$\frac{1}{n}\sum(x-\hat{x})^2$
???
?
????T_{prop}

$t_{rec}t_{tr}\Delta t_{sat}\Delta t_{rec}\nu$**??**$\sim c$

$p^{sat}p_{rec}p$
$h^{sat}, p_{rec}, \Delta t_{rec}) = ||p^{sat} - p_{rec}|| + c\Delta t_{rec}$
$= \sqrt{((p_x^{sat}-p_x)^2 + (p_y^{sat}-p_y)^2 + (p_z^{sat}-p_z)^2)} + c\Delta t_{rec}.^{sat}, p_{rec}, \Delta t_{rec}) - c\Delta t_{sat} + c\nu$
$= h(p^{sat}, \theta) - c\Delta t_{sat} + c\nu.\theta = [p_{rec}, \Delta t_{rec}]h$
ν**????**$\sim 10\mu s/s 0.001 \cdot c \approx 3 \cdot 10^5$
$\Delta t_{rec} = 0.01$**?**
$\nu\eta\epsilon$
?????
??

LLA:$\lambda\phi$
ECEF:
NED:
Elevation Azimuth:
BA
$\sin\phi cos\lambda - \sin\phi\sin\lambda\cos\phi$
$-\sin\lambda\cos\lambda 0$
$\cos\phi\cos\lambda\cos\phi\sin\lambda\sin\phi\Delta x$
Δy
$\Delta z n, e, d\lambda\phi\Delta x, \Delta y, \Delta z AB\lambda, \phi h\alpha\epsilon$

$\lambda M(\lambda)M(-\lambda) = [M(\lambda)]^T$
Δt_{sv}**?????**$_values.jpg An example of a sample of the parameters contained in a single ephemeris message sampled on Nov$
$3 \times 1[x, y, z]\theta$
$p_{rec} 1 \times 3$
Δt_{rec}
$p^{sat} 1 \times 3$
t
t_{tr}
γ
y
Δt_{sv}
t_{rec}
ξ
ϵ
$\mathbf{y}^{1nT} n \times 1$
$t\xi$

$p_1 p_{2tr} t$

τ

$t_{tr}\tau t_{tr} p'_{sat}(t_{tr};\gamma) p_{sat}(t_{tr})$

$t_{rec}\xi$

$y_{sat}(t_{tr}), \theta) - \Delta t_{sv} + \nu$**??**$p'_{sat}\hat{y} = ||p'_{sat}(t_{tr}) - p_{rec}(t)|| + c \cdot (\Delta t_{rec}(t) - \Delta t_{sv})\epsilon$
$\mathbf{p}_{rec}\Delta t_{rec}\theta = [\mathbf{p}_{rec}, \Delta t_{rec}]y = [y^1 \dots y^n]^T P^{sat} 3 \times n$**??**$\mathbf{y}^{sat}, \theta) + \Delta t_{sv} + \epsilon$
$= h^1(p^{(1)}, \theta)$

$h^n(p^{(n)}, \theta) + \Delta t^1_{sv}$

$\Delta t^n_{sv} + \epsilon_1$

$\epsilon_n \epsilon \Delta t_{sv}$**?**$^{sat}, \theta) + \Delta t_{sv} + \epsilon$
$= h^1(p^{(1)}, \theta)$

$h^n(p^{(n)}, \theta) + \epsilon_1$

ϵ_n
$\hat{\theta}$

$\hat{\theta} = *argmin_\theta \left(||y' - h(P^{sat}, \theta)||^2\right)$ **.??**$i\partial$ $\frac{}{\partial\theta h^{(i)}(p^{(i)},\theta) - \frac{\partial h(p^{(i)},\theta)}{} + \frac{\partial h(p^{(i)},\theta)}{} + \frac{\partial h(p^{(i)},\theta)}{} - \frac{p_x^{(i)}-p_x}{} - \frac{p_y^{(i)}-p_y}{} - \frac{p_z^{(i)}-p_z}{} + c}$