

1079-13-253

**Robert G Underwood\*** (runderwo@aum.edu), Department of Mathematics, Auburn University Montgomery, P.O. Box 244023, Montgomery, AL 36124-4023. *On the Cyclic Decomposition of the Hopf-Swan Subgroup*. Preliminary report.

Let  $p$  be a rational prime and let  $G = C_p$  denote the cyclic group of order  $p$ . For  $n \geq 1$ , let  $\zeta_{p^n}$  denote a primitive  $p^n$ th root of unity and put  $K = \mathbb{Q}(\zeta_{p^n})$ , with ring of integers  $R$ . Let  $H$  be an  $R$ -Hopf order in  $KG$ , let  $\mathcal{C}(H)$  denote the class group of  $H$ , and let  $\mathcal{T}(H)$  denote the Hopf-Swan subgroup of  $\mathcal{C}(H)$ . In this paper we review some results on the structure of  $\mathcal{T}(H)$  for the cases  $n = 1, 2$ . (Received January 16, 2012)