

$N_{ij}$  = # of TDS samples in region j of wave type i  
 $T_{oj}$  = Total duration that Wind spent in region j

$F_{ij} = N_{ij}/T_{oj}$

$S_i = \text{SUM}_{\{j\}} F_{ij}$

$P_{ij}$  = Probability of observing wave type i in region j

$P_{ij} = (F_{ij})/(S_i) * 100\%$

Definitions:

Entire Orbit = Time Wind spent outside the magnetosphere

Radiation Belts = Time Wind spent inside radiation belts

Magnetosphere = Time Wind spent inside magnetopause and outside radiation belts

|       |   | Whistlers    | Everything else |            |                  |
|-------|---|--------------|-----------------|------------|------------------|
| ===== |   |              |                 |            |                  |
| i     | = | W            | E               |            |                  |
|       |   |              |                 |            |                  |
|       |   | Entire Orbit | Magneto.        | Rad. Belts | Outside Magneto. |
| ===== |   |              |                 |            |                  |
| j     | = | A            | M               | R          | E                |

$P_{ER} = 22.99 \%$   
 $P_{EM} = 44.22 \%$   
 $P_{EE} = 32.79 \%$

$P_{WR} = 78.65 \%$   
 $P_{WM} = 5.37 \%$   
 $P_{WE} = 15.98 \%$

$N_{ij}$  = # of TDS samples in region j of wave type i  
 $t_{ij}$  = Total time duration of wave type i in region j  
 $T_{fij} = T_{oj}/(T_{oj} - t_{ij})$

$G_{ij} = N_{ij}/T_{fij}$   
 $Y_i = \text{SUM}_{\{j\}} G_{ij}$   
 $Q_{ij} = (G_{ij})/(Y_i) * 100\%$

$Q_{ER} = 9.04 \%$   
 $Q_{EM} = 38.13 \%$   
 $Q_{EE} = 52.84 \%$

$Q_{WR} = 50.44 \%$   
 $Q_{WM} = 7.56 \%$   
 $Q_{WE} = 42.00 \%$

|       | Whistlers | Everything else |
|-------|-----------|-----------------|
| ===== |           |                 |
| N_iA  | 450       | 1516            |
| N_iR  | 227       | 137             |
| N_iM  | 34        | 578             |
| N_iE  | 189       | 801             |

[t\_ij] = seconds

|       | Whistlers | Everything else |
|-------|-----------|-----------------|
| ===== |           |                 |
| t_iA  | 196.102   | 325.165         |
| t_iR  | 56.582    | 30.227          |
| t_iM  | 10.968    | 98.751          |
| t_iE  | 128.551   | 196.187         |

[T\_oj] = hours

|       | T_oj  |
|-------|-------|
| ===== |       |
| T_oA  | 453.0 |
| T_oR  | 62.1  |
| T_oM  | 136.3 |
| T_oE  | 254.6 |

delta\_Toj = % Time Wind spent in Region j

|           | delta_Toj |
|-----------|-----------|
| =====     |           |
| delta_ToA | 100.000 % |
| delta_ToR | 13.712 %  |
| delta_ToM | 30.077 %  |
| delta_ToE | 56.210 %  |