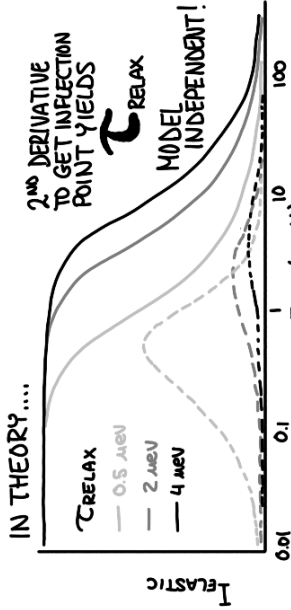
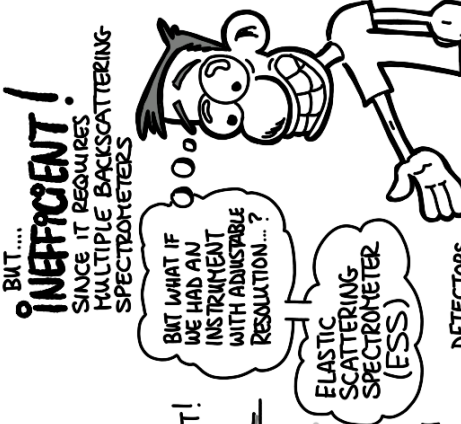


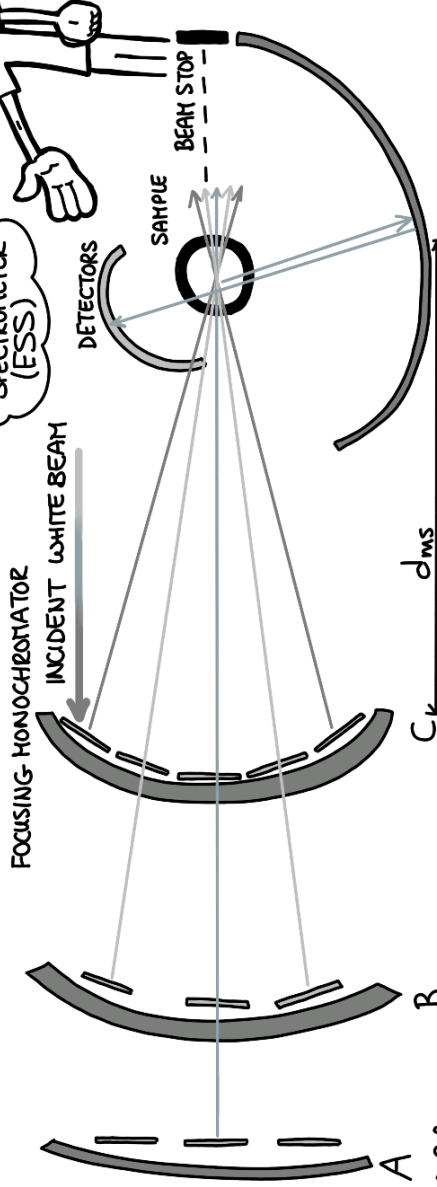
AN INSTRUMENT CONCEPT FOR DYNAMICS OF COMPLEX (BIO-) SYSTEM FROM ELASTIC SCATTERING

ANTONIO BENEDETTO
UNIVERSITY COLLEGE DUBLIN & PSI

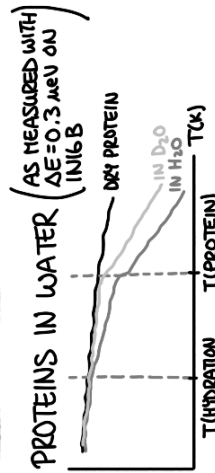
AUGUST 22, 2017



CONSTANT WAVELENGTH SETUP (CW SOURCE)



AS ALSO DESCRIBED A ESS INSTRUMENT CONCEPT EXPLOITING TOF BUT I HAVEN'T SHOWN IT HERE



→ "KINK" SHIFTS TO LOWER T
→ H₂O DYNAMICS FASTER THAN PROTEIN

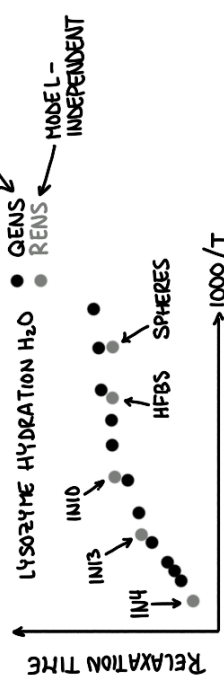
SKETCHNOTES: RDB



BENEDETTO DEVELOPED RESOLUTION ELASTIC NEUTRON SCATTERING (RENS)

AND WITH DON KEARLEY DEVELOPED AN INSTRUMENT DEDICATED TO RENS

RENS IS A MODEL-FREE WAY TO EXTRACT τ_{RELAX} AND THE AGREEMENT WITH QENS IS EXCELLENT IN THE CASE SHOWN BELOW



$$S_R(Q, \omega = 0; \tau_{RES}) = \int_{-\infty}^{\infty} dt I(Q, t) R(t; \tau_{RES})$$

MEASURED ELASTIC SCATTERING

SYSTEM DYNAMICS

RESOLUTION FUNCTION

