\( (A, \Theta) \) possibly polarized coh. var. \( \mathcal{K}_{1} \), check \( \mathcal{K}_{2} \).

\( \Theta \) divisor \( \dim \mathcal{K}(A, \Theta) = 1 \), \( \Theta \) nonreducible, \( -(A, \Theta) \in \Theta(A) \).

\[ \begin{align*}
\text{let } & \mathcal{E} : A \to \mathbb{P}^{2g-1} \text{ be the universal curve to } 2g. \\
\text{then } & \text{Kummer variety of } A = \text{Km}(A), \quad A = A^\vee / \langle \tau \rangle. \\
\text{prop: } & \Theta \cap t^* \Theta \subseteq t^* \Theta \cup t^* \Theta, \quad \forall \Theta, g, s \in C.
\end{align*} \]

\[ \text{for } g \geq 2, \quad H^0(J_2, 2\Theta) = \langle \Theta_1, \ldots, \Theta_{2g-2} \rangle, \text{ the previous prop implies that} \]

\[ c_1(\Theta_1 + 2\Theta_2) + c_2\Theta_3(2\Theta_1 + 4\Theta_2 + \Theta_3) + c_3\Theta_4(4\Theta_2 + 1) + \frac{c_4}{2} = 0 \]

for certain constants \( c_1, c_2, c_3, c_4 \) not all 0, \( \forall g = 1, 2, 3, \ldots \).

\[ \Rightarrow \quad [\Theta_1, \ldots, \Theta_{2g-2}] = [\Theta_2, \ldots, \Theta_{2g-2}] = [\Theta_2, \ldots, \Theta_{2g-2}] = [\Theta_2, \ldots, \Theta_{2g-2}] \text{ a solution} \]

\[ \text{then } \text{Km}(J) \text{ has 4-dim. family of tangent lines.} \]

\[ \text{thm: } (\text{Kummer}) \quad \text{if } \text{Km}(A) \text{ has 4-dim. tangent } \Rightarrow (A, \Theta) \text{ is isomorphic to a Secant.} \]

\[ \text{deg}(A, \Theta) \text{ is a Prym variety if } J \cong \text{Sec}(J, \Theta) \text{ sit. } A \cong J \text{ and } \Theta |_{A} \cong 2\Theta. \]
Then, \( 2x + c_1 + c_2 + c_3 \in W \Longleftrightarrow \langle x + c_1, x + c_2, x + c_3 \rangle \) are algebraic.

(A, Θ) near Θ in L. Assume \( H \subseteq A \) is a quasi-closed subscheme, \( X \) ample line bundle on \( A \).

Recall: A sheaf \( F \) on \( A \) is in \( \mathcal{G} \) if \( H^j(A, j_{\ast} \mathbf{P}) = 0 \) for all \( j > 0 \).

Recall: \( \mathcal{G} \) is \( \mathcal{G} \) on \( A \) if \( \mathcal{G} \) is locally free.

Recall: we have \( A \cong \hat{A} \), so we identify them.

(Make \( (\mathcal{G}) \) such that \( \mathcal{G} \) is locally free.

\( \mathcal{G} \) is also \( \mathcal{G} \).

Let \( \alpha(x, H) : R\Phi(x) \to R\Phi(xH) \) correspond to restriction.

By the proof of theorem.

\[ Z^i(x, H) = \text{zero locus of } \alpha(x, H). \]

\[ Z^i(x, H) \subseteq Z^{i+1}(x, H), \quad Z^{i+1}(x, H) \backslash Z^i(x, H) \]

consists of points where \( \alpha(x, H) \) is i.

\[ \Delta \subseteq A \times A \text{ diagonal.} \]

\[ \Theta(x, H) : \pi(A \times A) \to \pi(A \times A), \quad \Theta(x, H)(\pi(x^1, x^2)) \rightarrow \pi(x_1, x_2)(\pi(x, H) + A) \]

restriction \( (\pi^0, \tau^0)_{\hat{A}} \).
$U^i(X, H) = \text{zero locus of } \Lambda^i \beta(X, H)$

**Lemma:** Let $\phi_2^i : A \to A \times A$ given by $\phi_2(x) = \phi_{-1}(x^* x \otimes x^{-1})$.

Then $\phi_2^{-1}(z(X, H)) = U^i(X, H)$.

**Turn:** Let $X = \partial A(2\theta), H = \{c_1, \ldots, c_{m+2}\}, \theta \in \mathbb{R}$, $x \in \theta \mathbb{R}(2\theta)$, $z \in A$ s.t. $z = c_1 + \cdots + c_{m+2}$.

Then, $U^i(z(X, H))$ is scheme-theoretically defined by the equations

$$\det(\theta_{\sigma_i}(z - 1 + c_j)) = 0, \quad \forall (\sigma_1, \ldots, \sigma_{m+2}) \in \mathbb{R}^{m+2}$$

$\Rightarrow$ Kempf $\Rightarrow$ $z^{m+2}(X, H)$ is a translate of $-W_1$, where $W_1$ is the image of $\text{Sym}^i C$ in $J$ in particular, $z^i(X, H)$ is a translate of $C = -W_1$.

$X = \partial A(2\theta), H = \{c_1, \ldots, c_{m+2}\} \subseteq C$.

Robert thinks: $H = \{c_1, c_2, c_3, c_4\} \subseteq C$

$\Rightarrow$ the points of $U^i(z(X, H)) = z^i(z(X, H))$ are those s.t. $\psi(x+c_1), \psi(x+c_2), \psi(x+c_3)$ are collinear.

Thus: $(A, \theta)$ is a Schubert egg if at least one point on $z^i(X, C)$ that is not $z^i$-type.