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Facsimile Transmission

Date: Oct 20/03

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Number of Pages (including this sheet) 4

TCS - TOP LEVEL REQ

SLEWING

Initial Slew: to any point ±10 arcsec (within cone 60° from zenith) ← absolute encoding

Slew from Know Object: to any point ± 2 arcsec (with 10° of object) ← incremental encoding

Max Slew Speed: 2000 arcsec/sec

Max Slew Acceleration: 1200 arcsec/sec² ... This drives max slew speed

NOTE when slewing, velocity accuracy is not that important

TRACKING

Max allowable Tracking Speed: 400 arcsec/sec

Typical Tracking Speed: 15 arcsec/sec

Max allowable Tracking Acceleration: TBD - see offsetting/scanning ??

NOTE when tracking, velocity accuracy is important and based on:

- 20 Hz position update
- ± 2 arcsec/hr accuracy (with ±½° of zenith ??)
- RMS error of ±0.1 arcsec (... 10 minutes)

15.9736424

TRACKING

Max 400 arcsec/sec

Typ 15 arcsec/sec

* 20 Hz position update *

* 0.1 arcsec P-P over 10 minutes

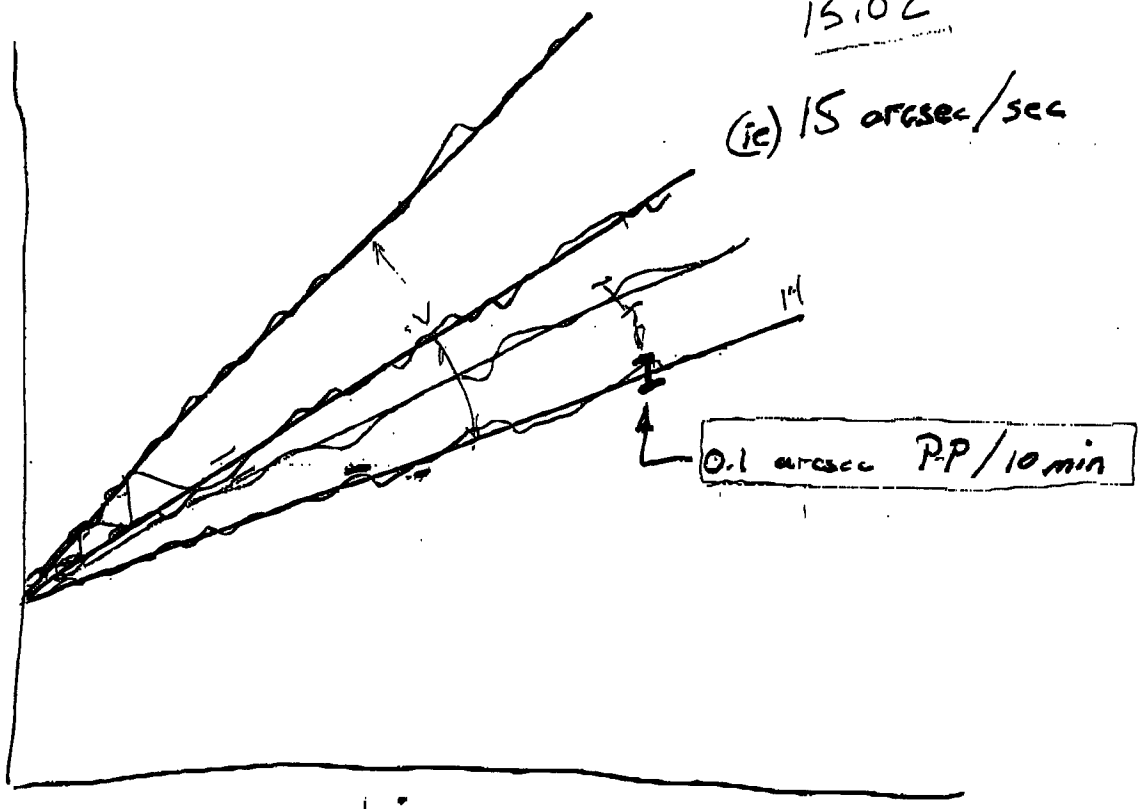
16 P-P hr

Encoders

Absolute	X	arcsec resolution
Incremental	Y	arcsec resolution
Tach	Z	arcsec/sec resolution

16 15.01 15.02

(ie) 15 arcsec/sec



ORIGINAL

±2 arcsec/hr accuracy

±.000555 arcsec/sec accuracy

.080 arcsec/sec @ motor

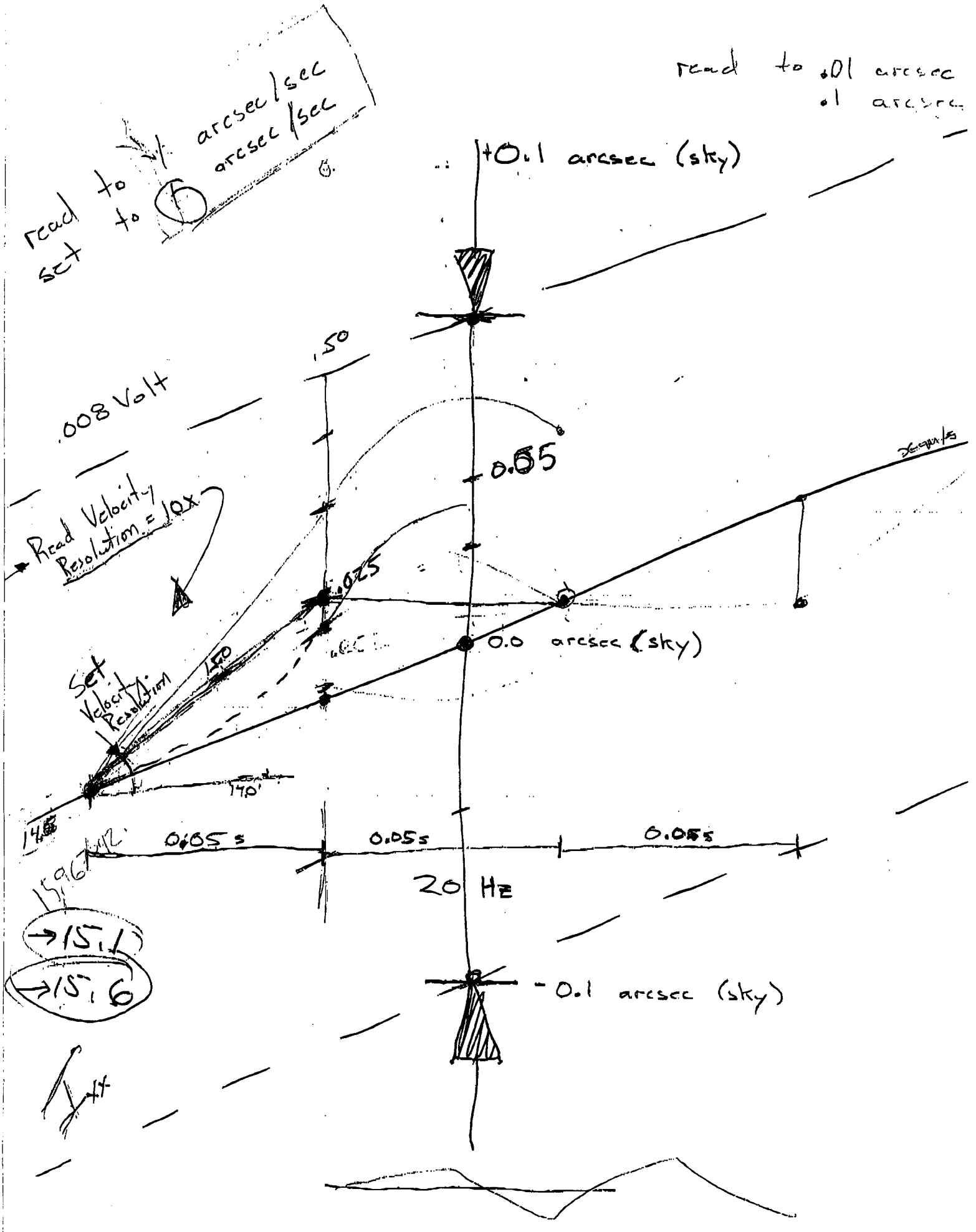
NEW ALAN/ERIC/JOHN

½ X 0.1 arcsec/10 min

= 0.2 arcsec/hr accuracy

.0000555 arcsec/sec

.008 arcsec/sec @ motor


read to .01 arcsec
.1 arcsec
read to
set to
arcsec/sec
arcsec/sec
+0.1 arcsec (sky)
.50
.008 Volt
0.05
Read Velocity Resolution = 10x
.025
0.0 arcsec (sky)
Set Velocity Resolution
.50
140
0.05s
0.05s
0.05s
20 Hz
-0.1 arcsec (sky)