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Date: 16/5/91...

Ref/Job no:

Total Pages: 10
(including this page)Fax To: Georgioubrs.....
Fax No: 010: 336773...3065.....
Attn: Humbert, Camerla.....
cc: Alexander, Cot.....
From: Lorraine Lin./Andy Sedgwick.....
Subject: Moon Theater.....

If you have not received all the pages listed please phone the sender

Message

Hello Humbert,

Included is the design of Uranic & Tyco
and notes about their construction. Both are individually
carried mirrors on stage.

The difference between the two is their focal length.

Uranic focuses on a point 5m away
and Tyco focuses on a point 2.5m away.

More information about Kepler tomorrow.

If you have any questions, you can reach me at 071-465-3767.

Andy is away until Monday.

Regards,

Jon

P.S.

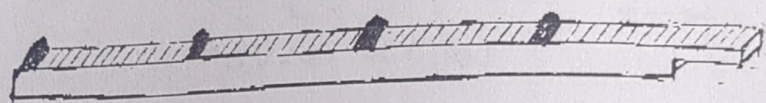
"Tyco" is named after
the astronomer

Tyco Brahe.

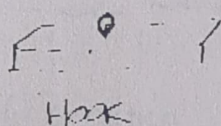
Construction Notes on Uranie & Tycho.

Steps:

- 1) Cut the Centerplate of Plywood: $t \approx 3\text{mm}$
- 2) Cut the radial members of $1\frac{1}{2} \times 1\frac{1}{2} \text{ cm}^2$ of timber
All radial members are identical.
Notch the ends as shown, then place hooks, sleeves, or grooves on the other side as shown:



~ THICKNESS
OF PLYWOOD
+



HOOK



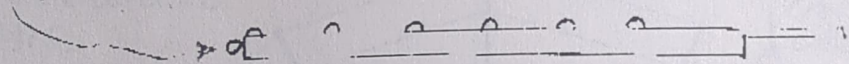
SLEEVE



GROOVE

THE HOOKS, SLEEVES OR GROOVES ARE FOR CIRCUMFERENTIAL CABLES.

PLACE an additional hook at the end of each radial arm

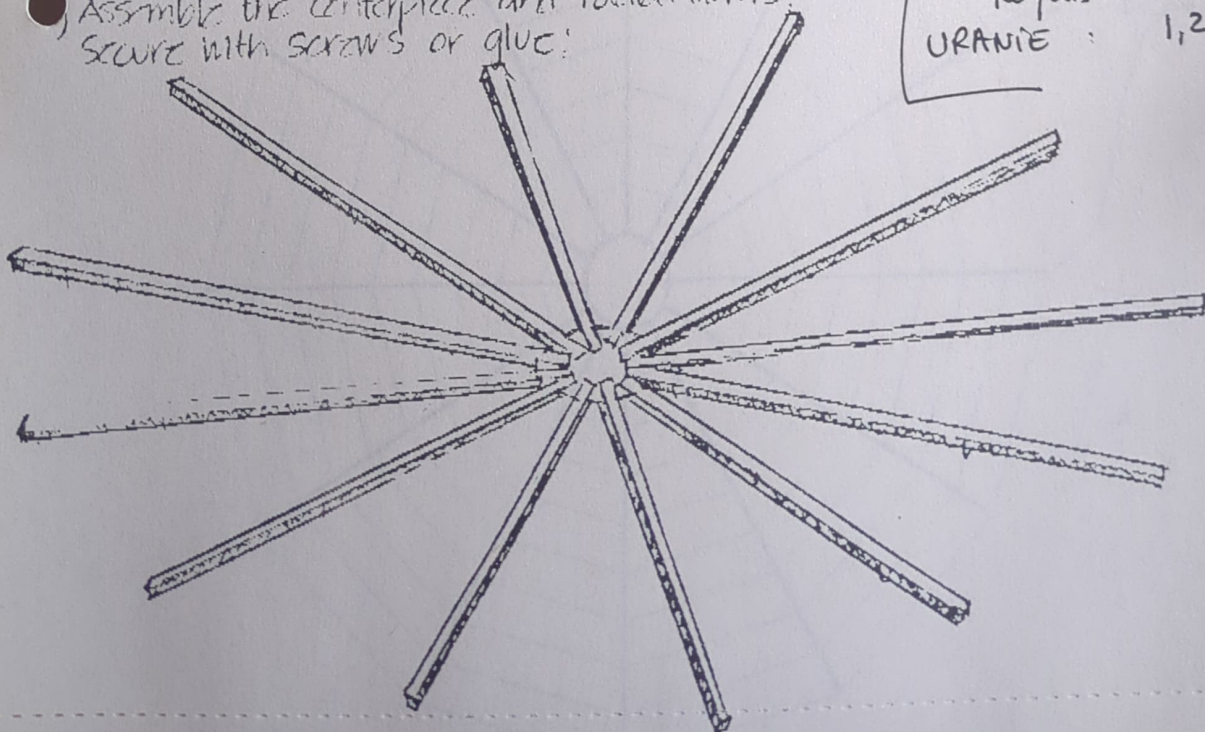


TYCHO.
Rajous.
URANIE :

1,228 m

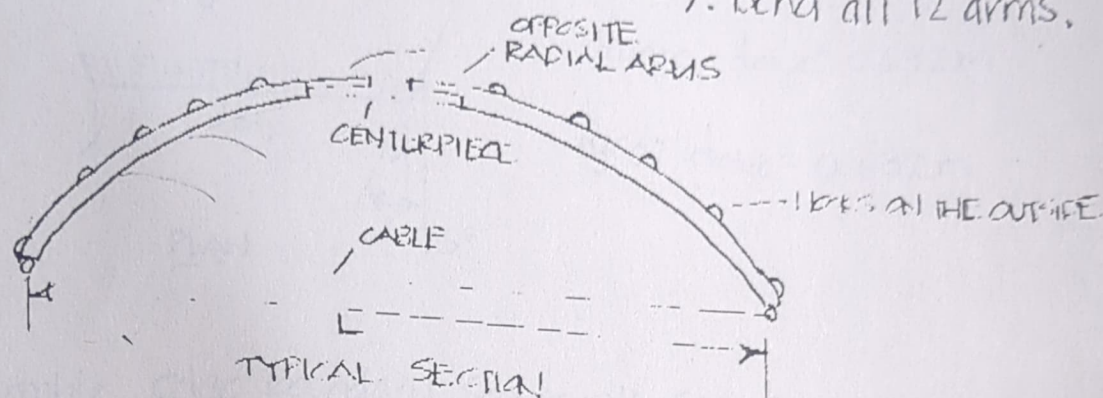
1,218 m

Assemble the centerplate and radial arms.
Secure with screws or glue:

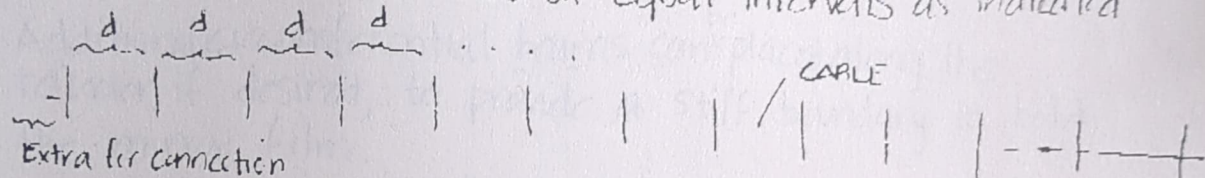


Construction Notes on Tramic (Contd.)

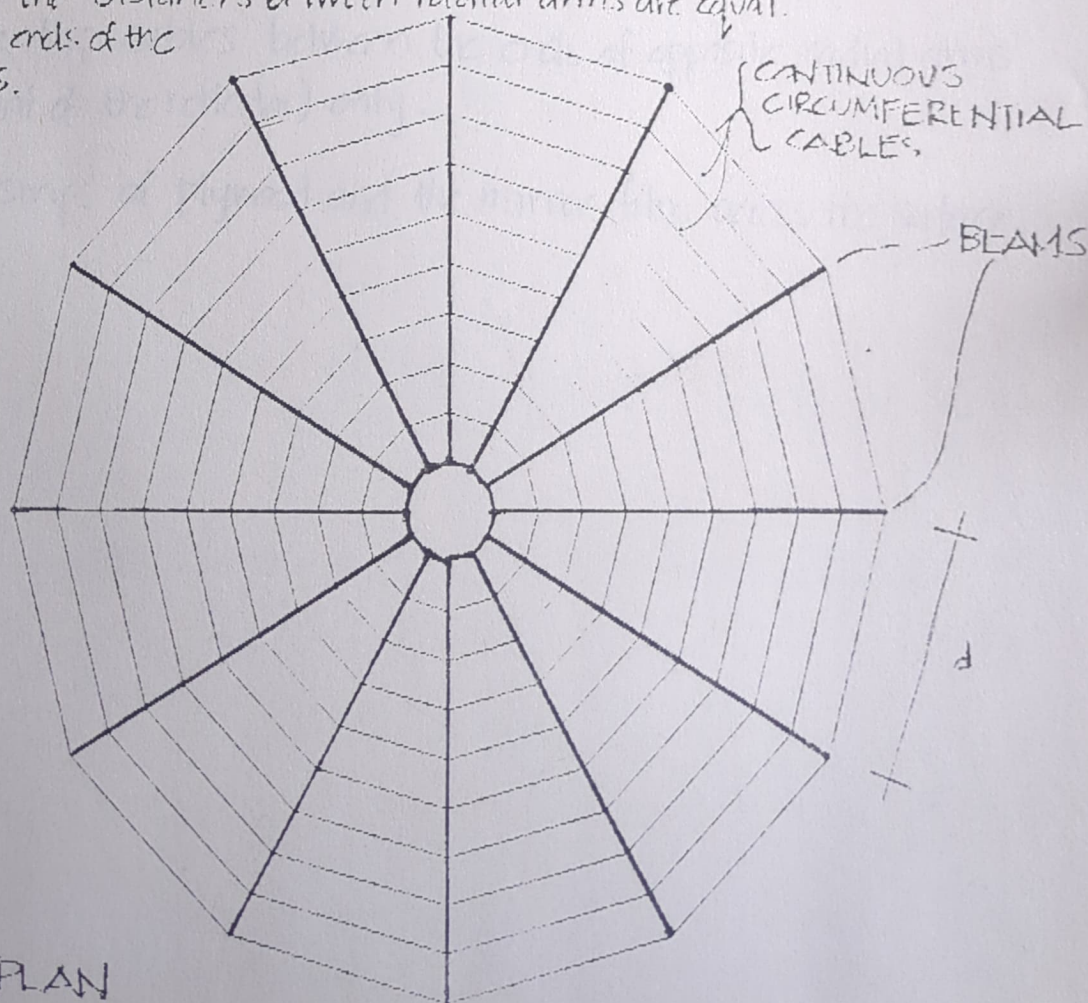
- 1) Attach a cable of given length between ends of opposite arms by bending the members so that the plywood centerpiece is in the vertex (the inside). Bend all 12 arms.



- 2) Mark circumferential cables at equal intervals as indicated



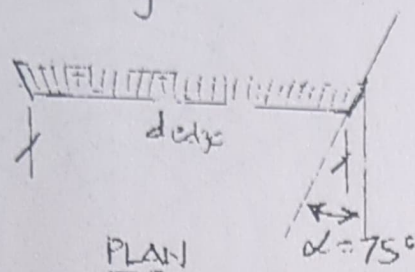
- 3) Place circumferential cables through the appropriate grooves, hooks or sleeves beginning near the boundary and moving in. Check the distances between radial arms are equal. Secure ends of the cables.



PLAN

Construction notes on Uranic (Contd)

- 7) Cut 12 segments of $1\frac{1}{2} \times 1\frac{1}{2}$ timber to construct the edge boundary



Uranic: $d_{edge} = 0.632 \text{ m}$

Tyco: $d_{edge} = 0.632 \text{ m}$

- 8) Assemble edge boundary, secure with screws

- 9) Additional circumferential beams can^{b.c.} be placed along the reflector, if desired, to provide a stiff boundary to hold the mirror film.

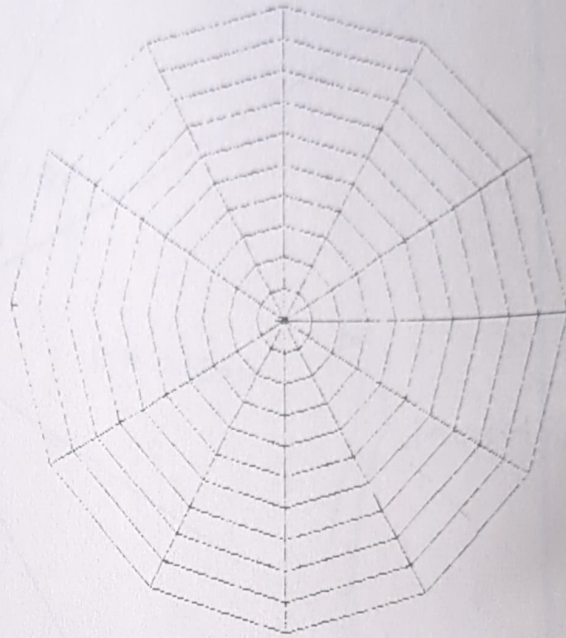
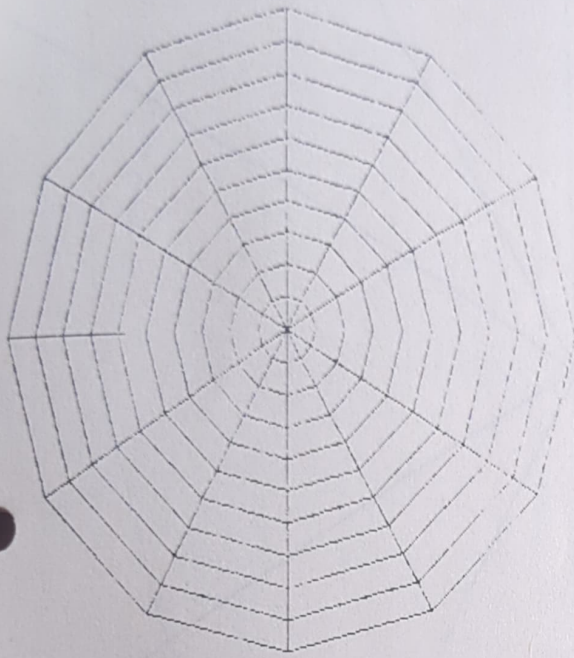
Cut segments as in step 7 using $\alpha = 75^\circ$ and

$$d = (d_{\text{circumferential cable}} - 1\frac{1}{2} \text{ cm})$$

- 10) Remove the cables between the ends of opposite radial arms (in front of the reflector) only.

- 11) Place strips of plywood and the mirror film across the surface.

SIDE VIEW



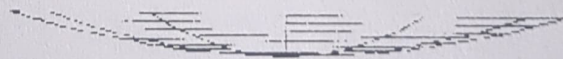
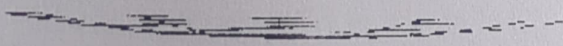
PLAN

Uranic

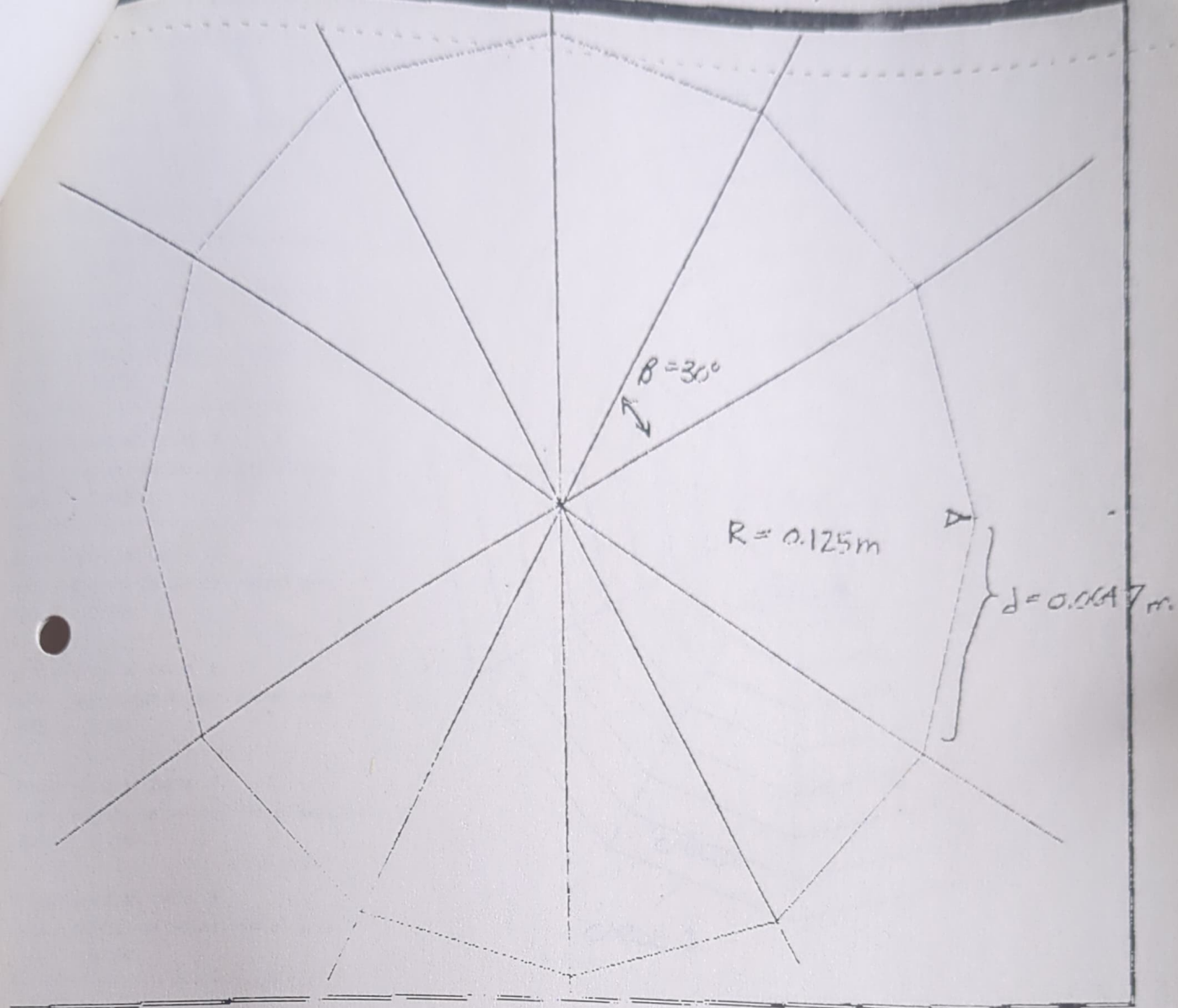
TYCO

1. SKETCH PLATE

Uranic and Tyco



SIDE VIEW



1 SOLID PLATE

Vranic and Tyco

matrix

7

Uranic and Tyco

circumferential cable 1
node d=distance between radial arms
1005 0.547

circumferential cable 2
node d=distance between radial arms
1805 0.582

circumferential cable 3
node d=distance between radial arms
1605 0.518

circumferential cable 4
node d=distance between radial arms
1405 0.453

circumferential cable 5
node d=distance between radial arms
1205 0.388

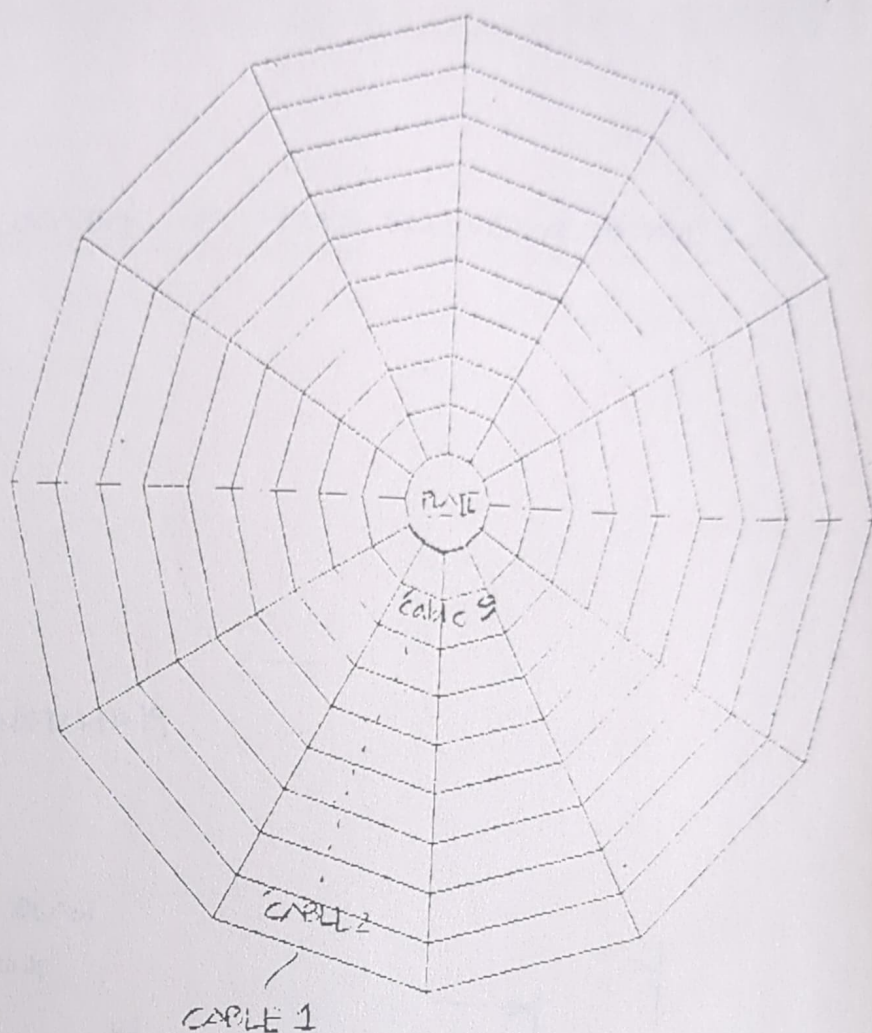
circumferential cable 6
node d=distance between radial arms
1005 0.324

circumferential cable 7
node d=distance between radial arms
805 0.259

circumferential cable 8
node d=distance between radial arms
605 0.194

circumferential cable 9
node d=distance between radial arms
405 0.129

node d=distance between the ends of opposite radial arms
2003 2.500



Uranic and Tyco

metres

Uranic

distance from edge

0.000

distance from edge

0.128

distance from edge

0.252

distance from edge

0.377

distance from edge

0.503

distance from edge

0.628

distance from edge

0.753

distance from edge

0.878

distance from edge

1.003

distance from edge

1.128

distance from edge

1.253

total length of the beam

1.218

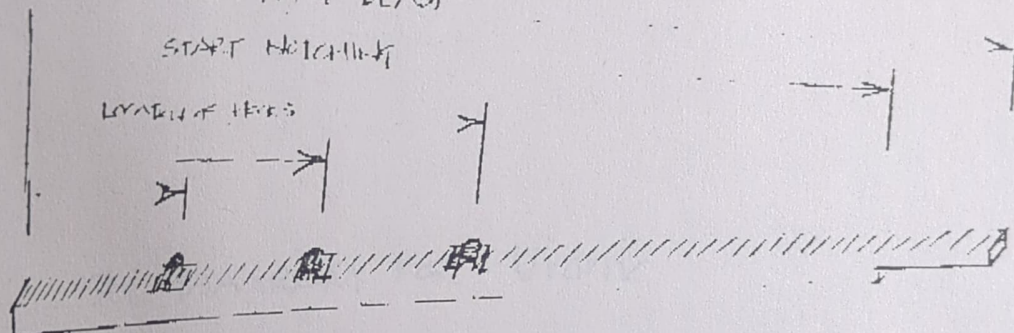
LOCATION OF HOLES, SLEEVES & GROOVES.

NOTCHING

LENGTH OF BEAM

START NOTCHING

LENGTH OF HOLES



Uranic

meters

node 1600
distance from edge
0.000
node 1604
distance from edge
0.128
node 1608
distance from edge
0.256
node 1612
distance from edge
0.383
node 1616
distance from edge
0.510
node 1620
distance from edge
0.636
node 1624
distance from edge
0.762
node 1628
distance from edge
0.888
node 1632
distance from edge
1.013

LOCATION OF HOOKS, SLEEVES OR GROOVES

node 204
start notching
1.138
node 204
end of the beam
1.228

NOTCHING.

SEE DIAGRAM FOR Urank

Tyco

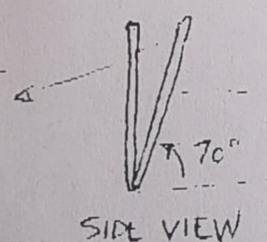
Additional Notes:

1) Vranic and Tyco are exactly the same in plan.
As a result:

- the centerplates have the same dimensions
- the circumferential cable lengths & spacings are the same
- L, the distance between the ends of opposite radial arms is the same
- the beams which compose the edge boundary are the same
- the only difference is the radial members.

2) Galilée:

- Based on the change in moon position throughout a performance, these flat mirrors will need to be able to rotate from the vertical to a maximum of 70° from the horizontal



- POSITION a
- POSITION b

- These mirrors should be no taller than 2m in height otherwise they will cast shadows on mirrors in back.
- Some sort of system needs to be devised to allow these to rotate and move on stage (maybe wheels?)
Could you ask the set designers if they have any ideas?

ally, you'll probably have to drill a small hole at eye level

- tyco & Vranic mirrors, so the person controlling them the performers in order to manoeuvre.