Table

	$A_{2\pi}$	$A_{\pi^- p}$ [8]
r_B	$(\alpha\mu)^{-1} = (\alpha \frac{m_\pi}{2})^{-1} = 387\,\text{fm}$	$(\alpha\mu)^{-1} = 223\,\text{fm}$ $(\mu = 0.87 m_\pi)$
E_{1S}^{EH}	$\frac{1}{4}\alpha^2 m_\pi = 1.86\,\text{keV}$	$\frac{1}{2}\alpha^2\mu \simeq 3.25\,\text{keV}$
$\varepsilon^* = 2\mu\alpha^3\cdot a$: ε_{1S}	$-E_{1S}^{EH}\frac{4a^h_{\pi^+\pi^+}}{r_B} \simeq -3.5\,\text{eV}$	$-E_{1S}^{EH}\frac{4a^h_{\pi^-\pi^-}}{r_B}\underbrace{(1+\delta_\varepsilon)}_{\text{corr.}} = -7.11\,\text{eV}$
Γ_{1S} (π)	$\frac{8\pi}{9}\frac{q_0}{\mu}[a_0 - a_2]^2 \lvert\psi(0)\rvert^2$ $\simeq 0.2\,\text{eV} \hat{=} 3.3\,\text{fs}$	$\frac{8\pi}{9}\frac{q_0}{\mu}[a_1 - a_3]^2 \lvert\psi(0)\rvert^2 (1+P^{-1})$ $\simeq 1\,\text{eV}\ (0.90\,\text{eV}) \hat{=} 0.7\,\text{fs}$
$\psi^2_{EH}(0)$	$\frac{1}{\pi}(\alpha\mu)^3 = \frac{2\mu}{\pi}\frac{E_{1S}^{EH}}{r_B}$	$\frac{1}{\pi}(\alpha\mu)^3 \simeq 8.15\cdot 10^{-8} m_\pi^3$
a	$a^h_{\pi^+\pi^+} = \frac{2a_0 + a_2}{3} \simeq 0.13\, m_\pi^{-1}$ $a^h_{\pi^+\pi^0} = \frac{\sqrt{2}}{3}\underbrace{[a_2 - a_0]}_{-.26} = -0.12\, m_\pi^{-1}$	$a^h_{\pi^-\pi^-} = \frac{2a_1 + a_3}{3} = 0.09\, m_\pi^{-1}$ $a^h_{\pi^-\pi^0} = \frac{\sqrt{2}}{3}\underbrace{[a_3 - a_1]}_{-.28} = -0.13\, m_\pi^{-1}$
$\hookrightarrow \Gamma_{1S}$	$\to E_{1S}^{EH}\frac{8q_0}{r_B}[a^h_{\pi^+\pi^0}]^2$	$\to E_{1S}^{EH}\frac{8q_0}{r_B}[a^h_{\pi^-\pi^0}]^2(1+P^{-1})$
q_0	35.6 MeV	28 MeV

$\varepsilon^* = \varepsilon - \frac{i}{2}\Gamma$