

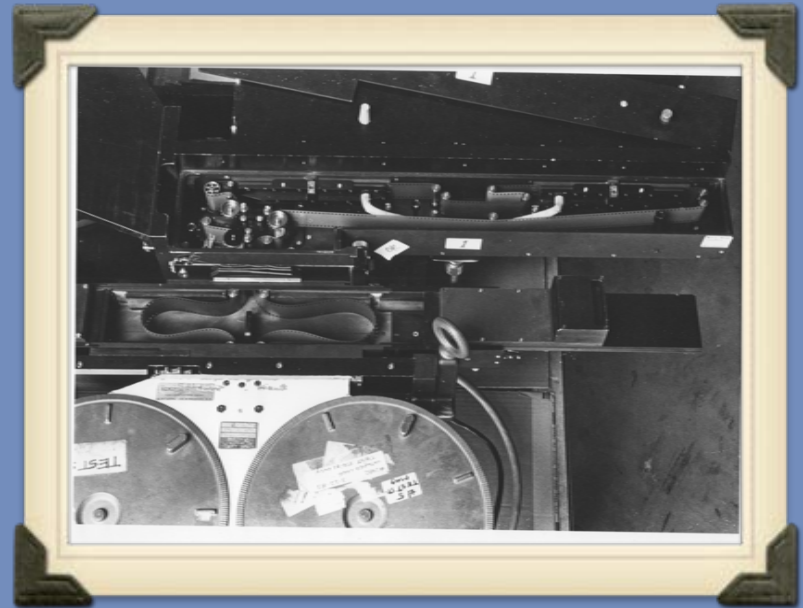
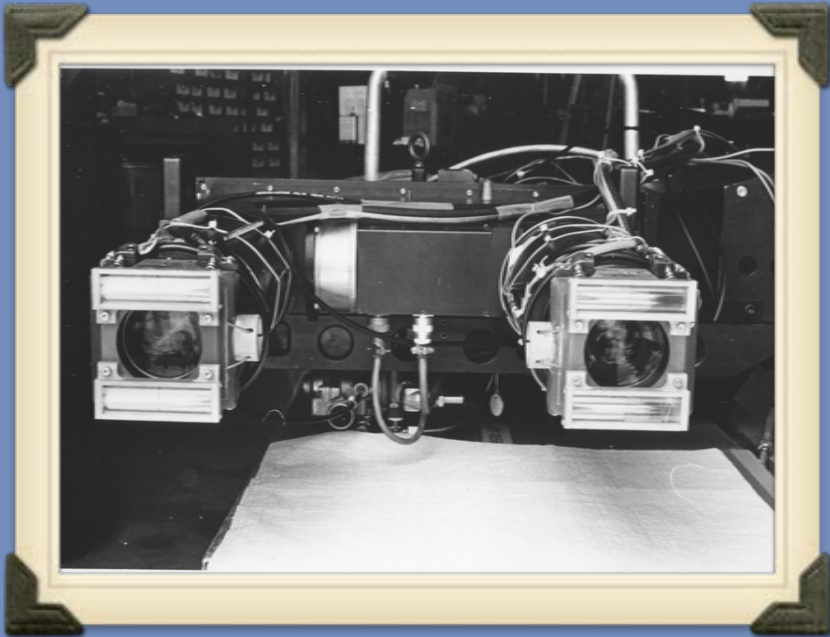
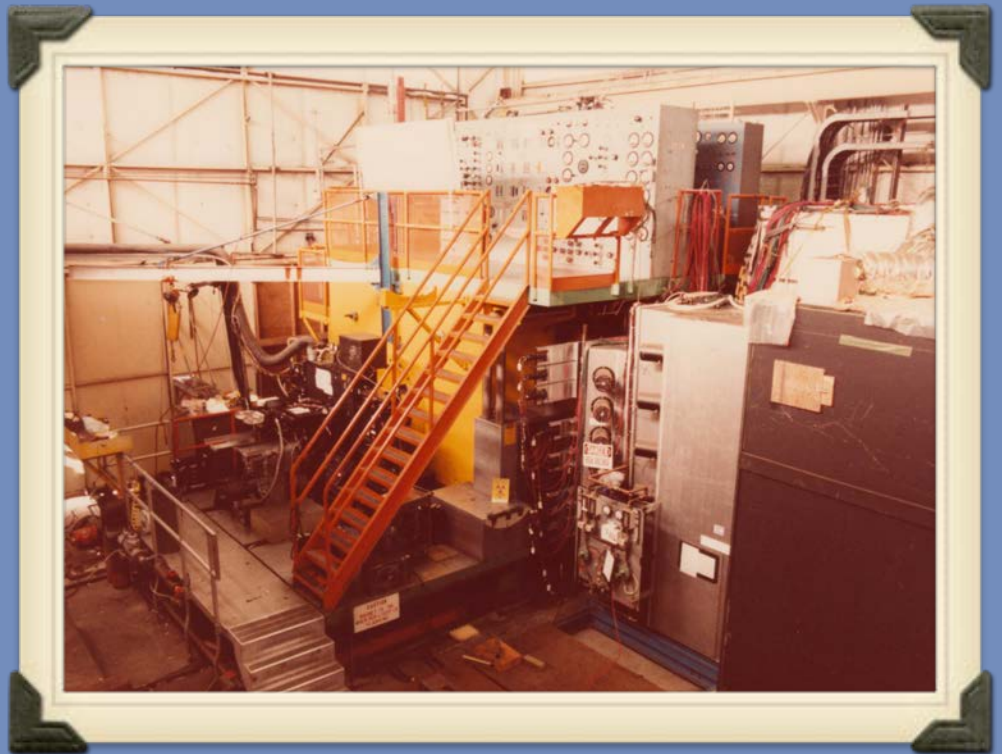


HAPPY BIRTHDAY, GEORGE

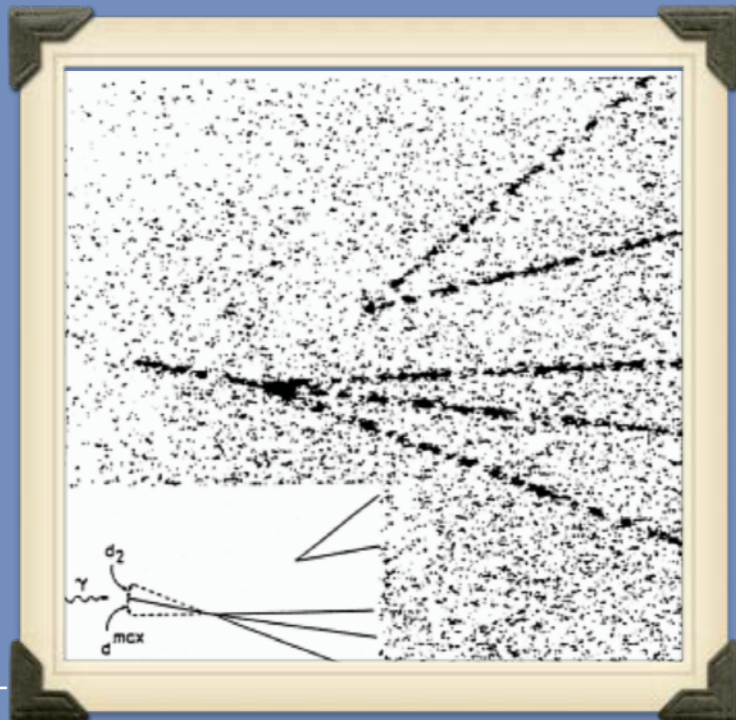
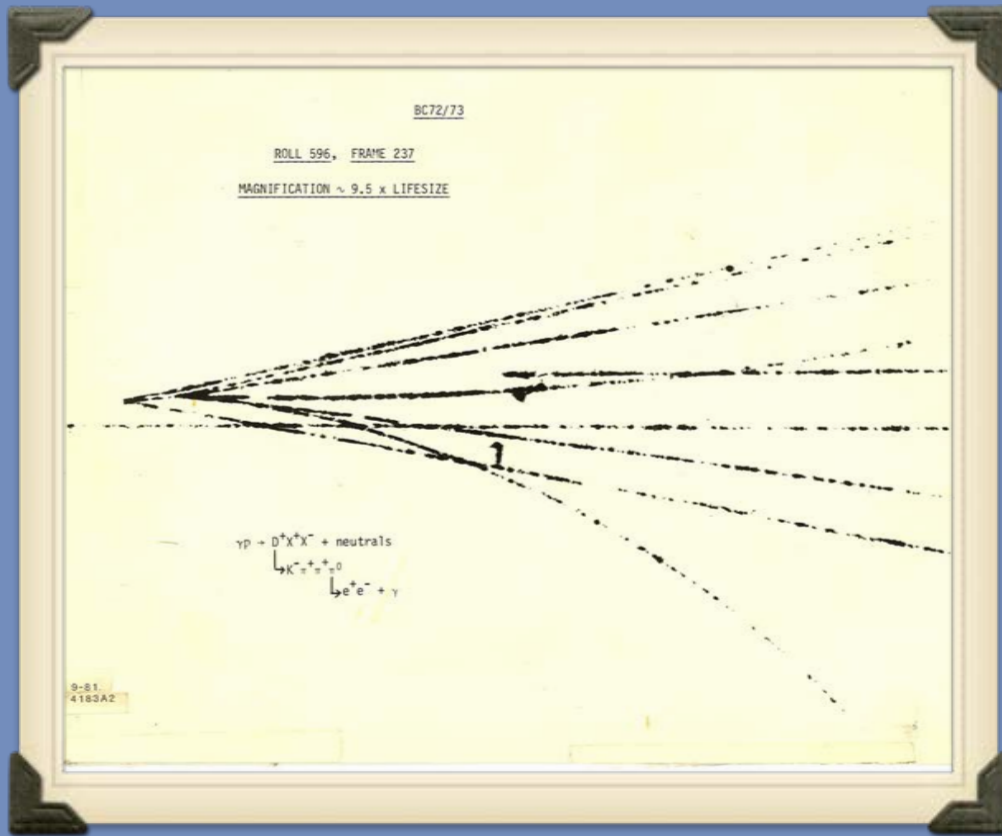
I HAVE FOND MEMORIES OF OUR COLLABORATION
DURING THE SLAC PHOTO PRODUCTION EXPERIMENT

BC72-73

- WE ALL RECALL THAT CHARM WAS DISCOVERED IN 1974
- ... AND OPEN CHARM APPEARED IN 1975
- SLAC HYBRID FACILITY BEGAN PREPARING FOR BACK-SCATTERED PHOTO PRODUCTION CHARM EXPERIMENT TO MEASURE CROSS SECTION AND LIFETIMES
- GEORGE CAME TO SLAC AND PROPOSED ADDING HIGH RESOLUTION CAMERA TO EXPERIMENT IN ORDER TO DIRECTLY OBSERVE CHARM DECAYS
- THIS ADDITION WAS APPROVED & COLLABORATION UPGRADED EXPERIMENT - THIS WAS CRITICAL TO EXPERIMENT'S SUCCESS



Reference: J. D. Ferrie & R. C. Field, NIM 221, 330 (1984)



BEAUTIFUL CHARM EVENTS

Lifetimes of Charmed Particles Produced in a 20-GeV $\gamma\gamma$ Experiment

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(Stanford Linear Accelerator Center Hybrid Facility Photon Collaboration)

(Received 21 January 1982)

Eleven neutral and nine charged decays of charmed particles have been observed in a sample of 205 000 hadronic interactions in a 1.2-million-picture exposure of the SLAC Hybrid Facility bubble chamber to a 20-GeV/c backward-scattered laser beam. The charged and neutral lifetimes were determined to be $8.2^{+1.5}_{-2.5} \times 10^{-13}$ and $6.7^{+2.2}_{-3.0} \times 10^{-13}$ sec, respectively, with a ratio of $1.2^{+0.8}_{-0.5}$.

PACS numbers: 14.40.Jz, 13.25.+m



1982 - PRL

11 NEUTRAL AND 9 CHARGED DECAYS

1.2 MILLION PHOTOS SHOWING 205,000 INTERACTIONS

PHYSICAL REVIEW D

PARTICLES AND FIELDS

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Lifetimes, cross sections, and production mechanisms of charmed particles produced by 20-GeV photons

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(SLAC Hybrid Facility Photon Collaboration)

(Received 8 July 1985)

Seventy-one events containing charmed-particle decays have been observed in an experiment using the SLAC Hybrid Facility exposed to a backward-scattered photon beam. Several improvements were made to the apparatus since the previous experiment on charm photoproduction. Results for the charmed-meson lifetimes are consistent with the published results from the previous experiment and the two data samples have been combined yielding a total sample of 136 charm events. After imposing rigorous cuts, 50 neutral, 48 charged, and 2 charged/neutral ambiguous decays remain. From these, the charmed-meson lifetimes are measured to be $\tau_{D^\pm} = (8.6 \pm 1.3^{+0.7}_{-0.3}) \times 10^{-13}$ sec, $\tau_{D^0} = (6.1 \pm 0.9 \pm 0.3) \times 10^{-13}$ sec, and their ratio $\tau_{D^\pm} / \tau_{D^0} = 1.4 \pm 0.3^{+0.2}_{-0.1}$. The total charm cross section at a photon energy of 20 GeV has been measured to be $(62 \pm 8^{+15}_{-10})$ nb. There is evidence for both DDX and $\bar{D}\Lambda_c^+ X$ production with $\sigma_{\bar{D}\Lambda_c^+ X} / \sigma_{\text{charm}} = (71 \pm 11 \pm 6)\%$.



1986 - PHY REV D

50 NEUTRAL, 48 CHARGED & 2 AMBIGUOUS DECAYS

TOTAL CHARM PHOTOPRODUCTION CROSS SECTION

$62 \pm 8^{+15}_{-10}$ NB



TOOK THE STORY ON THE ROAD



**GEORGE, YOU
LED BY
EXAMPLE.**

**YOUNGER
COLLEAGUES
TRIED TO
IMITATE YOU.**



I WAS NO EXCEPTION

I TRIED TO IMITATE



GEORGE, YOU WERE A LEADER IN BC72-73 OUTREACH



HAPPY BIRTHDAY, GEORGE

BEST WISHES FOR MANY MORE TO COME!