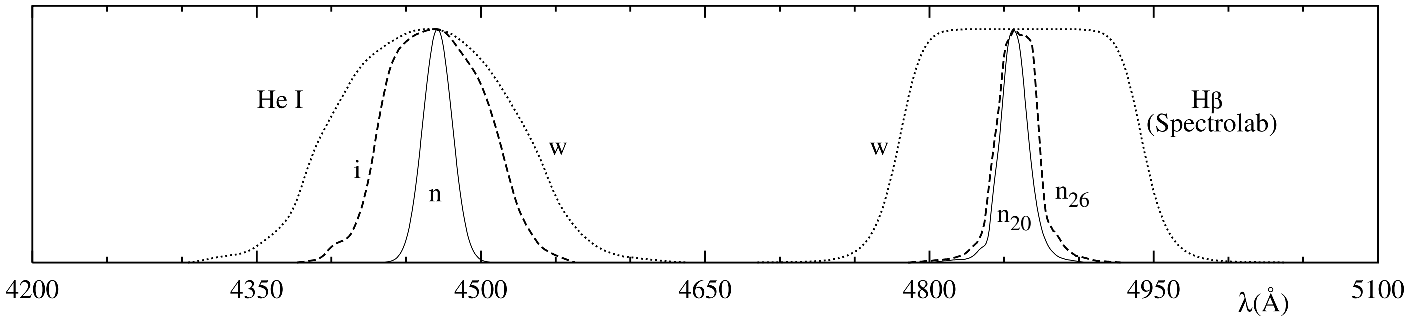
$H\beta,\gamma$ - Sinnerstad et al. - 1968



He I$_{narrow}$	(interference filter) assumed profile: gaussian		*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4471$			4471	4471	4471	4472	4472	4472
WHM = 23			[25]	[25]	[24]	[24]	[25]	[25]
$W_\circ = 24$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{5.0} = 1.19\,^{1.18}_{1.23}$	$a = ^{1.003}_{1.003}$ $b = ^{0.916}_{0.916}$ *B3*	*WN*	*WC*	*PN_{Ne}*	*PN^{Ne}*	*Nova*	*WDA*
	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{3.1} = 1.32\,^{1.30}_{1.38}$	$a = ^{1.003}_{1.003}$ $b = ^{0.915}_{0.915}$ *Sun*	4471	4470	4471	4471	4471	4471
	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{2.1} = 1.47\,^{1.43}_{1.57}$	$\frac{A(\lambda)}{E(B-V)}$: $(4.013, 0.075)^{r=1.00}_{B3}$	$(4.310, 0.095)^{r=1.00}_{Sun}$		$(4.922, 0.082)^{r=1.00}_{M2}$			
	$\lambda_{eff} = 4471.0 + 0.1 \times E(B-V)$ r=1.00		$W_{eff} = 24.5 - 0.0 \times E(B-V)$ r=-0.96					
	$\lambda_{eff}(T) = 4470.9 + 0.2 \times \theta + 0.1 \times \theta^2 - 0.1 \times \theta^3$		$W_{eff}(T) = 24.5 + 0.0 \times \theta - 0.0 \times \theta^2 - 0.0 \times \theta^3$					

He I$_{interm}$			*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4471$	$\lambda_\circ = 4471$ $\lambda_{peak} = 4469$	$\lambda_{gauss} = 4470$	4470	4470	4472	4474	4475	4472
WHM = 85	W10% = 127 W80% = 60	FWHM = 80	[85]	[85]	[85]	[83]	[82]	[84]
$W_\circ = 85$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{5.0} = 1.19\,^{1.18}_{1.23}$	$a = ^{1.003}_{1.003}$ $b = ^{0.917}_{0.916}$ *B3*	*WN*	*WC*	*PN_{Ne}*	*PN^{Ne}*	*Nova*	*WDA*
$\mu = 30$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{3.1} = 1.32\,^{1.30}_{1.38}$	$a = ^{1.003}_{1.003}$ $b = ^{0.914}_{0.913}$ *Sun*	4473	4469	4471	4471	4473	4471
$I_{asym} = 0.08$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{2.1} = 1.47\,^{1.43}_{1.57}$	$\frac{A(\lambda)}{E(B-V)}$: $(4.013, 0.075)^{r=1.00}_{B3}$	$(4.309, 0.095)^{r=1.00}_{Sun}$		$(4.918, 0.081)^{r=1.00}_{M2}$			
$I_{kurt} = -0.46$	$\lambda_{eff} = 4471.0 + 0.8 \times E(B-V)$ r=1.00		$W_{eff} = 85.2 - 0.1 \times E(B-V)$ r=-0.96					
	$\lambda_{eff}(T) = 4470 + 2 \times \theta + 1 \times \theta^2 - 1 \times \theta^3$		$W_{eff}(T) = 85 + 0 \times \theta - 0 \times \theta^2 - 0 \times \theta^3$					

He I$_{wide}$			*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4463$	$\lambda_\circ = 4463$ $\lambda_{peak} = 4467$	$\lambda_{gauss} = 4463$	4462	4463	4466	4469	4472	4468
WHM = 146	W10% = 215 W80% = 93	FWHM = 134	[142]	[142]	[142]	[141]	[142]	[127]
$W_\circ = 143$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{5.0} = 1.19\,^{1.18}_{1.23}$	$a = ^{1.003}_{1.003}$ $b = ^{0.927}_{0.925}$ *B3*	*WN*	*WC*	*PN_{Ne}*	*PN^{Ne}*	*Nova*	*WDA*
$\mu = 51$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{3.1} = 1.32\,^{1.30}_{1.38}$	$a = ^{1.003}_{1.003}$ $b = ^{0.922}_{0.919}$ *Sun*	4467	4463	4449	4461	4459	4465
$I_{asym} = 0.03$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{2.1} = 1.47\,^{1.43}_{1.57}$	$\frac{A(\lambda)}{E(B-V)}$: $(4.021, 0.074)^{r=1.00}_{B3}$	$(4.315, 0.094)^{r=1.00}_{Sun}$		$(4.922, 0.080)^{r=1.00}_{M2}$			
$I_{kurt} = -0.41$	$\lambda_{eff} = 4463.4 + 2.4 \times E(B-V)$ r=1.00		$W_{eff} = 143.1 - 0.5 \times E(B-V)$ r=-0.96					
	$\lambda_{eff}(T) = 4461 + 5 \times \theta + 4 \times \theta^2 - 2 \times \theta^3$		$W_{eff}(T) = 143 + 1 \times \theta - 2 \times \theta^2 - 0 \times \theta^3$					

Hβ_{narrow}			*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4856$	$\lambda_\circ = 4857$ $\lambda_{peak} = 4856$	$\lambda_{gauss} = 4857$	4856	4855	4856	4857	4857	4856
WHM = 20	W10% = 39 W80% = 12	FWHM = 22	[24]	[24]	[23]	[23]	[23]	[23]
$W_\circ = 23$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{5.0} = 1.12\,^{1.11}_{1.15}$	$a = ^{1.015}_{1.015}$ $b = ^{0.466}_{0.466}$ *B3*	*WN*	*WC*	*PN_{Ne}*	*PN^{Ne}*	*Nova*	*WDA*
$\mu = 11$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{3.1} = 1.19\,^{1.17}_{1.25}$	$a = ^{1.015}_{1.015}$ $b = ^{0.466}_{0.466}$ *Sun*	4858	4857	4860	4861	4857	4856
$I_{asym} = -0.17$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{2.1} = 1.28\,^{1.25}_{1.37}$	$\frac{A(\lambda)}{E(B-V)}$: $(3.632, 0.068)^{r=1.00}_{B3}$	$(3.902, 0.086)^{r=1.00}_{Sun}$		$(4.455, 0.074)^{r=1.00}_{M2}$			
$I_{kurt} = 2.16$	$\lambda_{eff} = 4856.8 + 0.1 \times E(B-V)$ r=1.00		$W_{eff} = 23.2 - 0.0 \times E(B-V)$ r=-0.96					
	$\lambda_{eff}(T) = 4857 + 0 \times \theta + 0 \times \theta^2 - 0 \times \theta^3$		$W_{eff}(T) = 23 + 0 \times \theta - 0 \times \theta^2 - 0 \times \theta^3$					

Hβ_{narrow}			*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4859$	$\lambda_\circ = 4859$ $\lambda_{peak} = 4857$	$\lambda_{gauss} = 4859$	4858	4858	4858	4859	4860	4858
WHM = 31	W10% = 54 W80% = 22	FWHM = 32	[34]	[35]	[34]	[34]	[34]	[33]
$W_\circ = 34$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{5.0} = 1.12\,^{1.11}_{1.15}$	$a = ^{1.015}_{1.015}$ $b = ^{0.464}_{0.464}$ *B3*	*WN*	*WC*	*PN_{Ne}*	*PN^{Ne}*	*Nova*	*WDA*
$\mu = 14$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{3.1} = 1.19\,^{1.17}_{1.25}$	$a = ^{1.015}_{1.015}$ $b = ^{0.464}_{0.464}$ *Sun*	4860	4859	4861	4861	4859	4858
$I_{asym} = -0.05$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{2.1} = 1.28\,^{1.25}_{1.37}$	$\frac{A(\lambda)}{E(B-V)}$: $(3.630, 0.068)^{r=1.00}_{B3}$	$(3.899, 0.086)^{r=1.00}_{Sun}$		$(4.452, 0.074)^{r=1.00}_{M2}$			
$I_{kurt} = 1.88$	$\lambda_{eff} = 4858.8 + 0.2 \times E(B-V)$ r=1.00		$W_{eff} = 33.9 - 0.0 \times E(B-V)$ r=-0.96					
	$\lambda_{eff}(T) = 4859 + 0 \times \theta + 0 \times \theta^2 - 0 \times \theta^3$		$W_{eff}(T) = 34 + 0 \times \theta - 0 \times \theta^2 - 0 \times \theta^3$					

Hβ_{wide}	(interference filter) assumed profile: three-cavity		*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4861$			4859	4859	4860	4861	4870	4856
WHM = 163			[166]	[166]	[167]	[167]	[160]	[163]
$W_\circ = 167$	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{5.0} = 1.12\,^{1.11}_{1.15}$	$a = ^{1.015}_{1.015}$ $b = ^{0.463}_{0.461}$ *B3*	*WN*	*WC*	*PN_{Ne}*	*PN^{Ne}*	*Nova*	*WDA*
	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{3.1} = 1.19\,^{1.17}_{1.25}$	$a = ^{1.015}_{1.015}$ $b = ^{0.463}_{0.460}$ *Sun*	4863	4859	4897	4862	4907	4859
	$\left.\frac{A(\lambda)}{A(V)}\right\vert_{2.1} = 1.28\,^{1.25}_{1.37}$	$\frac{A(\lambda)}{E(B-V)}$: $(3.629, 0.067)^{r=1.00}_{B3}$	$(3.898, 0.085)^{r=1.00}_{Sun}$		$(4.440, 0.072)^{r=1.00}_{M2}$			
	$\lambda_{eff} = 4861.0 + 2.5 \times E(B-V)$ r=1.00		$W_{eff} = 166.8 - 0.7 \times E(B-V)$ r=-0.96					
	$\lambda_{eff}(T) = 4859 + 4 \times \theta + 3 \times \theta^2 - 2 \times \theta^3$		$W_{eff}(T) = 166 + 1 \times \theta - 1 \times \theta^2 - 0 \times \theta^3$					

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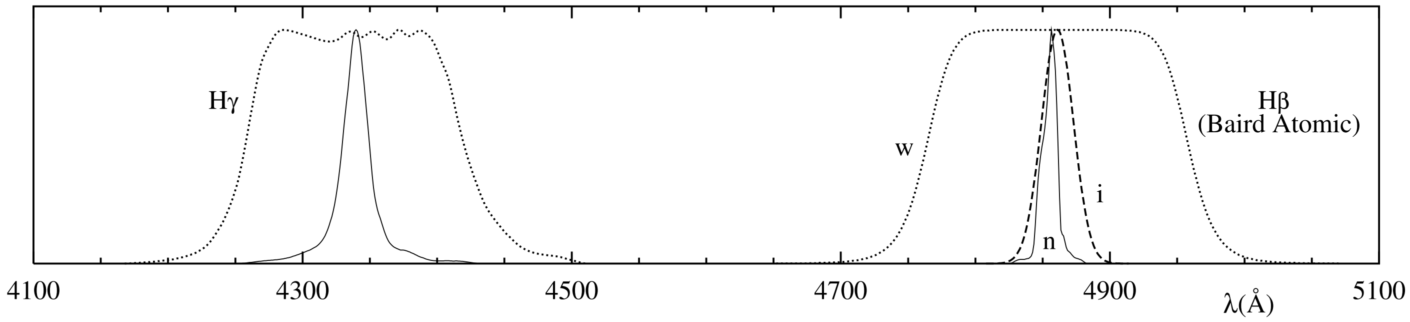

$\mathbf{H}\gamma_{narrow}$				*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4340$	$\lambda_\circ = 4340$	$\lambda_{peak} = 4340$	$\lambda_{gauss} = 4340$	4339	4339	4340	4341	4341	4359
WHM = 21	W10% = 49	W80% = 11	FWHM = 25	[27]	[29]	[26]	[25]	[24]	[37]
$W_\circ = 27$	$\frac{A(\lambda)}{A(V)}\|_{5.0} = 1.22\,{}^{1.20}_{1.25}$	$a = {}^{0.997}_{0.997}$ $b = {}^{1.085}_{1.085}$	*B3*	*WN*	*WC*	PN_{Ne}	PN^{Ne}	*Nova*	*WDA*
$\mu = 19$	$\frac{A(\lambda)}{A(V)}\|_{3.1} = 1.36\,{}^{1.34}_{1.42}$	$a = {}^{0.997}_{0.997}$ $b = {}^{1.084}_{1.083}$	*Sun*	4340	4339	4341	4340	4342	4339
$I_{asym} = 0.16$	$\frac{A(\lambda)}{A(V)}\|_{2.1} = 1.53\,{}^{1.49}_{1.63}$	$\frac{A(\lambda)}{E(B-V)}$:	$(4.137, 0.077)^{r=1.00}_{B3}$	$(4.443, 0.098)^{r=1.00}_{Sun}$		$(5.074, 0.084)^{r=1.00}_{M2}$			
$I_{kurt} = 3.92$	$\lambda_{eff} = 4339.6 + 0.3 \times E(B-V)$ r=1.00			$W_{eff} = 26.6 - 0.0 \times E(B-V)$ r=−0.94					
	$\lambda_{eff}(T) = 4339 + 1 \times \theta + 1 \times \theta^2 - 0 \times \theta^3$			$W_{eff}(T) = 27 + 0 \times \theta - 0 \times \theta^2 - 0 \times \theta^3$					

$\mathbf{H}\gamma_{wide}$				*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4339$	$\lambda_\circ = 4341$	$\lambda_{peak} = 4372$	$\lambda_{gauss} = 4339$	4338	4338	4345	4348	4352	4397
WHM = 163	W10% = 224	W80% = 141	FWHM = 159	[169]	[169]	[169]	[167]	[164]	[65]
$W_\circ = 169$	$\frac{A(\lambda)}{A(V)}\|_{5.0} = 1.22\,{}^{1.20}_{1.24}$	$a = {}^{0.997}_{0.997}$ $b = {}^{1.087}_{1.083}$	*B3*	*WN*	*WC*	PN_{Ne}	PN^{Ne}	*Nova*	*WDA*
$\mu = 54$	$\frac{A(\lambda)}{A(V)}\|_{3.1} = 1.36\,{}^{1.34}_{1.40}$	$a = {}^{0.997}_{0.997}$ $b = {}^{1.078}_{1.075}$	*Sun*	4341	4340	4342	4340	4344	4338
$I_{asym} = 0.09$	$\frac{A(\lambda)}{A(V)}\|_{2.1} = 1.53\,{}^{1.49}_{1.61}$	$\frac{A(\lambda)}{E(B-V)}$:	$(4.138, 0.076)^{r=1.00}_{B3}$	$(4.439, 0.097)^{r=1.00}_{Sun}$		$(5.062, 0.082)^{r=1.00}_{M2}$			
$I_{kurt} = -0.67$	$\lambda_{eff} = 4340.5 + 2.7 \times E(B-V)$ r=1.00			$W_{eff} = 169.3 - 0.7 \times E(B-V)$ r=−0.96					
	$\lambda_{eff}(T) = 4338 + 6 \times \theta + 4 \times \theta^2 - 2 \times \theta^3$			$W_{eff}(T) = 169 + 2 \times \theta - 3 \times \theta^2 - 1 \times \theta^3$					

$\mathbf{H}\beta_{narrow}$				*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4856$	$\lambda_\circ = 4855$	$\lambda_{peak} = 4856$	$\lambda_{gauss} = 4856$	4855	4854	4855	4855	4855	4855
WHM = 12	W10% = 22	W80% = 6	FWHM = 12	[13]	[12]	[13]	[13]	[13]	[12]
$W_\circ = 13$	$\frac{A(\lambda)}{A(V)}\|_{5.0} = 1.12\,{}^{1.11}_{1.15}$	$a = {}^{1.015}_{1.015}$ $b = {}^{0.468}_{0.468}$	*B3*	*WN*	*WC*	PN_{Ne}	PN^{Ne}	*Nova*	*WDA*
$\mu = 6$	$\frac{A(\lambda)}{A(V)}\|_{3.1} = 1.19\,{}^{1.17}_{1.25}$	$a = {}^{1.015}_{1.015}$ $b = {}^{0.468}_{0.468}$	*Sun*	4856	4855	4859	4859	4856	4855
$I_{asym} = -0.06$	$\frac{A(\lambda)}{A(V)}\|_{2.1} = 1.28\,{}^{1.25}_{1.37}$	$\frac{A(\lambda)}{E(B-V)}$:	$(3.634, 0.068)^{r=1.00}_{B3}$	$(3.903, 0.086)^{r=1.00}_{Sun}$		$(4.458, 0.074)^{r=1.00}_{M2}$			
$I_{kurt} = 1.93$	$\lambda_{eff} = 4855.2 + 0.0 \times E(B-V)$ r=1.00			$W_{eff} = 12.8 - 0.0 \times E(B-V)$ r=−0.96					
	$\lambda_{eff}(T) = 4855 + 0 \times \theta + 0 \times \theta^2 - 0 \times \theta^3$			$W_{eff}(T) = 13 + 0 \times \theta - 0 \times \theta^2 - 0 \times \theta^3$					

$\mathbf{H}\beta_{interm}$	(interference filter) assumed profile: gaussian			*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4861$				4861	4860	4861	4861	4862	4860
WHM = 28				[30]	[31]	[30]	[30]	[30]	[29]
$W_\circ = 30$	$\frac{A(\lambda)}{A(V)}\|_{5.0} = 1.12\,{}^{1.11}_{1.15}$	$a = {}^{1.015}_{1.015}$ $b = {}^{0.462}_{0.461}$	*B3*	*WN*	*WC*	PN_{Ne}	PN^{Ne}	*Nova*	*WDA*
	$\frac{A(\lambda)}{A(V)}\|_{3.1} = 1.19\,{}^{1.17}_{1.25}$	$a = {}^{1.015}_{1.015}$ $b = {}^{0.462}_{0.462}$	*Sun*	4861	4861	4861	4862	4860	4861
	$\frac{A(\lambda)}{A(V)}\|_{2.1} = 1.28\,{}^{1.25}_{1.37}$	$\frac{A(\lambda)}{E(B-V)}$:	$(3.627, 0.068)^{r=1.00}_{B3}$	$(3.897, 0.086)^{r=1.00}_{Sun}$		$(4.450, 0.074)^{r=1.00}_{M2}$			
	$\lambda_{eff} = 4861.0 + 0.1 \times E(B-V)$ r=1.00			$W_{eff} = 29.8 - 0.0 \times E(B-V)$ r=-0.96					
	$\lambda_{eff}(T) = 4860.9 + 0.2 \times \theta + 0.2 \times \theta^2 - 0.1 \times \theta^3$			$W_{eff}(T) = 29.8 + 0.0 \times \theta - 0.0 \times \theta^2 - 0.0 \times \theta^3$					

$\mathbf{H}\beta_{wide}$	(interference filter) assumed profile: three-cavity			*B3*	*Vega*	*Sun*	*K2*	*M2*	*Carbon*
$\lambda_c = 4861$				4858	4858	4860	4862	4871	4853
WHM = 195				[198]	[198]	[198]	[198]	[196]	[188]
$W_\circ = 198$	$\frac{A(\lambda)}{A(V)}\|_{5.0} = 1.12\,{}^{1.11}_{1.15}$	$a = {}^{1.015}_{1.015}$ $b = {}^{0.464}_{0.461}$	*B3*	*WN*	*WC*	PN_{Ne}	PN^{Ne}	*Nova*	*WDA*
	$\frac{A(\lambda)}{A(V)}\|_{3.1} = 1.19\,{}^{1.17}_{1.25}$	$a = {}^{1.015}_{1.015}$ $b = {}^{0.463}_{0.459}$	*Sun*	4862	4858	4927	4863	4928	4858
	$\frac{A(\lambda)}{A(V)}\|_{2.1} = 1.28\,{}^{1.25}_{1.37}$	$\frac{A(\lambda)}{E(B-V)}$:	$(3.630, 0.066)^{r=1.00}_{B3}$	$(3.898, 0.084)^{r=1.00}_{Sun}$		$(4.439, 0.071)^{r=1.00}_{M2}$			
	$\lambda_{eff} = 4861.0 + 3.5 \times E(B-V)$ r=1.00			$W_{eff} = 198.4 - 1.2 \times E(B-V)$ r=−0.96					
	$\lambda_{eff}(T) = 4858 + 6 \times \theta + 5 \times \theta^2 - 2 \times \theta^3$			$W_{eff}(T) = 198 + 2 \times \theta - 2 \times \theta^2 - 1 \times \theta^3$					