

This revised version was published online in August 2004 with corrections:

Section Predicates:Subscone

1. *The second paragraph* was revised.
2. *The third paragraph*, ‘Cartesian category \mathbb{D} ’ was changed to ‘category \mathbb{D} with finite limits’.
3. *The third paragraph*, ‘Let \mathbb{D} be a Cartesian category and $G : \mathbb{C} \rightarrow \mathbb{D}$ be a functor preserving finite products.’ and ‘Moreover π_G is faithful, thus $H^{\pi_G} : H^P \rightarrow H^F$ is a monomorphism.’ were deleted.
4. *At the end of the subsection*, ‘For a predicate $P \subseteq_G F$, there exists a monomorphism $H^{\pi_G} : H^P \rightarrow H^F$.’ and a footnote

We give a proof in terms of fibred category theory. In fact $p_{\mathbb{D}}$ is a fibration with fibred finite limits, thus so is π_G (see [Jac99], section 1.8). Then it follows from lemma 8.5.2 of [Jac99].

were added, and this footnote was referred from *the third paragraph*, ‘strictly preserved by π_G (reference to the above footnote).’

Section 3

1. *The first paragraph*, ‘Cartesian categories \mathbb{C}, \mathbb{D} , finite’ was changed to ‘a Cartesian category \mathbb{C} , a category \mathbb{D} with finite limits, a finite’.
2. *The right bottom corner of the first diagram*, ‘ $H^{[-1]}$ ’ was changed to ‘ H^F ’.
3. *Example 3(3)*, ‘ $\mathcal{I}_{\mathcal{B}}[[M]]\rho$ ’ was changed to ‘ $\mathcal{I}_{\mathcal{B}}[[M]]\rho'$ ’.

Section 4

1. *The first paragraph*, ‘Cartesian categories \mathbb{C}, \mathbb{D} , finite-product’ was changed to ‘a Cartesian category \mathbb{C} , a category \mathbb{D} with finite limits, a finite-product’.