

# 10 ps and dark data sets

<u>Total indexed 10 ps:</u>	~71'000
<u>Total indexed dark:</u>	~93'000
<u>Resolution:</u>	~2.0 Å
<u>Avg. indexing rate:</u>	6%
<u>Injectors used:</u>	35

## All-dark (no laser)

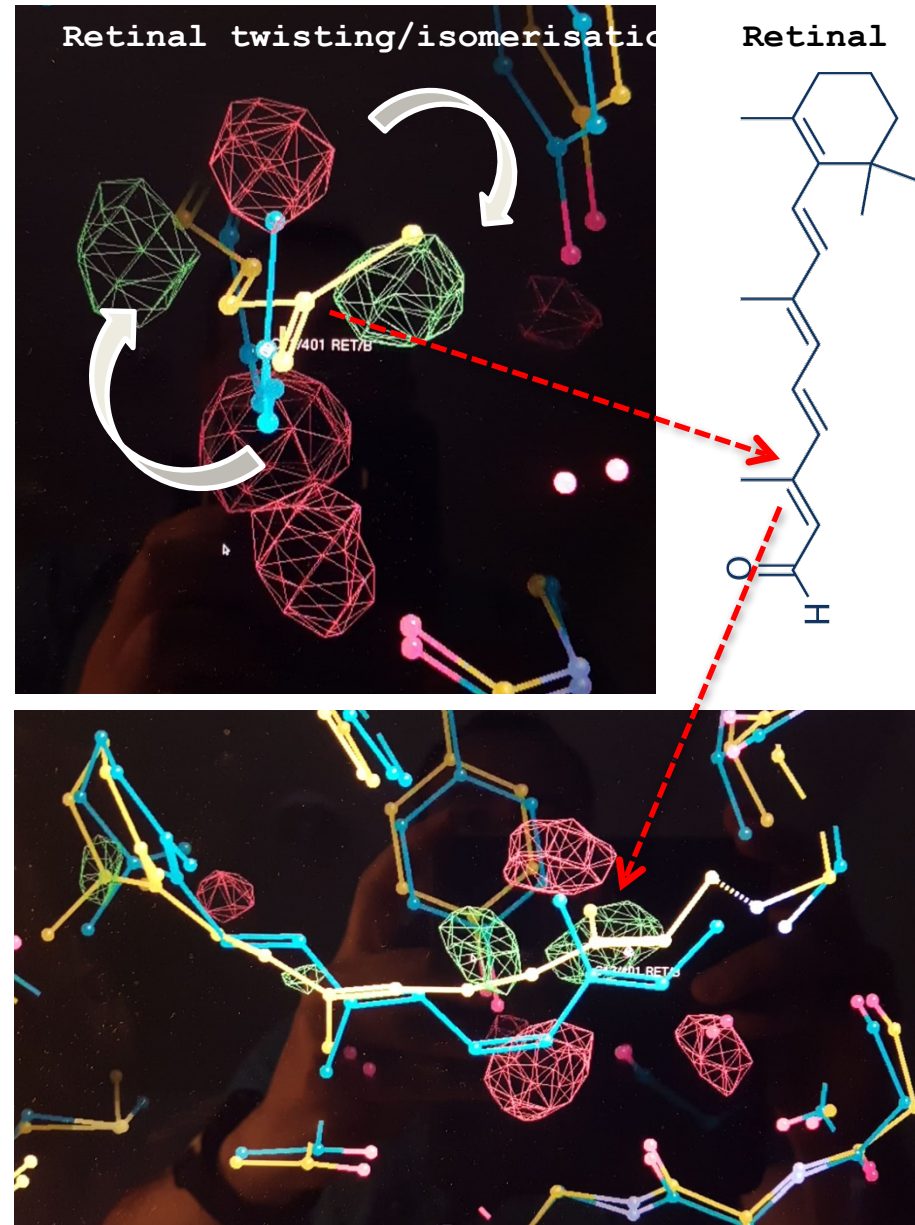
- ~41'000 indexed patterns

## Dark1 from 10 ps time delay

- ~29'000 indexed patterns

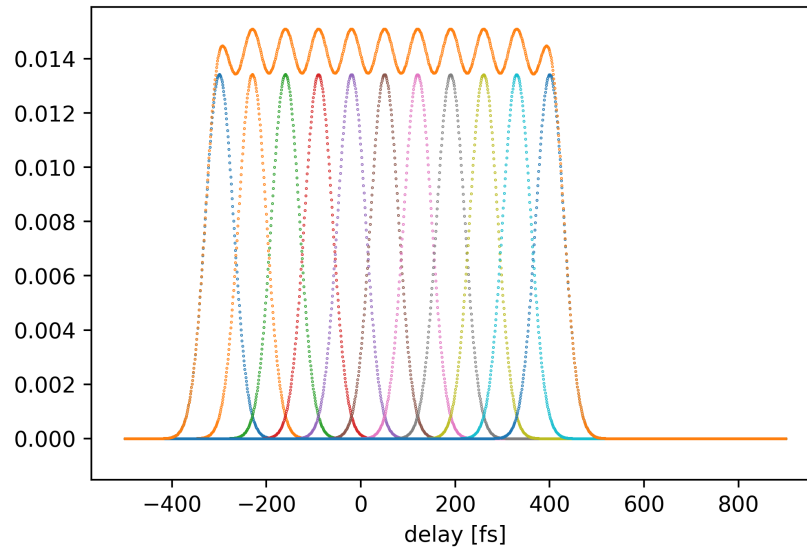
## Dark1 from NLSA scan

- ~23'000 indexed patterns



Difference map: light (10 ps) - dark @  $3\sigma$

# Rhodopsin NLSA scan (start 23 July 2020 18:10)



11 nominal delays

70 fs step

-300 fs

-230 fs

-160 fs

-90 fs

-20 fs

+50 fs

+120 fs

+190 fs

+260 fs

+330 fs

+400 fs

1'000 shots/delay point @ 50 Hz: 20 s/delay point

11'000 shots/cycle @ 50 Hz: 220 s/cycle

1 cycle takes ~4 minutes

**11 light : 1 dark**

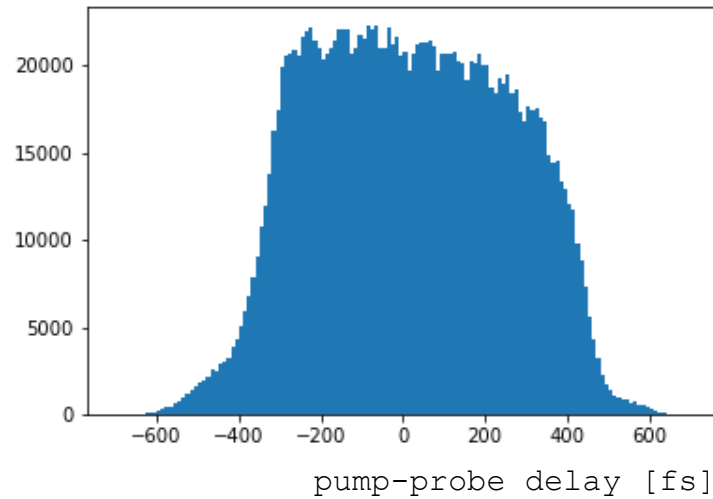
Pump laser: 480 nm, **3 uJ/pulse**, 50 um FWHM, 100 fs FWHM

X-ray laser: 12 keV, 25 fs (sigma?)

Jet: **0.027 ml/min** -> 152 um between shots, ~50 min/reservoir

# NLSA scan timestamps

~ 1.6M collected, light



NLSA scans automatic indexing results:

**251'230** indexed light

**22'995** indexed dark