

JADE Computer Note No. 12

1. version 21.11.1978

changed 23.2.1979

P. Steffen

Track Bank from Pattern Recognition Program

- name of bank : 'PATR'
- pointer to the bank : IDATA(70) in COMMON/BCS/

- contents of bank 'PATR':

- (1) : LO = length of event data (including this word): (=8)
- (2) : number of tracks
- (3) : LTR = length of data for each track (in 4 byte words): (=48)
- (4) : error code (= 0 if everything ok)
- (5) : number of hits in ID
- (6) : " " uncorrelated hits in ID
- (7) : " " " line elements in ID
- (8) : not yet used

(LO + 1)	}	: data of 1. track
.		
.		
(LO + LTR)	}	: data of 2. track
(LO + LTR + 1)		
.		
.		
(LO + 2LTR)		

- data for a track:

- (1) : track number
- (2) : identifier of program
- (3) : date of production
- (4) : type (e.g.: conversion point, decay point, ...)
- (5) : x
- (6) : y
- (7) : z
- (8) : dx
- (9) : dy
- (10) : dz
- (11) : .
- (12) : .
- (13) : .
- (14) : .
- (15) : .
- (16) : .
- (17) : .
- (18) : type (e.g.: parabola, circle)
- (19) : parameters
- (20) : χ^2
- (21) : No. of hits used in the fit
- (22) : curvature
- (23) : $\delta(\text{curvature})$
- (24) : curvature at 1. measured point
- (25) : " " last " "
- (26) : type
- (27) : parameters
- (28) : χ^2
- (29) : No. of hits used in the fit
- (30) : cell numbers that contain hits of the track
- (31) : (in the same order as passed by the track)
- (32) : cell numbers that contain hits of the track
- (33) : (in the same order as passed by the track)
- (34) : cell numbers that contain hits of the track
- (35) : (in the same order as passed by the track)
- (36) : cell numbers that contain hits of the track
- (37) : (in the same order as passed by the track)
- (38) : cell numbers that contain hits of the track
- (39) : (in the same order as passed by the track)
- (40) : pointer to corresponding lead glass cluster
- (41) : " " " μ -chamber hits
- (42) : " " " track bank in TP-bank
- (43) : " " " TOF-bank
- (44) : free for other pointers
- (45) : free for other pointers
- (46) : free for other pointers
- (47) : free for other pointers
- (48) : error code (= 0 if everything is ok)

filled

of 1. measured point of the track

of fit in the x-y plane

of fit in the r-z plane

Fit Parameters

- circle fit in xy-plane (type = 1)

$$P1 = \text{curvature} = R^{-1} \text{ [mm}^{-1}\text{]}$$

$$P2 = D_0 - R \text{ [mm]} \quad D_0 = \text{distance (coordinate origin-centre of circle)}$$

$$P3 = \text{angle of direction (coordinate origin-centre of circle)}$$

$$\in [-\pi, +\pi]$$

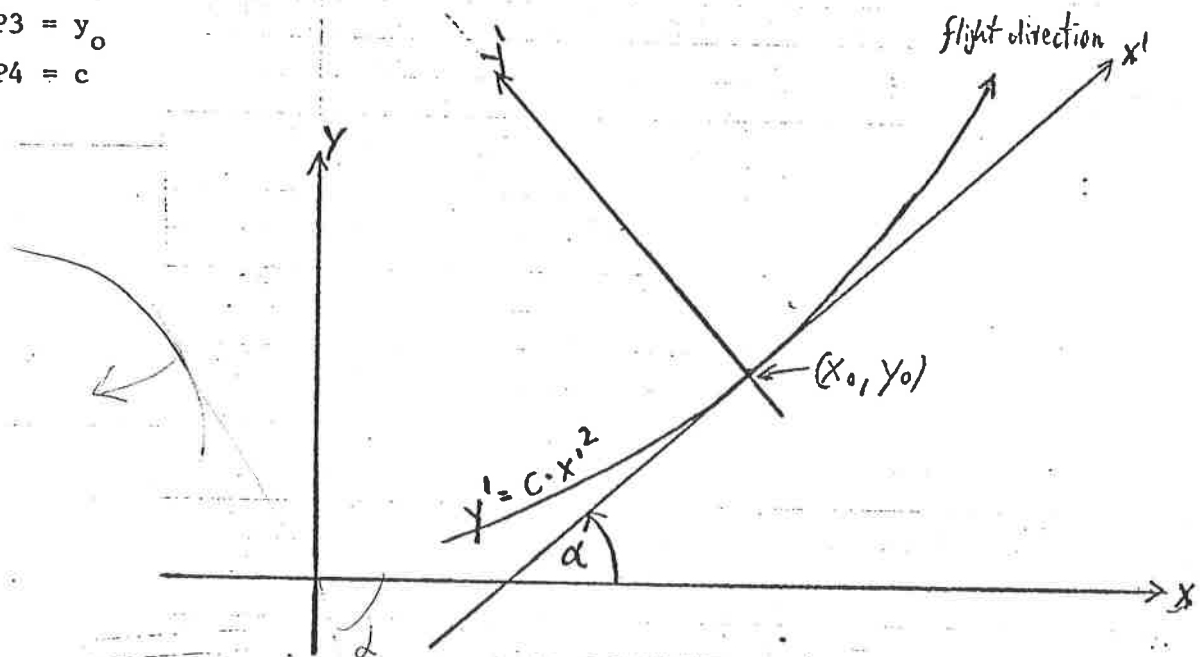
- parabola fit in xy-plane (type = 2): $y' = c \cdot x'^2$

$$P1 = \alpha \in [-\pi, +\pi]$$

$$P2 = x_0$$

$$P3 = y_0$$

$$P4 = c$$



α = angle between y-axis and y'-axis

- straight line fit in rz-plane (type = 1)

$$z = P1 \cdot r + P2$$

$$r = \sqrt{x^2 + y^2}$$

~~10~~

$$P1 = \frac{\Delta z}{\Delta r}$$

