







of brain storming.  $K_{sp} = 0.37$ ,  $K_{seps} = 0.35$ ,  $K_c = 1$ ,  $K_{ps} = 0.51$ ,  $K_{tc} = 0.51$ .

$$MTBF_c = 2.74 \times MTBF_s = 2.74 \times 341565.1 = 935888.4$$

$R_c = \exp(-\frac{t}{MTBF_c}) \approx 0.9815$ . On a similar plan, the other

reliability index is  $R_{sp} \approx 0.9931$ ,  $R_{seps} \approx 0.9935$ ,  $R_{ps} \approx 0.9905$ ,

$R_{tc} \approx 0.9905$ ,  $R_s = 0.9500$ .

The result of reliability index allocated only by the method of weighted factor is  $R'_c = 0.9810$ ,  $R'_{sp} = 0.9963$ ,  $R'_{seps} = 0.9974$ ,  $R'_{ps} = 0.9866$ ,  $R'_{tc} = 0.9975$ ,  $R'_s = 0.9594$ . By comprehensive comparison of the new method and weighted factor reliability allocation method, the new method is better. The reliability requirements of electronics system are met. At the same time the situation of higher allocation cannot appear.

#### IV. Conclusion

Space camera electronics system reliability allocation based on weighted factor method and fuzzy synthetic assessment and the application are detailed expounded. The results indicate that the new method can allocate the reliability index more accurate and reasonable. It can ensure the content of index requirements. It can avoid the waste of high request for selecting electronic components and redundancy design. The quality of space camera can be assured.

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