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| **Parallel Equations of Motion** | | | | |
| *RA Gillmann, 2022-07-08* | **Displacement & Time** | **Dischronment & Stance** | **Spatial Angles & Time** | **Temporal Angles & Stance** |
| **Stance / Distance |**  **Time / Duration** | Displacement: **x**  Time | duration: *t* | Dischronment: **t**  Stance | distance: *x* | Spatial angle: **θ** *=* **s**/*r*  Temporal arc: *t* | Temporal angle: **φ** = **t**/*q*  Spatial arc: *s* |
| **Radius | Period** | Spatial radius  *r* = S/(2π) = *qv* | Temporal radius  *q* = T/(2π) = *rw* | Angular velocity  **ω** = **φ**/*t* =**κ**/*w* = 2π*f* = 2π/T  = d**θ**/d*t*= d**t**/d*φ*= **v**⊥/*r*= 1/*q* | Wavenumber (angular lenticity)  **κ** = **θ**/*s* =**ω**/*v* = 2π*h* = 2π/λ  = d**θ**/d*s*= d**s**/d*φ*= **w**⊥/*q*= 1/*r* |
| **Velocity | Lenticity | Wavenumber** | Cross/Tangential velocity  **v**⊥= d**x**/d*t*= **r**×**ω** =*r*/*q*= S/T | Cross/Tangential lenticity  **u**⊥= d**t**/d*x*= **q**×**κ** =*q*/*r*= T/S |
| **Acceleration | Relentation** | Radial acceleration  *a*∥= *v2*/*r* = *rω*2= *v*/*q* = *r*/*q*² | Radial relentation  *b*∥= *w2*/*q* = *qκ*2= *w*/*r* = *q*/*r*² | Angular acceleration  **α** = d**ω**/d*t =* **a**T/*r* | Angular relentation  **β** = d**κ**/d*s =* **b**T/*q* |
| Tangential acceleration  **a**⊥= **ω**×**v** = Td**v**/d*t*=*r***α** | Tangential relentation  **b**⊥= Td**w**/d*x*=*q***β** |
|
| **Wavelength | Period** | λ = S = 2π*r* = 2π*vq* | T = 2π*q* = 2π*wr* | λ = S = 2π/*κ* = 1/*h* | T = 2π/*ω* = 1/*f* |
| **Revolutions | Repetitions**  **Frequency | Circuncy** | Revolutions  N = *θ*/(2π) | Repetitions  Z = *φ*/(2π) | Temporal frequency  *f* = *ω*/(2π)= 1/T | Spatial frequency (circuncy)  *h* = *κ*/(2π) =1/λ |
| **Constant Velocity | Lenticity** | **x** = **x**0+ **v***t* | **t** = **t**0+ **w***x* | **θ** = **θ**0+ **ω***t* | **φ** = **φ**0+ **κ***s* |
| **First Equation of Motion** | **v** = **v**0+ **a***t* | **w** = **w**0+ **b***x* | **ω** *=* **ω**0+ **α***t* | **κ** *=* **κ**0+ **β***s* |
| **Second Equation of Motion** | **x** = **x**0+ **v**0*t*+ ½**a***t*² | **t** = **t**0+ **w**0*x*+ ½**b***x*² | **θ** = **θ**0+ **ω**0*t*+ ½**α***t*2 | **φ** = **φ**0+ **κ**0*t*+ ½**β***s*2 |
| **Third Equation of Motion** | **v***²*= **v**0² + 2**a**∙(**x** – **x**0) | **w**² = **w**0² + 2**b**∙(**t** – **t**0) | **ω**²= **ω**0²+ 2**α**∙(**θ** – **θ**0) | **κ**²= **κ**0²+2**β**∙(**φ** – **φ**0) |
| **Inertia | Facilia** | Mass, linear inertia: *m* = 1/*n* | Vass, linear facilia: *n* = 1/*m* | Angular inertia: I *= mr*2 | Angular facilia: J *= nq*2 |
| **Momentum | Levamentum** | Momentum: **p** *= m***v** | Levamentum: **q** *= n***w** | Angular momentum: **L** *=* I**ω** | Angular levamentum: **Γ** *=* J**κ** |
| **Kinetic Energy and Lethargy** | Kinetic energy: EK = ½*mv*2 | Kinetic lethargy: LK = ½*nw*2 | Angular energy EA = ½I*ω*2 | Angular lethargy LA = ½J*κ*2 |
| **Newton’s Second Law** | Force: **F** *= m***a** = d**p**/d*t* | Release: **R** *= n***b** = d**q**/d*x* | Torque: **τ** *=* I**α** = **s** × **F** | Strophence: **σ** *=* J**β** = **t** × **R** |
| **Work | Repose** | Linear work: *W =* **F** ∙ **x** | Linear repose: *Y =* **R** ∙ **t** | Angular work: *W =* **τ** ∙ **θ** | Angular repose: *Y =* **σ** ∙ **φ** |
| **Power | Placidity** | Linear power: *P* = **F** ∙ **v** | Linear placidity: *Z* = **R** ∙ **w** | Angular power: *P* = **τ** ∙ **ω** | Angular placidity: *Z* = **σ** ∙ **κ** |