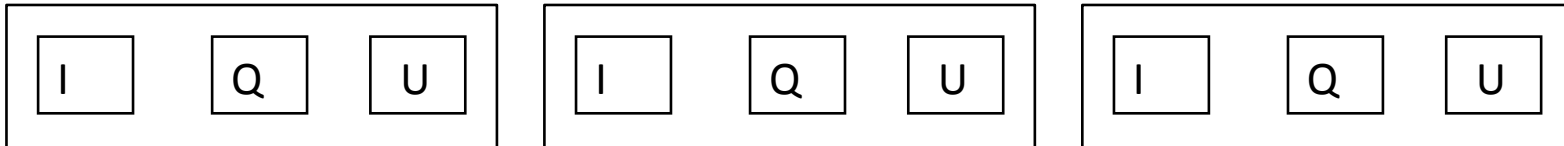
Step 1: apply tau (smoothed tau or original tau) correction to all maps

Step 2: rotate polarization reference angle from raw to sky:

| I | Q ← → U |

| I | Q ← → U |

| I | Q ← → U |
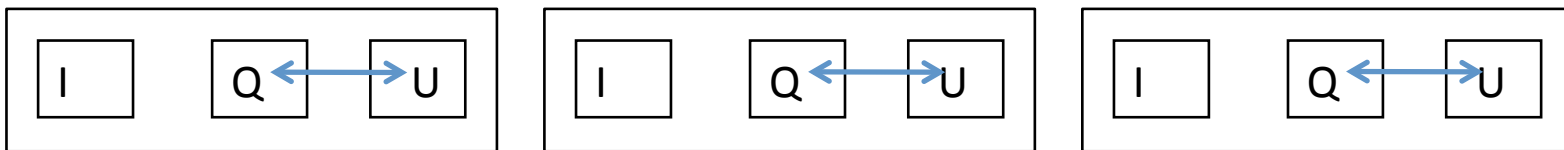
Step 3: interpolate/smooth to make large-kernel I-map (lg. kernel is governed by -ps, -pm)

| I | Q | U |

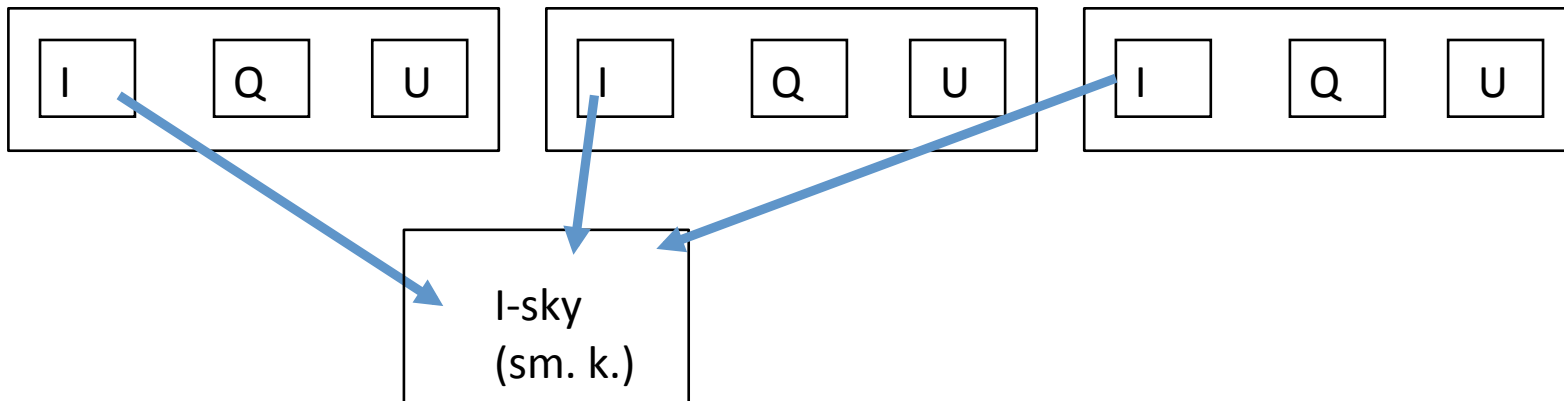| I | Q | U |

| I | Q | U |

I-sky (lg.k.)

_Step 4_: background-subtract I, Q, U using large kernel:
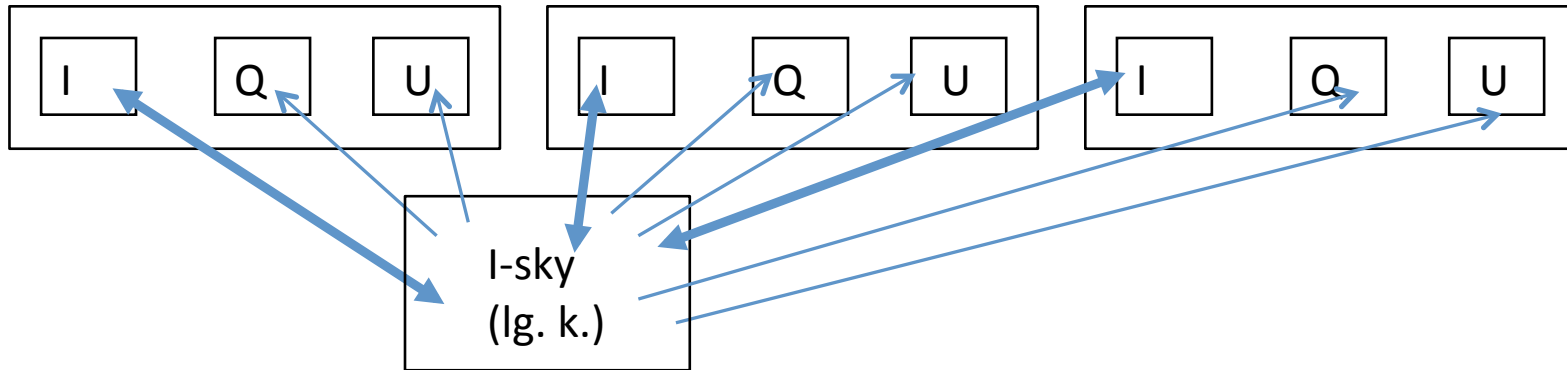
details of step 4: comparisons (thick arrows) determine DC shifts and gains of individual files, then DC shifts are removed from individual I-maps and gain corrections are applied to individual I, Q, and U maps

Step 5: interpolate/smooth to make small kernel I map (sm. kern. governed by -sm and –ma)

Step 6: create individual q and u maps using small kernel I map:

| I | Q | U |
| | | |

| I | Q | U |
| | | |

| I | Q | U |
| | | |

I-sky
(sm. k.)

| I | q | u |
| | | |

| I | q | u |
| | | |

| I | q | u |
| | | |
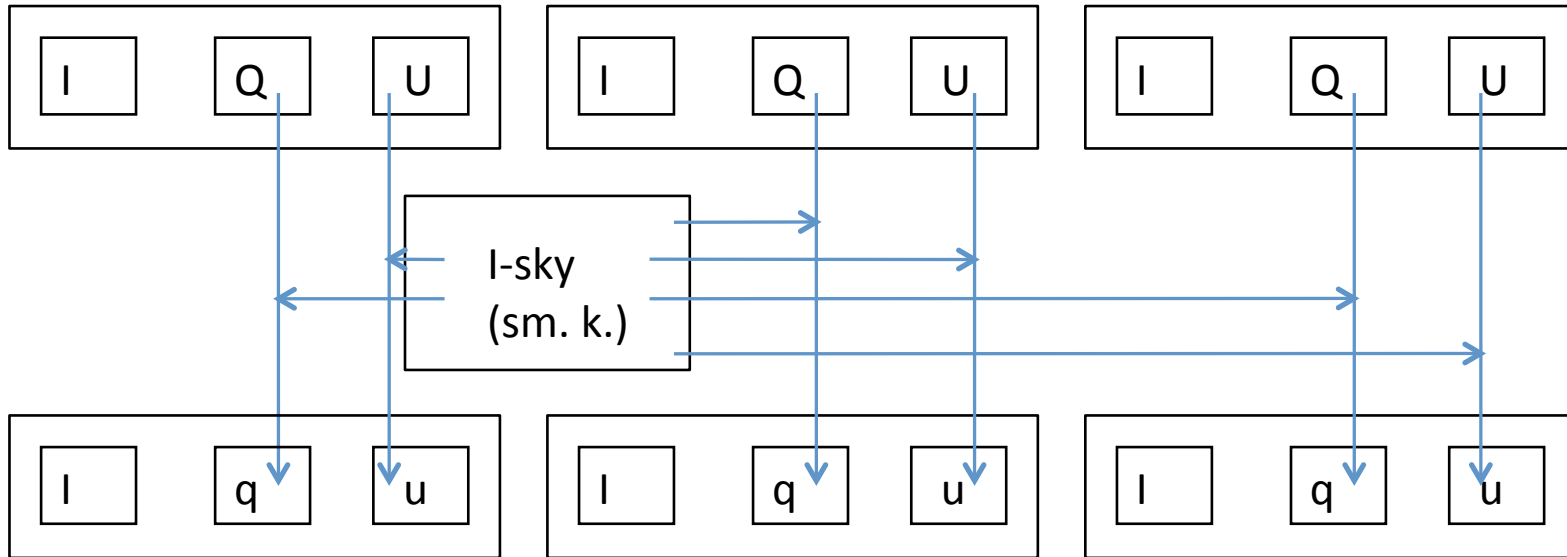
details of step 6: use "nearest-neighbor" I-sky for division of each Q, U to get q, u

Step 7: subtract uniform i.p. from each individual q, u map

Step 8: interpolate/smooth q, u maps with large kernel to make final maps:

| I | q | u |
| | | |

| I | q | u |
| | | |

| I | q | u |
| | | |

q-sky
(lg. k.)

u-sky
(lg. k.)