

~~TOP SECRET~~ [REDACTED]

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GZ/7/NT

OPERATION GRAPPLE-2

INTERIM REPORT

PART 7. NUCLEAR TRANSIENTS

1. Group Tasks

NT1 To record, for the balloon rounds, the gamma flux at S13, F-Site, throughout the [REDACTED] exponential phase, using high time-resolution equipment.

NT2 To attempt to record, for the balloon rounds, the gamma flux at S11, D-Site, over a period of a [REDACTED] following initiation, using low time-resolution equipment.

NT5 To attempt a crude energy resolution of the [REDACTED] gamma peak from Burgee, using the different gamma absorption characteristics of materials of high and low atomic number. [REDACTED]

The equipment arrived 48 hours before firing and was installed at D-Site, instead of at F-Site as originally intended.

2. Results

The results, except where specifically stated are the same as quoted in the Initial Summary of results.

2.1 Round 1 - Pennant

2.1.1 Task NT1 F-Site 1000 metres slant range.

The value of Alpha measured 1 generation below plateau was [REDACTED]

The plateau flux was [REDACTED]

Alpha at breakaway [REDACTED]

Peak Flux greater than [REDACTED]

Maximum value of Alpha
(The values quoted may
be up to 10% low)

below plateau
" " "
" " "

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2.1.2 Task NT2/NT3 D-Site 4000 metres slant range:

High speed measurements (NT3)

The value of Alpha measured 1 generation below plateau
was [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

The low speed measurements (NT2) were valueless.

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2.4 Round 4 - Burgee

2.4.1 Task NT1 F-Site 1000 metres slant range

[REDACTED] in region of maximum Alpha.
No plateau. Shape of [REDACTED] peak was almost identical at
both D and F Sites, and almost identical with that of
Pennant.

[REDACTED]

(The values of Alpha quoted may be up to 10% low).

2.4.2 Task NT2/NT3 D-Site 4000 metres slant range.

High speed measurements

[REDACTED]
Alpha, measured just before [REDACTED]
Alpha at [REDACTED] approximately [REDACTED]

Relative peaks at F and S Sites indicate [REDACTED]

2.4.3 Task NT5 D-Site

Transmission of high-Z filter [REDACTED]
Transmission of low-Z filter [REDACTED]

[REDACTED] of lead shot added to low-Z filter to offset
build up.

The expected transmission of all filters to [REDACTED]
[REDACTED]. Much further experimental work necessary before
results can be interpreted.

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