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## Overview of Females in the PLA Air Force



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This report discusses the past and present role of females in the People's Republic of China's (PRC) People's Liberation Army (PLA) Air Force (PLAAF) to include officers, enlisted personnel, civilian cadre, and civilian personnel.<sup>i</sup> Historically, females in the PLAAF served in two primary roles: transport aircraft pilots and crew members and enlisted personnel in communications units. Over the past few decades, their roles have increased into the medical field, academics, research, radar units, and the Airborne Corps. Although five females have become major generals, no females have become lieutenant general or generals, so there appears to be a glass ceiling for females. There also appears to be a glass ceiling for most enlisted personnel. While some basic demographic information about the U.S. Air Force (USAF) is provided in the Air Force Association's annual *USAF Almanac*, the PLA as a whole and the PLAAF in particular do not provide detailed information about personnel, including the total number or the breakdown by officers, enlisted personnel, civilian cadre, grades and ranks, and males and females. Appendix A: Female Flag Officers

### Key Findings

- Historically, PLAAF enlisted force females served primarily as communications operators and officers served as medical personnel and transport aircraft crew members. Overall, the branches/arms and organizations in which females are allowed to serve have gradually expanded.
- There appears to be a glass ceiling for female officers above the battalion level and female enlisted personnel above the sergeant level; however, there are always exceptions. There are no indications that the glass ceilings for female officers and enlisted personnel will disappear.
- Only five females have been promoted to major general. No females have been promoted to lieutenant general or general, and there are no indications this will happen in the future.
- The PLAAF has female civilian cadre in certain specialties.
- There has only been one female Air Regiment commander and one Air Division commander.
- Two females have served as deputy commandant at the Air Force Command College.
- Only one female has served as deputy chief of staff at a Military Region Air Force/ Theater Command Air Force Headquarters, and none have served as a deputy chief of staff in the PLAAF Headquarters.
- Most females in the PLAAF serve in all-female organizations, which have female commanders and political officers; however, there are a few organizations that include a mix of male and female officers and enlisted personnel.
- The PLAAF has had 13 groups of female pilots since 1951, with over 360 graduates as of late 2021. The first time that males and females were mixed during their basic education and training was the 8th group that began in 2005, but, even then, they were separated during the first three years at the Air Force Aviation University and were not mixed until they began their flight training at their Flight Academy.
- Almost all female pilots are transport pilots, but some have become helicopter pilots as well as fighter and fighter-bomber pilots.
- There are now a few mixed male-female combat fighter and fighter-bomber aircraft flight squadrons and flight groups, but none of them appear to have a female commander or political officer.

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- In November 2014, four female pilots flew the J-10 for the first time as part of the PLAAF's Bayi Flight Demonstration Team at the 10th China Air Show in Zhuhai, Guangdong Province.
- There do not appear to be any female bomber pilots, and there are no indications this will change.
- All PLAAF pilots must stop flying at a certain age based on the type of aircraft they fly; however, the age for females is earlier than that for males in the same airframe.
- Two PLAAF female transport pilots have entered space as astronauts.
- Multiple females have served as political officers at the company, battalion, regiment, division, and corps levels, as well as in the Air Force Command College.
- Females can only be recruited as enlisted personnel. They have never been conscripted, even though the Service Law says then can be. Some females are directly recruited as noncommissioned officers based on their academic qualifications.
- The role of females in the Airborne Corps is growing, but they are still usually organized into all-female organizations.
- The PLAAF does recruit female minorities for certain officer and enlisted force specialties that require interaction with minorities.
- Some PLAAF female medical personnel have been involved in United Nations Peacekeeping Operations.

### **Key Terms and Concepts**

This section provides a few key Chinese terms and concepts.

*Feixing Xueyuan* (飞行学院): Historically, the PLAAF translated this term as Flight College; however, in 2013, the PLAAF changed the official English name of the Shijiazhuang Flight College to Flight Academy, and in 2017 it changed the names of the Harbin and Xi'an Flight Colleges to Flight Academies as well. For purposes of this report, Flight Academy will be used throughout for continuity sake.

*Feixingyuan* (飞行员): In 1951, the PLAAF began recruiting, educating, and training its 1st group of female pilots (女飞行员).<sup>1</sup> Originally, since females only flew transport aircraft, the term *feixingyuan* for females could be translated as aviator, which referred to the pilots, navigators, and communicators.<sup>2</sup> The PLAAF ceased training communicators starting with the 5th group (1981-1984) and navigators starting with the 7th group (1997-2001), leaving only training for pilots. For purposes of the report, the term pilot will be used throughout.

*Feixing Renyuan* (飞行人员): The PLAAF also uses the term *feixing renyuan* (飞行人员), which it translates as flying personnel and includes all flight crew members.<sup>3</sup>

*Hangkong Xuexiao* (航空学校) and *Hangkong Yubei Xuexiao* (航空预备学校): All Flight Academies began as Aviation Schools (航空学校) or Aviation Preparatory Schools (航空预备学校).

*Nü* (女): The PLA and PLAAF translate this character as both “female,” “woman,” and “women.”<sup>4</sup> For purposes of this book, female is used unless it refers to the official name such as International Working Women's Day and All-China Women's Federation.

*Yiwubing* (义务兵): This term is translated as “compulsory serviceman” or “conscript,” which applies to all two-year enlisted personnel regardless of whether they voluntarily joined or were conscripted.<sup>5</sup>

*Zhengbing* (征兵) and *Zhengji* (征集): Two of the most confusing terms are *zhengbing* and *zhengji*, which are each translated as both conscription and recruitment for the enlisted force but often have completely opposite meanings in English, forcing the reader to rely on context to understand which is meant.<sup>6</sup>

### **Promotions and Glass Ceilings**

As can be seen throughout this report, it appears that there are glass ceilings preventing female officers from reaching commands above the battalion level and enlisted females from promotion above the sergeant (中士) level throughout the PLAAF; however, as with everything in the PLAAF, there are always exceptions.

#### *Aviation Officer Career Paths*

Concerning pilots, since the 1st group of female pilots, females have become company-level flight squadron commanders and battalion-level flight group commanders in all-female aviation units, but the majority of them become a “regular pilot” (普通飞行员) and only a few of them have ever served in any leadership positions at the regiment level or above. As a “regular pilot,” a female can continue to move up her grade and rank career ladder, but they are not in any leadership billets. As such, a lieutenant colonel or colonel with the grade of regiment deputy leader or regiment leader can continue to fly but would be under the command of a flight squadron commander or a flight group commander. No information was found about any female flight squadron or flight group commanders or deputy commanders in mixed male-female combat aircraft units.

Only one female pilot, Liu Xiaolian (刘晓连), was identified as having served as a deputy regiment commander, and only one, Cheng Xiaojian (程晓健), served as a deputy commander and then the commander of an Air Division. There was no mention of Cheng having served as a deputy commander or commander of an Air Regiment. Both of them achieved the rank of major general. The five females who have received the rank of major general (four of whom were pilots) served in the following leadership billets. See their full profiles in Appendix A.

- Air Force Command College
  - Deputy commandant
  - Deputy director of the Political Department
- Military Region Air Force/Theater Command Air Force HQ
  - Deputy chief of staff
- Transport Air Division
  - Commander, deputy commander, deputy chief of staff (Headquarters/Staff Department),
  - Deputy political commissar, and deputy director of the Political Department,
- Command Post
  - Chief of staff
- Base<sup>i</sup>
  - Deputy political commissar

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<sup>i</sup> An Air Force Base (基地) is a corps-level headquarters, not an airbase (airfield).

- Transport Air Regiment
  - Commander, staff officer

Besides the five female major generals, only a few female pilots have ever served in the following leadership billets above the flight group level:<sup>7</sup>

- Air Regiment training staff officer (团训练参谋)
- Air Regiment deputy chief of staff (团副参谋长)
- Air Regiment deputy commander (副团长)
- Flight Academy deputy chief of staff (飞行学院副参谋长)

In addition, all male and female flight group commanders must also serve as a “flight commander” (飞行指挥员) in the control tower. The first females to serve in this role were part of the 2nd group of female pilots.<sup>8</sup>

#### *Non-Aviation Officer Career Paths*

As noted in the rest of the report, almost no females, especially in the communications branch, were found in command billets, including the commander, deputy commander, political commissar, or chief of staff, above the battalion level. This clearly implies that there is a glass ceiling for them. Although no regulations or discussion of this was found anywhere, they most likely are required to retire at age 40 after having served as a battalion leader-grade officer. Assuming they are not given a command billet above the battalion level nor required to retire, about the only option they would have is to become a staff officer in a brigade or higher headquarters.

#### *Enlisted Force Career Paths*

As shown in the report, female enlisted personnel are mostly found in the communications field and the number is slowly growing in the Airborne force. Based on analysis of the material used for this report, it appears that the majority of enlisted females are two-year recruits and that only a small proportion remain on active duty as an NCO after the completion of their initial commitment. With only a few exceptions, enlisted female personnel are assigned to all-female squads, platoons, companies, and battalions. According to the PLA’s *2010 Active Duty Enlisted Force Service Regulations* (现役士兵服役条例), female officers serve as platoon commanders and company and battalion commanders and political officers, while female NCOs serve as squad leaders. According to the regulations, the two ranks assigned to female squad leaders are corporal (下士) and sergeant (中士).<sup>9</sup> Of note, although the regulations state that squad leaders are corporals and sergeants, one article in 2020 noted that a female master sergeant class-4 (四级军士长) in a Southern Theater Command Air Force (TCAF) Base Communications Station (南部战区空军某基地通信站某连) became the company’s first ever squad leader with that rank.<sup>10</sup>

As discussed in the “Communications Personnel” section, information was also found concerning female NCOs serving as “acting” (代理) platoon and company commanders and political officers, as well as a manual switchboard chief operator. Even though there are “acting” platoon and company leaders, this means there is an upper limit for those NCOs (regardless of gender) at the company level. Specifically, whereas an officer can move up their career ladder from platoon to company and battalion deputy commanders and commanders, enlisted personnel cannot move up as “acting” battalion deputy commanders or commanders.

Also, the PLAAF implemented a Master Chief program in the communications field in 2015. No information was found about their ranks or exactly what levels they are serving at, but it is most likely only at the platoon, company, and battalion levels.

All of this implies that there may not be any female NCOs above the rank of master sergeant class-4. If that is the case, then it also means that no female NCOs will ever reach their mandatory retirement criteria of age 55 or 30 years of service. As such, they are demobilized and will not receive the benefits of a retiree.

### **Highlighting Females**

Occasionally, the PLAAF provides articles that highlight certain females for propaganda purposes. For example, an 11 March 2019 article in the PLAAF's official website kj.81.cn leading up to the PLAAF's 70th Anniversary in November had an 11-page article entitled "Them [Females], in Combat Billets!" (她们,在战位!) that identifies 19 key billets for females in the PLAAF.<sup>11</sup> The 19 billets are listed below in the order they appeared:

1. Pilots (飞行员) in air divisions, brigades, and regiments
2. Paratroop squad leaders (伞勤班长) in airborne force brigades
3. Release person (投放员) who is an airborne force squad leader that is responsible for helping train paratroop females through the whole process
4. Radar brigade communications female elements (雷达旅通信女兵分队)<sup>12</sup>
5. Airfield station hospital nurse (场站医院护士)<sup>i</sup>
6. Propaganda and security staff officer (宣传保卫干事) who is responsible for news reporting
7. Electronic countermeasures brigade platoon commander (电子对抗旅排长)
8. Director, Air Force Early Warning Academy, Information Processing Education and Research Office (空军预警学院预警情报处理教研室主任)
9. Civilian Personnel Faculty (文职教员) in the Air Force Early Warning Academy
10. Pharmacist and Psychologist (药师兼心理医生)
11. Lawyer (律师)
12. Finance staff officer (财务股助理)
13. Airfield station weather forecaster (场站气象预报员)
14. Cultural staff officer (文化干事)
15. News staff officer (新闻干事)
16. Propaganda staff officer (宣传干事)

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<sup>i</sup> An Airfield Station (场站) is an independent regiment leader-grade logistics support unit subordinate to an air division or air brigade. The commander (站长) serves as the airfield commander with responsibility for all facilities and operations. He also organizes the supply of materials and equipment to each tenant air regiment or brigade and provides logistics support for flight operations and training. The Airfield Station is also responsible for radar, communications, and meteorology components within the control tower. An Airfield Station has three components: a command staff, functional and administrative organizations, and subordinate company-level organizations. Although the Airfield Station serves as the logistics support organization for an air regiment or brigade, it also incorporates certain organizations within the Equipment Department system, such as munitions and air materiel. The functional and administrative branches support more than ten companies, including navigation beacon, target range, security, four stations, airfield service, vehicle, fuel transport, cave depot, and air-to-air missile companies. The Airfield Station also manages the control tower and the unit's hospital and clinics. Each Airfield Station also has several ad hoc organizations (element / 分队).



17. Telephone operator (话务员)
18. Communications #1 Station squad leader (通信一号台班长)
19. Communications #1 Station deputy squad leader (通信一号台副班长)

### **PLAAF Force Size and Officer Career Tracks**

This section provides a brief overview of the PLAAF's force size and the history of officer career tracks.

#### *PLAAF Force Size*

Since 1949, the PLA has had 11 force reductions, each of which included changes to the PLAAF.<sup>i,13</sup> Early programs were aimed primarily at cutting the size of HQ staff by 15 to 20 percent. In December 1975, the PLAAF reduced its entire force by 100,000 people, and in August 1985, it further downsized 20 percent by eliminating some organizations, reforming the unit organization structure, and eliminating old equipment. In October 1992, it carried out yet another 20-percent reduction. According to the International Institute for Strategic Studies' (IISS) annual *Military Balance*, the PLAAF had 330,000 personnel in 2010 and 2011.<sup>14</sup> According to China's *2012 Defense White Paper*, the PLAAF in 2012 consisted of 398,000 personnel.<sup>15</sup> Unfortunately, unlike the U.S. military, the PLA does not provide any information about its force size by gender, rank/grade, or education levels.

On 3 September 2015, Xi Jinping announced that the Chinese military would implement a 300,000-man force reduction, of which half were officers. As the 11th force reduction and reorganization of the PLA since 1952,<sup>16</sup> the focus in 2016 was on "above-the-neck" (e.g., above the corps level) organizations, whereas 2017 focused on "below-the-neck" (e.g., corps and below). Based on available information, it appears that, even though the number of personnel at PLAAF HQ and TCAF HQ levels has been reduced, the overall number of PLAAF personnel has actually increased since 2012. Five years later in August 2017, that figure had reportedly risen to 420,000<sup>17</sup>; however, no specific details were reported and IISS retained the number of 398,000 until 2020, when it reduced that number to 395,000 for the end of 2019 and has remained constant since then.<sup>ii,18</sup>

#### *PLA Personnel Career Tracks<sup>19</sup>*

Unlike the U.S. military, PLA officers have never been assigned alpha-numeric Military Occupation/Occupational Specialty (MOS) codes or Air Force Specialty Codes (AFSC).

Historically, when the PLA introduced its first rank system in 1955, it categorized its officers into the following eight career tracks (业务性质).<sup>20</sup> Although officers have always been organized into categories, no PLA enlisted personnel have ever been organized into specialty categories.

- Command/commanding officers (指挥军官)
- Political officers (政治军官)
- Technical officers (技术军官)
- Quartermaster officers (军需军官)
- Military medical officers (军医军官)

<sup>i</sup> The overall PLA force reductions occurred in 1950, 1952, 1953, 1957, 1980, 1982, 1985, 1997, 2004, and 2016. Of these, the PLAAF implemented force reductions in only eight of them (1960, 1970, 1975, 1985, 1992, 2004, and 2016).

<sup>ii</sup> The numbers for the previous 10 years reported in the annual IISS *Military Balance* report are: 2010-2011 (330,000), 2012-2018 (398,000), 2019-2021 (395,000).

- Veterinary officers (兽医军官)
- Military law officers (军法军官)
- Administrative officers (行政军官).

In 1988, officers were reorganized into the following four career tracks:<sup>21</sup>

- Military/operational officer (军事军官)<sup>i</sup>
- Political officer (政治军官)
- Logistics officer (后勤军官)
- Special technical officer (专业技术军官)

Following the April 1998 creation of the General Armament Department (GAD), the PLA created an equipment/armament officer (装备军官) career track so there were five career tracks shown below.<sup>22</sup> In addition, the PLA combines the first four career tracks together and identifies them as non-special technical officers (非专业技术军官). As with almost everything in the PLA, including organizations, the career tracks are listed in protocol order.

- Military/operational officer (军事军官)
- Political officer (政治军官)
- Logistics officer (后勤军官)
- Equipment/armament officer (装备军官)
- Special technical officer (专业技术军官).

There are indications that the PLA may have merged some of its career tracks in 2021, but it is still not clear which ones have been merged.<sup>23</sup>

### **Female Officer and Enlisted Force Education and Training**

Historically, no males or females in the PLA have ever been conscripted as an officer.<sup>ii</sup> Although the 1984 Service Law and its amended versions, which are discussed later, state that males and females can both be conscripted as enlisted personnel, only males have actually been conscripted. Females have only voluntarily joined the PLA. The following subsections discuss PLAAF female officer and enlisted recruitment, education, and training.

#### *PLAAF Academic Institutions*

The PLAAF currently has the following 10 academic institutions:<sup>24</sup>

1. Air Force Command College (空军指挥学院)
2. Air Force Engineering University (空军工程大学)
3. Air Force Aviation University (空军航空大学)
4. Air Force Early Warning Academy (空军预警学院)
5. Air Force Harbin Flight Academy (空军哈尔滨飞行学院)
6. Air Force Shijiazhuang Flight Academy (空军石家庄飞行学院)
7. Air Force Xi'an Flight Academy (空军西安飞行学院)
8. Air Force Medical University (空军军医大学)

<sup>i</sup> The 2004 PRC Defense White Paper translates *junshi junguan* (军事军官) as “operational officer”.

<sup>ii</sup> Concerning male officers, they either 1) voluntarily joined or were conscripted as an enlisted member and then received a direct promotion as an officer (which stopped in 1982) or attended an officer academic institution to get their education and training, or 2) they joined directly as an officer and received their cadet education and training at an academic institution.

9. Air Force Logistics College (空军勤务学院)<sup>i,25</sup>
10. Air Force Communications NCO Academy (空军通信士官学校).<sup>ii,26</sup>

The following information concerns the involvement of females in these institutions. Information about pilot recruitment, education, and training affiliated with the Air Force Aviation University and three flight academies is covered in detail in the “Pilots” section below. Unfortunately, no information was found concerning the number of females to include professors and researchers in any institutions. The following paragraphs provide information for the remaining institutions.

Virtually no information was found concerning the role of females in the Air Force Command College, other than that they cannot be pregnant while receiving their graduate degrees.<sup>27</sup>

The following bullets concern Air Force Engineering University undergraduate recruitment during 2017. This is the foundation academic institution for female communications officers.

- Number of specialties (专业): 21
- Degrees and number of years: four-year bachelor’s degree
- Gender (男, 女): Of the 21 specialties, males can take all 21, but females can only take two – 080703 (Communications and Engineering) and 110301 (Command Information System Engineering)
- Total number of personnel recruited (合计): 2,072 including 2,019 males and 53 females

Concerning the Air Force Early Warning Academy, no specific information was found other than one photo showing three female cadets.

Concerning the Air Force Medical University, it has five undergraduate specialties, each of which include female cadets. This university is discussed in more detail later.

No information was found concerning any females in the Air Force Logistics College.

Finally, some information was found concerning female students who were receiving training as Master Chiefs at the Air Force Communications NCO Academy.<sup>28</sup>

#### *PLAAF’s National Defense Student (Reserve Officer) Program*

In 1998, under then Central Military Commission (CMC) Chairman Jiang Zemin, the PLA reduced the number of PLA academic institutions to 67, including 15 PLAAF institutions,<sup>29</sup> and initiated a program to implement the National Defense Student (国防生) Program, which is also called the Reserve Officer (后备军官) Program, to educate undergraduates as technical officers in 118 civilian engineering, science, and technology universities.<sup>30</sup> Note that, although the students were considered reserve officers during their time at school, they became active duty officers once they graduated and assumed their billet. Unlike officers who attend a military academic institution where their time as a cadet counts as time-in-service, time as a student in the National Defense Student program does not count as time-in-service.

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<sup>i</sup> The term *qinwu* (勤务) is translated as both “service” and “logistics” and basically means the same. The PLA / PLAAF are not consistent in how they translate *qinwu*. Based on multiple China National Knowledge Infrastructure (CNKI) articles, it appears that the official English name is Air Force Logistics College even though the name best translates as Air Force Service College. Of note, the Army and Navy use the same Chinese terms, but their institutions appear to be translated as “Army Logistic University” and “Naval Service Academy.”

<sup>ii</sup> Although the PLA translates *xuexiao* as school, it has made an exception for this institution and translates it as academy.

Although there was initially a 5 percent maximum for the number of female students enrolled in the program, that restriction seems to be applied inconsistently across the civilian academic institutions involved in the program.<sup>31</sup> For example, as of 2015, Peking University's National Defense Student program limited the number of female undergraduate students to 10 percent and the number of female graduate students to 20 percent.

Unfortunately, the PLAAF has not provided any detailed information about the overall history of female officer recruitment, education, and training; however, it has provided considerable information about its recruitment, education, and training of its female pilots, which is discussed later.

### **Enlisted Force Recruitment and Training**

This section focuses primarily on the PLA's female enlisted force as a whole rather than on just the PLAAF. Most importantly, while male PLA recruits may join either voluntarily or are conscripted, the PLA has never conscripted females.<sup>32</sup> According to the 1984 PRC Military Service Law (中华人民共和国兵役法) passed by the National People's Congress and each of its amended versions (1998, 2009, 2011, and 2021), "According to the needs of the military, female citizens can be recruited/conscripted for active service (根据军队需要, 可以征集女性公民服现役)."<sup>33</sup> The implication of this sentence is that they can be conscripted if a situation arises whereby the PLA needs to increase the size of its enlisted force, such as a conflict.

The section first discusses the process of recruiting enlisted females and digs into available recruitment data from the years 2012-2016. It also discusses how the PLAAF has approached direct recruitment of female NCOs. The majority of the data for this section was taken from the website: 大学生征兵网 ([www.0730hao.cn](http://www.0730hao.cn)).

#### *Female Recruitment*

This subsection addresses information concerning recruiting female enlisted personnel in a total of 14 provinces, three Autonomous Regions (ARs), and one municipality.<sup>34</sup>

Although female representation within the PLA remains relatively limited at this point,<sup>35</sup> estimated at approximately 5% overall, their recruitment can allow the PLA to ensure that it draws upon all available talent in the process of constructing a highly-educated NCO corps. However, females who seek to join the PLA as enlisted personnel continue to face a separate process and requirements.

Based on the examined data, the PLA has incrementally increased its recruitment of females as enlisted personnel. However, the number of females who are recruited is still dramatically lower than the number of males. For females, given the seemingly limited numbers of their recruitment, the process appears to be quite competitive. Often, a high proportion of those who are accepted have college degrees. In addition, females are subject to more stringent requirements in certain aspects of the recruitment process, including with regard to age.

*Physical Requirements*

The PLA’s physical requirements have gradually been adjusted over time, in accordance with changes in the patterns of their recruitment.<sup>36</sup> In general, there has been a relaxation of physical standards, including with regard to height, weight, and eyesight (e. g., visual acuity). To some extent, these changes could be taken as an indication of adverse trends in public health in China, including increases in obesity. However, the PLA’s changes in its physical standards also reflect the reality that it is starting to focus its recruitment on those with higher educational attainments, including college/university students and graduates, who are necessarily older and may be, for instance, heavier than personnel conscripted or recruited with only a middle school (中学) or high school (高中) education.<sup>i</sup>



There have been slight revisions to the PLA’s official standards for college/university student and graduate applicants’ physical requirements over the past several years, with seemingly some slight variations at the provincial level over time, as well as for specialized roles. Within the past several decades, there has seemingly been one major adjustment to the physical requirements as outlined in the “Standards for Applicants Physical Examinations” (应征公民体格检查标准) issued by the Ministry of National Defense in 2014.<sup>37</sup>

At a basic level, each set of requirements stipulates the following two components:

- Minimum height (身高)
- Maximum and minimum weight (体重), which are calculated based on percentage above and below a standard weight. This standard weight (in kilograms) is calculated by subtracting 110 from the height (in centimeters).

For example, for a woman who is 1.6 m (5’2”) tall, the standard weight would be 50 kilograms (110.2 pounds), while the acceptable weight range, within 15% of that figure, would be from 42.5 kilograms (93.7 pounds) to 57.5 kilograms (126.8 pounds). Table 1 below shows the height and weight requirements for males and females in 2003, when college/university students were not being conscripted/recruited because they had exceeded the maximum age for registration, and 2014, when the maximum age for registration was increased to include college/university students.

**Table 1: Height and Weight Requirements: 2003 and 2014**

Year	Male Height	Female Height	Male Weight Range	Female Weight Range
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<sup>i</sup> Middle school includes 7<sup>th</sup> to 9<sup>th</sup> grade, and high school includes 10<sup>th</sup> to 12<sup>th</sup> grade.

2003 <sup>38</sup>	>1.62 m (5'4")	>1.60 m (5'3")	no more than 25% above, no less than 15% below the standard weight	within 15% of standard weight
2014	>1.60 m (5'3")	>1.58 m (5'2")	no more than 30% above, no less than 15% below the standard weight	no more than 20% above, no less than 15% below the standard weight

### Registration and Screening Process

At a basic level, the female registration (报名) process shown in Figure 1 below, which includes online and in-person registration, is similar to that of male applicants, but it has a couple of minor differences.<sup>39</sup>

Figure 1: Female Enlisted Member Registration Process



1. Online registration (网上报名)
2. Preliminary examination (初审初检)
3. Physical examination (体检考评)
4. Political review (政治审查)
5. Provide a schedule for pre-selection of new soldiers (预定新兵)
6. Approve entering the military (批准入伍)

While male applicants have a seven-step process,<sup>i</sup> females have a six-step process. The physical examination and political review are broken down into two separate steps, while the

<sup>i</sup> The seven-step male process consists of: 1) Online registration (网上报名); 2) Preliminary examination (初审初检); 3) Physical exam and political review (体检政审); 4) Personal interview (走访调查); 5) Provide a schedule for pre-

personal interview is removed from the process. There is no clear explanation provided for the slight differences between the processes.

The photo on the left in Figure 2 below shows female students taking part in the physical examination.<sup>40</sup> The photo on the right shows personnel from a People's Armed Forces Department (PAFD/人武部/人民武装部), which is responsible for conscripting and recruiting enlisted personnel at the provincial and below levels as well as managing college student recruitment, who are conducting in-person registration for male and female college/university students and upcoming graduates.<sup>41</sup>

**Figure 2: Female Enlisted Member Recruitment Photos**



*Qualifications for Female Recruitment:*

Females age 17 to 22 who are high school graduates can be recruited as two-year enlistees or voluntarily join the PLA. In general, females between 18 and 22 years of age can also be directly recruited into the PLA's NCO corps once they have the necessary education. Although male college graduates can be conscripted/recruited up to the age of 24, there was not a similar relaxation in the age requirements for female college graduates explicitly noted.<sup>42</sup>

Based on the "Standards for Applicants Physical Examinations" (应征公民体格检查标准),<sup>43</sup> last revised in 2016, females are required to be at least 1.58 meters or 5'2" tall. However, would-be members of the female honor guard must be 1.73 meters, 5'8", or more in height. Minimum and maximum weight are determined as percentage deviations from a standard weight (in kilograms), which itself is calculated subtracting 110 from the height (in centimeters). For example, for an applicant standing 1.58 meters tall, the standard weight would be 48 kilograms (105.8 pounds). Female applicants must be within 15% above or below the standard weight, which in this example equates to between 40.8 kilograms (89.95 pounds) and 55.2 kilograms (129.7 pounds).

There has been some relaxation of the physical standards over time. For example, as of 2013, females were required to be at least 1.60 meters or 5'3" tall.<sup>44</sup> In 2014, there were changes in the recruitment policy, such that the minimum female height was reduced to 1.58 meters or 5'2." In some provinces, female applicants were allowed to exceed the standard weight by 20%, rather than 15%.<sup>45</sup> These changes were linked to the PLA's intensified focus on recruiting "high-quality troops."<sup>46</sup> Although the rationale for the changes was not explicitly noted, these adjustments would have ensured that a greater number of females would be eligible to apply.

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selection of new soldiers (预定新兵); 6) Post information publicly (张榜公示); and 7) Approve entering the military (批准入伍).

*Limited PLA Recruitment Data (2012-2016)*

Based on the available data, it is possible in some cases to determine the number of females recruited from two municipalities (Beijing and Tianjin), 14 Chinese provinces, and one AR (Tibet) from 2012 to 2016. The available data, which is shown in Table 2 below, is inconsistent, and the information available about the recruitment process is often incomplete from year to year. Nonetheless, the sources available allow for initial assessments about patterns in the PLA's recruitment of females.

Table 2 includes the year, location (province/AR/municipality) in alphabetical order and then by year, the number of females registered, the number of females who made it to the physical evaluation or were eventually selected, the percentage of females who received their physical evaluation or were eventually selected, the total number of males and females selected, and, finally, the percentage of females selected out of the total males and females. Only a few entries clarified which service or branch or specialty, such as the honor guard, they would be assigned to.

**Table 2: Female Enlisted Force Recruits: 2012-2016**

<b>Year</b>	<b>Location</b>	<b>Females Registered</b>	<b>Females Selected</b>	<b>Females Selected (%)</b>	<b>Total Males &amp; Females Selected</b>	<b>Females % of Total</b>
2013	Beijing	2,000 out of 10,000 total				
2013	Guangdong		50			
2015	Guangdong	5,400 out of 140,000 total				
2013	Guizhou		250		11,750	2.1%
2013	Hainan		110		3,100	3.5%
2015	Hainan		80		3,420	2.3%
2016	Hainan		60		2,920	2.0%
2013	Heilongjiang		6 (PLAAF)		130	
2014	Heilongjiang	1,575	8 (honor guard)			
2013	Hubei		70			
2012	Jiangsu		730		32,500	2.2%
2013	Jiangsu	5,682	750	13.2%		
2014	Jiangsu	8,800	690	7.8%	30,000	2.3%
2016	Jiangsu		450		25,400	1.8%
2012	Jiangxi		420			
2013	Jiangxi		440			
2014	Jiangxi	3,000	400	13.3%		
2014	Jilin	3,660	300 (5 honor guard)	8.2%		



2014	Liaoning	6,000	627 (8 honor guard)	10.5%		
2011	Ningxia	875				
2013	Ningxia	1,190	240 (evaluated)	20.2%		
2014	Ningxia	1,020	242 (evaluated)	23.7%		
2012	Shaanxi		25		684	3.7%
2013	Shaanxi		18		980	1.8%
2012	Sichuan	2,561	600 (evaluated)	23.4%		
2012	Tianjin		200		3,300	
2012	Tibet AR	290	70	24.1%		
2013	Tibet AR	400	10 (PLA Navy)	2.5%		
2014	Tibet AR		40		1,200	
2009	Yunnan	5,000	450 (evaluated)	9.0%		
2014	Zhejiang	5,299				

Based on this limited data, four patterns are discernible: 1) Typically, the percentage of females who are finally selected out of the number of those who initially applied ranges from 8% to 20%; 2) As a percentage of the total number of personnel recruited, females typically constitute a proportion from about 2% to approximately 4%; 3) There is at least a slight, though inconsistent, upward trend over time, but the PLA has not yet made substantive efforts to recruit a critical mass of females; and 4) The final selection criteria for female honor guards is stricter than normal selection criteria.

#### *Directly Recruited NCOs*

The PLA is also directly recruiting females as NCOs. For example, in 2014, Jiangxi Province directly recruited 357 personnel as NCOs, including four females (1.1%).<sup>47</sup> In 2013, a total of 18 females (1.8%) and 962 males were directly recruited as NCOs in Shaanxi Province.<sup>48</sup> Although females do not constitute a large portion of the PLA's officers or enlisted personnel, the recruitment is nonetheless a substantive contribution to the PLA's overall effort to achieve a more educated and talented NCO corps.

The directly recruited NCO system has two separate types of programs. The first program, which began in the early 2000s but was very limited until the early 2010s, involves recruiting university-level students who are graduating or have recently graduated with a special technical (associate) degree, vocational specialty certificate, or bachelor's degree and are not older than 23 for females and 24 for males. The second program, which appears to have begun in 2012 and is identified as cultivation for directly recruited NCOs, involves recruiting high school seniors to participate in a three-year program. The program includes 2.5 years at one of at least 25 higher education colleges, universities, or vocational institutions followed by half a year of basic training and practice/observation at the operational or support unit that recruited them. This program is

apparently increasing in size and will most likely continue to grow in the future, so that it becomes a key component of building a qualified specialized NCO corps.

The objective is to recruit males and some females who will soon graduate or have already graduated from civilian colleges and universities (对象为男性普通高校应届, 往届毕业生) with a special technical (associate) degree (大专) or bachelor's degree (本科) and whose specialties meet the requirements of specific units (所学专业符合部队需要).<sup>49</sup> They cannot be married (未婚). While the goal is to recruit them between the age of 18-22 (男女青年征集年龄为年满 18 至 22 周岁), males with bachelor's degrees can extend to age 24 but cannot be older than 24 (普通高等学校毕业男生可以放宽至 24 周岁, 不超过 24 周岁) and females cannot be older than 23 (女青年不超过 23 周岁). Minorities can exceed the age limit by one year (少数民族可放宽 1 岁).<sup>50</sup> All personnel must meet the same political and physical requirements for other recruits/conscripts (政治和体格条件, 按照征集义务兵有关规定执行). Before being accepted, they must already have a State-issued intermediate level or higher vocational qualification certificate (应当取得国家颁发的中级以上职业资格证书).

For example, in 2014, the PLAAF created a New-Soldier Training Brigade (新兵训练旅) that included an all-female New-Soldier Training Company (新兵训练连) that consisted of 28 directly recruited female NCOs (直招女士官).<sup>51</sup> While the brigade had a male commander and political commissar, the company had a female commander and political director. It is not clear exactly where the females were recruited, their age or academic background, or where they were assigned after they completed their training.

## Pilots

This section discusses females in the Aviation Branch/Arm, which is the most visible component for females in the PLAAF. It provides an overview of the 13 groups (批) of females who have been recruited, educated, and trained since 1951, a description of the training pipeline for female transport aircraft pilots, and the “firsts” that the PLAAF has identified.

### *The 13 Female Pilot Groups*

This subsection provides a rough overview of the 13 female pilot groups since 1951, when the PLAAF began recruiting, educating, and training its 1st group (批) of female pilots (女飞行员).<sup>52</sup> Originally, since females only flew transport aircraft, the term *feixingyuan* (飞行员) for females could be translated as aviator, which referred to the pilots, navigators, and communicators. The PLAAF also uses the term *feixing ren yuan* (飞行人员) and translates it as flying personnel.<sup>53</sup> The PLAAF ceased training communicators starting with the 5th group (1981-1984) and navigators starting with the 7th group (1997-2001), leaving only training for pilots. It is not clear where the remaining crew members have received their training since then. For purposes of this report, the term pilot is used.

In March 2012, the PLAAF celebrated the 60th anniversary of the first female pilots joining an operational unit, thus becoming one of 16 countries with female air force pilots at that time.<sup>54</sup> In September 2012, the PLAAF published a detailed book on the history of its female pilots entitled *People's Liberation Army Air Force Female Pilots* (中国人民解放军空军女飞行员).<sup>55</sup> Although their numbers have been small, PLAAF females are playing an increasingly important role as evidenced by the selection of China's first female astronaut for its first (and successful) manned

space docking mission, which is discussed in the “Astronaut” section, and the shift from merely transport aircraft pilots to combat aircraft pilots as well including JH-7s and J-10s.

The PLAAF has had 10 groups of female pilots complete their education and training. As of late 2021, the PLAAF had recruited nearly 700 female pilot candidates, and over 360 had graduated.<sup>56</sup> As such, the washout rate has averaged about 50%, which appears to be similar to or slightly better than male candidate washout rates, which have been reported as 50% and growing in 2010 and over 60% in 2014.<sup>57</sup> Those who do not complete their training are sent to another PLAAF college to receive a degree in a different specialty.<sup>58</sup>

As can be seen below, the first time that the PLAAF had two groups of female cadets at the same time was the 9th group in 2008, but the next overlap did not occur until the 12th group in 2019. Historically, female pilots have been separated from their male counterparts throughout their cadet education and training, as well as at in their operational units. For example, the female cadets from the 1st group (April-November 1951) through the 7th group (1997-2001) were not integrated with male cadets at any time during their education and training. In contrast, the 8th group (2005-2009), which was designated as the first group of fighter pilots, were separated from their male counterparts during their 30 months of basic education at the Air Force Aviation University (AUAF), but were then integrated with male cadets during the 18 months of intermediate and advanced fighter training held in the relevant flight academies. Similarly, the 16 graduating members of the 9th group (2008-2013) were integrated with their male counterparts after they graduated from the AUAF and began their flight training at a flight academy. In July 2015, they completed their two years of transition training at one of the three flight academies and began their transition training in JH-7s, shown at the right,<sup>59</sup> at an operational unit.<sup>60</sup> Like their male counterparts, they were part of the “4+1” program and received two bachelor’s degrees.<sup>61</sup> In addition, like their male counterparts, upon completing their final year at the AUAF, they received the rank of 1st lieutenant (中尉) and the grade of company deputy leader (副连职) before transitioning to one of the three flight academies.<sup>62</sup> Finally, the 40 female cadets in the 10th group (2013-2018) were not only recruited along with their male counterparts, but they became the first group to be fully integrated with them at the AUAF.<sup>63</sup>



The most likely Flight Academies noted below are in Harbin (Heilongjiang Province), Changchun (Jilin Province), Huxian (Shaanxi Province), and Jiayang (Sichuan Province). See *70 Years of the PLA Air Force* and “China’s Air Force Female Pilots: Sixty Years of Excellence (1952-2012)” for greater detail about the history of the flight institutions.

### *1st Group (1951)*

From April to November 1951, a total of 55 pilots were selected and received training at the 7th Aviation School (第七航空学校) in Mudanjiang, Heilongjiang Province.<sup>64</sup> A total of 55 females were involved, including 14 pilots, 6 navigators, 5 communicators, 14 maintenance personnel, and 16 ground crew maintenance personnel. They were selected from five provinces. In March 1952, they flew 6 Li-2s, which was their primary aircraft, over



Tiananmen and received praise from Mao Zedong and Zhou Enlai. After 16 years, one pilot had flown 4,400 hours and another had flown more than 3,000 hours. In 1984, everyone retired (退出) together after having flown for 33 years, at which time they met their mandatory retirement age based on their grade, which is discussed earlier in the “Pilots” section.

#### *2nd Group (1956-1958)*

From July 1956, a total of 44 pilots, including 21 pilots, 17 navigators, and 6 communicators, began their training at a PLAAF Aviation Preparatory School (空军航空预备学校).<sup>65</sup> They were selected from 11 provinces plus the three municipalities of Beijing, Shanghai, and Tianjin. They graduated in December 1958. Some of them served as a navigator for the Tu-2 bombers; however, no information was found about them serving at any time after that as a navigator or a pilot for any other type of bomber. In 1990, the entire group was grounded together after having flown for 32 years. They had averaged from 20 to 30 years of flying by that time. It is not clear what their primary transport airframe was.

#### *3rd Group (1965-1967)*

Due to the Cultural Revolution, there was considerable disruption in the overall PLAAF pilot training system.<sup>66</sup> They were selected from three provinces plus the two municipalities of Beijing and Shanghai. The youngest was 15 and the oldest was 20. The 3rd group began their training in from July to August 1965 at an unidentified Aviation Preparatory School. In September, they were assigned to an operational unit to receive maintenance training. In July 1966, they entered an unidentified Air Force Aviation School for training. In January 1967, a total of 13 navigators and 13 communicators graduated. In August, the 25 pilots graduated. It is not clear what their primary transport airframe was. In 2001, the entire group was grounded together after having flown for 35 years. In July 2003, Yue Xicui (岳喜翠) was promoted as the second PLAAF female to the rank of major general and the first female pilot to receive that rank. See Appendix A for her profile.

#### *4th Group (1970-1974)*

Due to the Cultural Revolution, considerable disruption continued in the overall PLAAF pilot training system.<sup>67</sup> They were selected from six provinces plus the two municipalities of Beijing and Tianjin. They all began their training in September 1970, but this was the first time that the PLAAF split up the location for training pilots in two Aviation Schools, while the navigators and communicators received their training in a different location. From September 1970 to February 1972, the navigators and communicators received their training at an Air Force Aviation School in Xi'an, Shaanxi Province. From February 1972 to November 1973, they were assigned to a flight regiment for training. In November 1973, a total of 26 navigators and 26 communicators graduated. In November 1973 and December 1974, a total of 48 pilots graduated from their two schools. One of the primary aircraft they flew was the Y-5. This was the last group to train communicators. Although one member of the 4th group became the first female civilian airline pilot in 1986, this was rare.<sup>68</sup> In 2010, China's civil airlines created its own aviation school to train female helicopter pilots.<sup>69</sup>

#### *5th Group (1981-1984)*

The 5th group of 50 personnel was not selected for seven years after the 4th group completed its training.<sup>70</sup> They were selected from only two cities and one municipality (Shanghai). From July 1981 to March 1982, the pilot and navigation cadets attended an Air Force Aviation Preparatory

School, at which time the pilot cadets began their training at an unidentified Air Force Flight Academy (空军飞行学院) and the navigation cadets began their training in Xi'an. Both groups (23 pilots and 17 navigators) graduated in May and October 1984, respectively. This was the first group to receive a 3-year post-secondary (大专) (associates) degree. By 2012, the average number of flying hours was 3,300, while one navigator had flown 5,000 hours and one pilot had flown more than 8,500 hours. It is not clear what their primary aircraft was after they graduated.

#### *6th Group (1989-1993)*

The 6th group included 15 pilots and 14 navigators who eventually graduated.<sup>71</sup> In August 1989, all of the cadets, who ranged from age 16 to 19, began their training at an Air Force Flight Basic School (空军飞行基础学校). In April 1991, they transferred to an unidentified Air Force Flight Academy (空军飞行学院), where they received their education and training. In March 1993, a total of 15 pilots and 14 navigators graduated. This was the first group of female pilots to receive a 4-year bachelor's degree, which was a major in Military Studies (军事学). By 2012, one pilot had flown 4,800 hours, and the average number of flying hours was 3,300. It is not clear what their primary aircraft was after they graduated.

#### *7th Group (1997-2001)*

The 7th group ceased training navigators and included 22 pilot graduates, who began their education and training at the Changchun Flight Academy in Jilin Province in August 1997 and graduated in June 2001.<sup>72</sup> They were selected from six provinces and one municipality (Chongqing). They averaged from age 17 to 20. The majority of them were from single-child families. They received their first two years of education and training at the Changchun Flight Academy and then transferred to another flight college in April 1999 for their final two years. While at Changchun, they received parachute training. It is not clear what their primary aircraft was after they graduated.

#### *8th Group (2005-2009)*

Historically, female pilots received their basic education in Changchun (the Air Force Aviation University since 2004) and their basic (CJ-7) and advanced (Y-7) flight training in the 1st Flight Academy (Harbin, Heilongjiang Province) or 2nd Flight Academy (Huxian, Shaanxi Province, and Jiayang, Sichuan Province). The 8th group, however, received its basic (CJ-6)<sup>73</sup> flight training in Harbin, as shown at the right, and advanced (K-8) flight training at the 3rd Flight Academy (Jinzhou).



The Air Force Aviation University (AUAF), which is now the core education and training center for all new PLAAF pilot cadets, was created in June 2004 by merging the Air Force's 2nd Aviation College (空军第二航空学院), which was responsible for educating and training aircraft maintenance personnel, the Air Force Changchun Flight Academy (空军长春飞行学院), and the Air Force 7th Flight Academy (空军第七飞行学院).<sup>74</sup> The 8th group has become the PLAAF's most notable group.<sup>75</sup> Of the 38 cadets selected out of 200,000 applicants from 12 provinces and municipalities, 17 graduated, including one Hui minority from Nanjing, Jiangsu Province. The remaining 21 remained in the Air Force and received degrees at other PLAAF colleges. This group

was the first to be identified as “combat aircraft” and “fighter” pilots, who would fly fighters, tankers, airborne early warning (AEW) aircraft, and reconnaissance aircraft.<sup>76</sup>

Their “2.5+1.5” cadet education and training included 30 months of basic education at the Aviation University, followed by six months of basic trainer flying at the 1st Flight Academy. They then became the first group to receive 12 months of advanced trainer flying in a K-8 “combat aircraft” at the 3rd Flight Academy. Upon graduation, they deployed to Tangshan, where they flew 55 hours in 120 days before flying in three 5-ship formations over Tiananmen to celebrate the PRC’s 60th Anniversary.

After the ceremony, they saw their families for the first time in three years, visited a spa, performed on stage, toured China’s Space City, modeled new flight suits, and had multiple interviews on TV. In March 2011, four were assigned to the 2nd Flight Academy for one year of training in Z-9 helicopters, as shown at the right,<sup>77</sup> where they were scheduled to each fly an average of 100 hours and 581 sorties. According to a CCTV report, six members were assigned to the Beijing MRAF, where they completed their J-7 transition training in late 2011 and are currently transitioning to J-10s. One photo shows a J-11, which implies some may be transitioning to that aircraft as well.<sup>78</sup> A [plaa.net](#) article in March 2011 states that another six members assigned to a Nanjing MRAF unit completed their transition training to a two-seat JH-7 fighter bomber.<sup>79</sup>



#### *9th Group (2008-2012)*

A total of 33 cadets were selected from 16 provinces and municipalities out of 150,000 applicants for the 9th group that began their education and training in August 2008 as part of a new “4+1” program. The “4+1” program refers to increasing the basic education to three and one-half years plus six months of basic trainer (CJ-6) education and training at the AUAF (a total of four years), which is followed by one year of intermediate (K-8) and advanced flight training at one of the PLAAF’s flight academies. They had already completed two years of basic education and one year of aviation theory at the Aviation University. In February 2011, some members of the 9th group were transferred to the 2nd Flight Academy’s 2nd Training Regiment near Xi’an to receive transport aircraft navigation and communications training on simulators.<sup>80</sup> Additionally in February 2012, 22 cadets began receiving their basic trainer flying at the Aviation College’s Flight Training Base.<sup>81</sup> This was followed by one year of advanced trainer training, probably at the 1st Flight Academy in Harbin. Upon graduation, they received a Bachelor’s in Engineering and a Bachelor’s in Military Science and were scheduled to fly transports, tankers, AEW, and reconnaissance aircraft.<sup>82</sup>

#### *10th Group (2013-2017)*

In December 2010, the media reported that the PLAAF was preparing to recruit cadets from 10 provinces for the 10th group to begin in mid-2011<sup>83</sup>; however, the recruiting was stopped and no new group was selected until 2013. It is not clear why. In July 2013, the PLAAF recruited 40 new female pilot cadets from 20 provinces, autonomous regions, and municipalities, which was four more locations than the 9th group.<sup>84</sup> In June 2018, a total of 17 cadets graduated.<sup>85</sup> Throughout their education and training, they were merged with the male cadets.<sup>86</sup> No additional information was found concerning this group.

### *11th Group (2017-2021)*

The 11th group, which consisted of 35 cadets, began their education and training at the AUAF in 2017.<sup>87</sup> They were scheduled to complete their education and training at AUAF in mid-2021 and move on to their flight training at a flight academy.

### *12th Group (2019-2023)*

The 12th group, which consisted of 40 cadets, began their education and training at AUAF in 2019.<sup>88</sup> They are scheduled to complete their education and training at AUAF in mid-2023 and move on to their flight training at a flight academy. The 12th group was also the first to have members participate in the Dual-Enrollment Program (DEP), where cadets specialize in science and engineering subjects (理工科) simultaneously at one of the China's elite universities and AUAF.<sup>89</sup> Seven cadets from the 12th group were selected for the program and attended classes at either Peking University or Tsinghua University.<sup>90</sup>

### *13th Group (2021-2025)*

The 13th Group, which consisted of 23 cadets, began their training in 2021, with 9 selected to attend Peking University or Tsinghua University under the DEP program. This is the third consecutive group to overlap the previous group by two years, establishing a potential new pattern and perhaps indicating the PLAAF's increasing confidence in the program.

## *Female Transport Pilot Training and Assignments*

The following information provides an overview from 2012 concerning female transport aircraft training, including what is now considered the three-phase (三个阶段) process, which takes at least six years, and details on female transport pilot assignments.<sup>91</sup>

### *Phase 1 Training*

Phase 1 has involved basic training at an academic institution (院校基础训练), which primarily consists of new cadet education (入伍教育), drill training (队列训练), physical training (体能训练), parachuting (跳伞), and wilderness survival (野外生存训练), as well as university cultural knowledge (大学文化知识) and aviation basic theory (航空基础理论). The training time and content for each component is different and requires a total of two to three years.

The goal is to have high school graduates transition to military cadets and to have regular cadets transition to pilot cadets. Their primary training includes: political education (政治教育), cultural education (文化教育), aviation theory (航空理论), military theory education (军事理论教育), military training (军事训练), and physical training (体能训练).

Cultural education includes university cultural courses (大学文化课程), university physics (大学物理), university English (大学英语), computer programming (计算机程序设计), and cultural knowledge (文化知识).

Aviation theory and military theory education includes aerodynamics (空气动力学), aircraft flight mechanics (飞机飞行力学), airborne navigation (航空领航学), air force weather (空军气象), aircraft structure and systems (飞机结构与系统), aircraft power plants (飞机动力装置), aircraft instruments, electronics, communications, and navigation instruments (飞机仪表电气通信导航设备), flight rules (飞行法规), flight training psychology and flight safety (飞行训练心

理与飞行安全), and aviation electronic countermeasures (航空电子对抗). While the content for the 1st to 5th groups was fairly simple, the content for the 6th and later groups has increased and more complete.

### *Phase 2 Training*

Phase 2 has involved academic institution flight training (院校飞行训练). After flight cadets complete their basic training (基础训练), they transition to a flight college where they receive flight training in a basic trainer (初级教练机) and an advanced trainer (高级教练机). They receive two to three months of aviation theory (航空理论学习). Each cadet also averages 150 to 200 flight hours (飞行小时). Overall, this phase takes 12 to 18 months.

Military training is based on studying and employing the necessary military laws and regulations, as well as military drill training (e.g., marching, saluting, formations, etc.), parachuting, and basic military capabilities training, including wilderness survival, conduct/behavior (行事), weapons firing (射击), and chemical defense (防化).

This phase consists of transition aviation theory (改装航空理论) and flight techniques training (飞行技术训练) in basic and advanced trainers, most of which occurs within a flight college. Flight techniques training is normally the last and most important step. The techniques component is divided into the following three phases: 1) ground-based training, including sitting in a cockpit (座舱实习) and simulator training (模拟机训练); 2) flying with a flight instructor (教员带飞), and 3) cadet solo flight (学员单飞). Each phase is implemented according to the training subjects (课目) and quality requirements within the necessary Outline of Military Training and Evaluation (OMTE/大纲). In order to move to the next phase, the cadets must pass the necessary examination(s) (考核). Flight training subjects (飞行课目) normally consist of the following components: takeoff and landing routes, (起落航线), airspace (空域), instruments (仪表), formation flying (编队), simple aerobatics (简单特技), and navigation (航行).

Today, the PLAAF has four academic institutions that are responsible for female pilot cadet education and training. Although the text does not identify them, the article is accompanied by ten photos of various buildings, including 1) the Air Force Aviation University and its flight basic training base (飞行基础训练基地); 2) Air Force Harbin Flight Academy; 3) Air Force Shijiazhuang Flight Academy; and 4) Air Force Xi'an Flight Academy.

### *Phase 3 Training*

Phase 3 has involved unit flight training (部队飞行训练). After graduating from a flight college (飞行学院), their first step is to receive transition training (该转训练) into their operational unit's aircraft. The next step is to receive four-weather conditions training (e.g., flying during night and day under instrument flight rules and visual flight rules) (四种气象训练) and combat basic training subject training (战斗基础课目的训练). During this phase, transport aviation units normally begin by conducting consolidated training (集中训练) for all personnel followed by combined mission training (结合任务训练). The normal time for transport unit training is one to two years.

Although the transition period is based on the unit's aircraft, the normal period is about two years. The following bullets show the types of aircraft the various groups used as transition aircraft:

- 1st and 2nd groups: Li-2



- 3rd to 5th groups: Il-12 and Il-14
- 6th and 7th groups: An-24, An-26, and Y-7

Besides transitioning through the aircraft above, each new pilot must also receive four-weather conditions training, special situation training (特殊情况处置训练), and campaign and tactics flight training (战役战术飞行训练). Once they complete this training, they are then allowed to become part of the unit's combat table of organization (战斗序列) and begin to train for the unit's missions. Once the new pilots arrive at their unit, it normally takes about six years to become an experienced pilot with the ability to independently carry out every type of combat mission (单独执行各种作战任务).

### *Assignments*

The majority of female pilots overall have been assigned to all-female crews in a single flight group subordinate to the former Guangzhou Military Region Air Force's (MRAF) and now Southern Theater Command Air Force's (TCAF) 13th Transport Air Division's 38th Regiment, where they conduct charter flights, disaster relief, and research-oriented trial flights, as well as reforestation and cloud seeding. They have also historically been assigned to the 34th Transport Air Division in Beijing, which is directly subordinate to the PLAAF HQ.<sup>92</sup> For example, through 2012, about 200 female graduates had been assigned to the 13th Transport Air Division and 100 to the 34th Transport Air Division. Cheng Xiaojian (程晓健) served as the commander of the 4th Transport Air Division from 2009-2015, but it is not clear if any other females have served in this division. Of note, in September 2021, the PLAAF announced during the Zhuhai Airshow that the first female pilots had been assigned to fly the Y-20 transport aircraft and participated in the airshow.<sup>i,93</sup>

### *Aviation Female "Firsts"*

The following bullets provide information from various sources about the identified "firsts" (首次) for female pilots:<sup>94</sup>

- As of 2016, a total of 16 countries have female pilots, including China, the United States, the United Kingdom, Germany, Spain, Israel, and Pakistan.
- In November 1951, the first group of female pilots.
- On March 8, 1952, the first group of female pilots flew a plane over Tiananmen Square for the first time.
- In March 1956, the first female pilot passed the examination and officially took on the flight command task (担负飞行指挥任务), becoming the first female flight commander (飞行指挥员) of an aviation unit.
- In 1959, four females became the first female bomber navigators. [Note: No information was found about females ever serving as pilots in bombers or about them serving as navigators after the initial group.]
- In August 1963, three females became the first PLAAF female helicopter pilots.
- In 1964, China conducted its first successful atomic bomb explosion. Three female pilots participated in flight support missions and became the first female pilots in the world to participate in a nuclear test.

<sup>i</sup> The aircraft tail number 20047 indicates it belongs to the 13th Transport Air Division.

- In 1982, Liu Xiaolian (刘晓连) was the first female to fly a Y-8.
- In 1984, one female pilot from the 3rd group became the first female test pilot.
- In 1998, Liu Miquan was the first female to become a PLAAF Command College deputy commandant.
- In 2000, Jin Wenya (靳文雅) became the first PLAAF female pilot to receive a master's degree, which she received at the Command College.<sup>1</sup> The degree was in Combat Command.
- On 28 July 2003, Yue Xicui (岳喜翠), who had served in the 13th Transport Air Division's 38th Air Regiment's 3rd Flight Group and was at that time the first female to serve as a deputy chief of staff in the Guangzhou MRAF HQ, was awarded the rank of major general and became the first female pilot general in the PRC's history. See Appendix A for her profile.
- In 2005, four female crews conducted their first drop of several hundred Airborne troops.<sup>95</sup>
- In 2005, a few female pilots were assigned to mixed IL-76 crews for the first time.<sup>96</sup>
- In April 2009, the 8th group of 16 female pilots graduated and became the first female fighter (歼击机) pilots in the PRC's history.
- In April 2009, Cheng Xiaojian (程晓健) was appointed as the commander of the 4th Transport Air Division in Chengdu, Sichuan Province, as the PRC's first female Air Division commander. See Appendix A for her profile.
- On 1 October 2009, the first group of female fighter pilots flew in K-8 aircraft over Tiananmen in the National Day military parade.
- In 2010, Liu Yang (刘洋), who was part of the 7th group and had 1,680 hours of transport aircraft flying hours, was selected as China's first female astronaut.<sup>97</sup> She successfully flew on the Shenzhou 9 in 2012.<sup>98</sup>
- On 29 July 2012, Yu Xu (余旭) was the first female pilot to fly a J-10.
- On 11 November 2014, four female pilots, including Yu Xu, flew the J-10 for the first time as part of the PLAAF's Bayi Flight Demonstration Team at the 10th China Air Show in Zhuhai, Guangdong Province.
- On 11 March 2015, Yu Xu and three other female J-10 pilots departed for Malaysia to participate in the Langkawi International Air and Sea Show, which was the first overseas flight demonstration. Yu died from a failed parachute jump out of her J-10 during a training mission in November 2016.<sup>99</sup>

There appears to be a glass ceiling for female pilots. As noted in Appendix A, only five females have received a promotion to major general and no one has received a promotion to lieutenant general or general. In 1986, the PLAAF also established age limits for its pilots.<sup>100</sup> When a pilot is no longer allowed to fly, due to age, incompetency, or ill health, he or she is grounded (停飞). Although the age limit for male transport pilots is 55, it is only 48 for female pilots. While male pilots can continue to move up their career ladder as a commanding officer or staff officer in various headquarters until they meet their mandatory retirement age based on their grade, almost no information was found concerning any females moving into these types of billets.

## Astronauts

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<sup>1</sup> Information accessed at <http://www.fubusi.com/2006/3-10/142936497.html> on 26 January 2012.

This section briefly discusses China's three female astronauts (航天员), who are sometimes identified as "taikonauts." To date, China has selected three groups of astronauts, of which the second and third groups have included females. Following the successful crewed flight of *Shenzhou-5* in October 2003, China announced plans to send a female into space as well.<sup>101</sup> Initially, the criteria for females to be selected included having been married, having had a child, and having no serious health problems. The marriage and having had children criteria were later dropped. The physical size requirements have not changed for all three groups of astronauts. Specifically, an astronaut must have a height between 1.6 meters and 1.72 meters (5.2 feet and 5.64 feet) and weigh between 55 kilograms and 70 kilograms (121 pounds and 154 pounds) in order to fit in the cabin of spacecraft and consume less fuel.<sup>102</sup>

According to various reports, in 2010, five out of 30 males and two out of 15 female candidates were chosen for the second group of astronauts. This was the first time China recruited females to its space program. One of the selection criteria was that the females must be married and have borne children. Females had to reach the same standards as males but were said to possess several valuable qualities, such as being more patient, sensitive, and considerate than men. They were also said to have better psychological and communication skills and be better able to handle loneliness than males. Other standards for all astronauts included that they must be clearly spoken, have no strong accent, no drug, smoking or alcohol addictions, and no dietary restrictions, and that they can fall asleep easily and do not snore.<sup>103</sup>

In June 2012, China became the third nation after the Soviet Union/Russia and the United States to independently send females into space. As such, PLAAF Major Liu Yang (刘洋) became the first Chinese female launched into space. This mission involved the 13-day *Shenzhou-9* mission with two male counterparts, all of whom boarded the Chinese *Tiangong-1* space station.<sup>104</sup> Liu, who was born in



1978 in Zhengzhou, Henan Province, was part of the 7th group (1997-2001) of female pilot cadets at the Changchun Flight Academy discussed in the "Pilot" section. When she was selected as an astronaut in 2010, she had already flown 1,680 hours of transport aircraft flying hours with the 13th Transport Air Division.<sup>105</sup>

Another female PLAAF transport pilot, Colonel Wang Yaping (王亚平), who was born in 1978 or 1980 in Yantai, Shandong Province, was selected as a member of the backup crew for *Shenzhou-9*.<sup>106</sup> Wang was also part of the 9th group of female pilot cadets and had already flown 1,600 hours in transport aircraft with the 13th Transport Air Division when she was selected. In June 2013, Wang became the second Chinese female astronaut when she flew aboard the 15-day three-man *Shenzhou-10* mission



that orbited the earth and docked with the *Tiangong-1* space station. In October 2021, Wang was one of three crewmembers on the *Shenzhou-13* mission, becoming the first female taikonaut to stay on China's space station and expected to be the first to participate in a spacewalk.<sup>107</sup> As of 2021, she is a Colonel in the newly-created PLA Strategic Support Force, which manages the space program.

In March 2021, a total of 18 personnel had been selected as members of the third group of astronauts for China's manned space program and were beginning their training for three to four years before they are launched into space to visit a space station.<sup>108</sup> The selection of the third-group of astronauts began in May 2018, and, out of about 2,500 candidates, 18 qualified astronauts were chosen, among whom seven will work as spacecraft pilots, another seven as flight engineers, and the last four as payload experts. Although no names or background were provided for any members, one was reported to be female. According to a report in 2017, “The first group of astronauts consisted of 14 male military personnel with the oldest age of 42. The age range dropped to 25-35 in the second group of seven astronauts, including two females, who were all pilots from the Air Force. The standard for being an astronaut for the third group is much lower than before in terms of both identity and physical condition, indicating that more ordinary people could have the opportunity to explore the universe in the future.” Although previous astronauts were all selected from the PLAAF, the new selection process gave a priority to engineering, with preferences given to flight engineers and load experts with master’s degrees or above. This means that people without a military background or flight experience could also get a chance to go to space. To cope with various unpredictable situations in space, an astronaut should have a perfect physical condition. A series of tests on cardiac function, central nervous system function and visual performances are required. In addition, candidates also need to go through exams in balancing and bearing capacities in low pressure and gravity, according to the Ministry of National Defense of China.<sup>109</sup>

As of December 2019, of the 565 total space travelers, 65 have been females, including: one each from France, Italy, South Korea, and the United Kingdom; two each from Canada, China, and Japan; four from the Soviet Union/Russia; and 50 from the United States.<sup>110</sup> The first American was Sally Ride in 1983.<sup>111</sup>

### **Aircraft Maintainers**

Of note, almost no information was found about any female officers or enlisted personnel having ever served as aircraft maintenance-related personnel. The only information found was about Xu Hua (许华) and Qin Hui (覃慧).

Xu Hua graduated from an unidentified academic institution’s graduate school in 2001 with a major in mechanical electronic engineering (机械电子工程专业).<sup>112</sup> She worked in the field of development and the safeguarding of military equipment (保障装备研发工作). In 2002, she was able to make improvements to an unidentified aircraft’s air conditioning charging equipment (电源设备) unit by making it more reliable, portable, efficient, and precise. She and her team of male technicians also solved some major issues concerning aircraft lighting systems.

In 2013, Xu accompanied the PLAAF’s Bayi Flight Demonstration Team to participate in the Moscow Air Show (MAKS), which included seven J-10s and two IL-76 support aircraft. This was the team’s first overseas airshow. As shown in the photo at the right, she was a special technical Lieutenant Colonel assigned as the director of the Technology Center in a Jinan MRAF Four-stations’ Equipment Repair



Shop (济南空军某四站装备修理厂技术中心主任).<sup>i</sup> No information was found concerning her current position.<sup>ii,113</sup>

In March 2017, Major Qin Hui, who was an equipment technician (设备师) from a Southern TCAF Airfield Station's (场站) Airborne munitions group (机载弹药大队), was a PLAAF Representative at the International Working Women's Day (三八妇女节).<sup>114</sup> She has a bachelor's degree from Shanghai Jiao Tong University (上海交通大学) and received her master's and doctoral degrees from the National University of Defense Technology (NUDT / 国防科技大学). She also studied in Canada for four years as a PhD student. Her first billet was in the Airfield Stations' Headquarters, but she chose to work at the grassroots level.



### Communications Personnel

This section provides an overview of the communications structure and how females have fit into it.<sup>115</sup> One of the most important points is that females have always served as the core of the communications structure. Although some enlisted force males have served in communications organizations, the majority of the organizations discussed below are all-female organizations. Only a few mixed male and female organizations have been noted.<sup>116</sup> Although female officer and enlisted personnel form the core of the communications structure at the bottom, it appears that males dominate the command structure at the top. For example, no information was found concerning a female commander or deputy commander at the regiment or brigade level or any director, deputy director, or staff officer in any of the PLAAF or TCAF communications-related organizations; however, that does not mean they do not exist.



"Red No.1 Desk " of the PLAAF General Communication Station in 1960s

Although females have dominated the billets in communications organizations below the regiment level, it appears that the first female telephone operators (话务员)<sup>117</sup> to serve in the Taklamakan Desert (大漠 / 塔克拉玛干风沙)<sup>iii</sup> was in 2014 and at a PLAAF Base in Tibet was in 2017 (第一批驻藏空军话务女兵; 驻藏空军某基地通信站二连).<sup>118</sup> While the majority of these female operators are Han Chinese, the PLAAF has also recruited non-Han



<sup>i</sup> The four stations company consists of an oxygen generation station (制氧站), compressed air (冷氧站), battery charging (充电站), and power supply equipment (电源站), each of which considered a station (站). Each station is probably a platoon-level organization.

<sup>ii</sup> Ironically, there is a male with the same name who is currently a professor in the Air Force Engineering University's Information and Navigation Academy (空军工程大学信息与导航学院) and has written multiple articles about digital communications.

<sup>iii</sup> The Taklamakan Desert is a desert in Southwest Xinjiang in Northwest China. It is bounded by the Kunlun Mountains to the south, the Pamir Mountains to the west, the Tian Shan range to the north, and the Gobi Desert to the east.

Chinese communications personnel. For example, the commander of a company in a Western TCAF Base’s communications station is an ethnic Uighur.<sup>119</sup>

### *Responsibilities*

Communications troops are assigned to communications organizations at the brigade and regiment levels down to squads.<sup>i</sup> A high percentage of communications personnel are females. The PLAAF appears to have only a few mixed-gender communications companies, platoons, or squads as shown in the photo at the top right for a Western TCAF Air Force Command Post’s Communications Company (西部战区空军某指挥所通信连) and at the bottom for a Communications Company in a Western TCAF Air Force Base’s Communications Station in Xinjiang (藏空军某基地通信站二连).<sup>120</sup>



Some females are also assigned to an all-female communications element at a PLAAF radar brigade in the Northern TCAF (北部战区空军雷达某旅通信女兵分队).<sup>121</sup>

Although no brigades were identified as “female brigades” (女兵旅), they were identified as brigades with females (旅的女兵们), including staff officers (参谋).<sup>122</sup> In addition, no information was found identifying a regiment as a female regiment, but they were identified as having females. However, specific examples were found for all-female elements (通信女兵分队), battalions (通信女兵营), companies (通信女兵连), and platoons (通信女兵排).<sup>123</sup>

Each all-female communications element, battalion, company, and platoon has a female commander (长) and each squad has a female leader (班长), while each company has a female political director (指导员) and each battalion and element has a political instructor (教导员). No information was found for any female commanders or political officers above the battalion level in communications units. In addition, information was found for corporal (下士) Wu Yingjiao (吴英娇), who was serving as an “acting” platoon commander (代理排长), and as another sergeant (中士),



Zhong Jin (钟瑾), shown at the right, and Zhang Yalei (张娅磊), who were serving as an “acting” company commanders (代理连长). In addition, one enlisted member, Lu Xin (卢欣), was identified as serving as an “acting” political instructor in a Telephone Operators Company.<sup>ii,124</sup> Besides serving as a telephone operator, at least one female, Sergeant Shi Yaping (石亚萍), served as manual switchboard chief operator (人工总机领班员) in a Northern TCAF Communications regiment, 1st Battalion, 3rd Company (通信团一营三连).<sup>125</sup>

<sup>i</sup> Squads are composed of enlisted personnel only.

<sup>ii</sup> As a result of the 10th force reduction in 2004 when the PLA began turning over a lot of junior officer billets to NCOs, the PLAAF began to allow some enlisted personnel to become “acting” commanders/Directors at the platoon, company, and battalion levels. However, although officers could continue to move up their grade ladder, there was a glass ceiling for enlisted personnel at those levels. The reason they are called “acting” is because each billet is assigned an officer’s grade, and enlisted personnel cannot be assigned an officer’s grade.

### *Officer Education and Training*

As noted earlier, it appears that female communications officers receive their undergraduate education and training at the Air Force Engineering University (AFEU / 空军工程大学) in Xi'an, Shaanxi Province. Of the 21 undergraduate specialties offered, males can take all 21, but females can only take two – Communications and Engineering and Command Information System Engineering.

Some officers began as outstanding enlisted personnel. For example, Tao Sirui (陶思睿) graduated from Zhongshan University (中山大学) in Guangzhou, Guangdong Province, and gave up the opportunity to pursue a master's degree and to study overseas in order to join the PLAAF to follow the footsteps of her grandparents.<sup>126</sup> She was trained to become an enlisted telephone operator and excelled at her billet. In 2012, she was selected to become an officer (提干) and received further education at AFEU for eight months, where she was the only female out of a total of 26 new cadets, and was then assigned to a billet at a radar brigade. She then became a political staff officer and, over four years, she published hundreds of articles and reports. In November 2017, as a captain, she was serving as a political instructor in a Communications Company.

### *Enlisted Force Training and Education*

As noted earlier, although the Service Law states that females can be conscripted, no females have ever been conscripted as enlisted personnel. They have always joined voluntarily. Until 2021, when the PLA began a two-cycle conscription process for enlisted personnel, all new enlisted force received their two months of basic training in early December to late January in a New-Soldier Company at their operational unit. They were then assigned to their operational billet, where they received their skills training. In 2013, the PLA moved the entire cycle forward by three months, began consolidating new-soldier training into brigades in 2014, and extended the basic training to about five months. Some new personnel also attended specialty training at a different location, but it is not clear what the actual training has been for communications personnel. After completing their two-year initial enlisted force requirement, they can either leave the military or, if selected, can become a noncommissioned officer (NCO) or more rarely, an officer.

One of the PLAAF's most important NCO training institutions is the Air Force Communication NCO Academy (空军通信士官学校). It is not clear how many females have attended the academy; however, in 2017 the PLAAF selected its first four female Master Chiefs, who were assigned to front-line communications elements and were receiving their NCO-level training and education there.<sup>127</sup>

### *Ethnicity Issues*

Concerning the enlisted force, the PLAAF has recruited multiple ethnic minority females to serve in their home province or autonomous region so that they can communicate with people in their native tongue. This is unique because, as a general rule, the PLA as a whole ceased allowing personnel to serve in their home province, autonomous region, or municipality after the June 1989 Tiananmen crisis. However, the PLAAF clearly needs native speakers in certain areas in order to enhance communications.

For example, one female telephone operator of Uyghur ethnicity (维吾尔族) grew up in Xinjiang.<sup>128</sup> When she joined the PLAAF after two years of college in Xinjiang, she did not speak any Mandarin and spent time learning the language. As such, she was invaluable in being able to

communicate with Uyghurs and provide the information in Mandarin as needed. She was one of several people in her unit who were Uyghurs.<sup>i</sup>

### **Electronic Countermeasures Personnel<sup>129</sup>**

The PLAAF provides little public information about its electronic countermeasures specialty troops (电子对抗专业兵). According to the 2008 *Defense White Paper*, it is organized into brigades or regiments, each of which has subordinate battalions.<sup>130</sup>

Only two articles were found concerning females in electronic countermeasures units. The first was 1st Lieutenant Xun Yuting (孙渝婷), an electronic countermeasures brigade platoon commander (电子对抗旅排长).<sup>131</sup> This implies that the entire platoon consists of females, since female commanders have traditionally only led all-female communications platoons. The second was 1st Lieutenant Gao Lingyun (高凌云), a Cultural Staff Officer (文化干事) in a Northern TCAF electronic countermeasures brigade (北部战区空军电抗某旅).<sup>132</sup> Together, this implies that there are likely several female officers and enlisted personnel assigned to electronic countermeasures brigades. The officers most likely receive their education and training at the Air Force Engineering University, which has an Electronic Countermeasures Academic Department (电子对抗系). Enlisted personnel most likely received their training once they complete basic training and are assigned to their operational billet.

### **Medical Personnel**

This section discusses the various roles of females in the PLAAF's medical field, including doctors, nurses, and researchers. It also provides a brief overview of the Air Force Medical University (空军军医大学), PLAAF hospitals, and involvement in United Nations Peacekeeping. Female medical personnel include officers, enlisted personnel, and civilian cadre. All medical issues come under the PLAAF HQ's Logistics Department and the Support Department at the TCAF and below levels.

#### *Air Force Medical University<sup>133</sup>*

The university presently has three education levels— bachelor's degrees, master's degrees, and professional education. It also has 10 postdoctoral stations (博士后流动站). It has five specialties and recruits both male and female cadets for all five specialties. No information was found concerning any training or education for NCOs. It has the following subordinate academic institutions/departments:<sup>ii</sup>

- The School of Basic Medicine or Basic Medical School (基础医学院)
- The Department of Aerospace Medicine (航空航天医学系)<sup>134</sup>
- The Department of Military Medical Psychology (军事医学心理学系)<sup>135</sup>
- The School of Military Preventive Medicine (军事预防医学系)<sup>136</sup>
- The School of Biomedical Engineering (军事生物医学工程学系)<sup>137</sup>
- The School of Pharmacy (药学系)<sup>138</sup>

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<sup>i</sup> The Uyghurs, alternatively spelled Uighurs, Uygurs or Uigurs, are a Turkic ethnic group originating from and culturally affiliated with the general region of Central and East Asia. The Uyghurs are recognized as native to the Xinjiang Uyghur Autonomous Region in Northwest China.

<sup>ii</sup> Of note, this is sometimes confusing because the Chinese term *xi* (系) normally refers to an academic department not as school; however, as can be seen in the list, the PLAAF translates it both ways.



- The School of Nursing (护理系).<sup>139</sup>

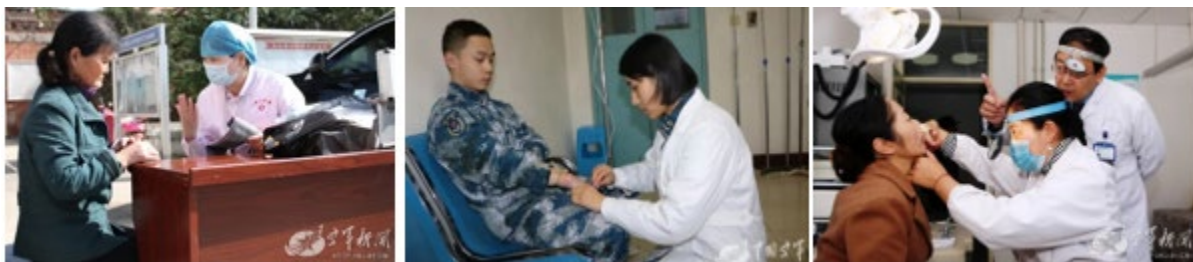
It is important to note that not every PLAAF female doctor and nurse receive their education at this institution. They sometimes receive their education in a civilian academic institution and are then directly recruited into the PLAAF. For example, one enlisted force nurse received two years of education at the Norman Bethune Health Science Center at Jilin University (吉林大学白求恩医学).<sup>140</sup> In addition, a Chief Medical Officer (主治医师) in a Western TCAF Airfield Station graduated from Tongji University Medical School (同济大学医学院) in Shanghai and then joined the PLAAF.<sup>141</sup>

### *PLAAF Hospitals*

The PLAAF has multiple hospitals. The PLAAF's General Hospital (空军总医院) is located in Beijing's Haidian District.<sup>142</sup> Unlike the PLA General Hospital, which is known as the 301st Hospital, the PLAAF General Hospital does not have a number; however, the PLAAF has had multiple lower-level hospitals that have changed their names several times. For example, at one point, there were at least 20 hospitals with the 3-digit number of 451 to 478. Based on the PLA's reorganization that began in 2016, at least some of them have changed their 4xx number to 9xx, such as the former 451st Hospital, which is now the 986th Hospital.<sup>143</sup> In addition, some of the hospitals have merely taken the name of their respective Theater Command Air Force, such as the Eastern Theater Command Air Force Hospital (东部战区空军医院), which was previously the 454th Hospital.<sup>144</sup> The 463rd Hospital in Shenyang, Liaoning, still existed with the original number in late 2018.<sup>145</sup> All hospitals apparently have a mix of male and female personnel as shown in the photo at the right at a Northern TCAF hospital.<sup>146</sup>



Every PLAAF Headquarters and unit, including every Airfield Station, has some level of medical clinics (门诊部 / 门诊所). Each clinic has female doctors and/or nurses as shown in the photos below.<sup>147</sup>



### *Female Doctors*

The PLAAF has a range of female doctors. For example, one female Lieutenant Colonel, Fan Xinna (范新娜), is a doctor of both pharmacy and psychology (药师兼心理医生) at the PLAAF's 93246 Unit in Changchun, Jilin Province.<sup>148</sup> As of 2019, she had been involved in psychological services for 11 years. She had also taught more than 300 key grass-roots psychological personnel (基层心理骨干), had more than 5,000 hours of consultations, and had been awarded as an All-Army Excellent Psychological Counselor 10 times. She has published more than 30 articles and participated in the compilation of three books.



### *Female Nurses*

It appears that female nurses include officers, enlisted personnel, and civilian cadre. For example, one nurse in an operational unit was an enlisted squad leader.<sup>149</sup> The photo on the left below shows both officer and enlisted force nurses.<sup>150</sup> The photo on the right shows a civilian cadre nurse assigned to an Airfield Station at the Air Force Shijiazhuang Fight Academy.<sup>151</sup>



### *Support to the Airborne Force*

It appears that each airborne brigade most likely has its own airborne medical support team (空降医疗救援队), which is involved in routine training events. The team is also included in the National Emergency Medical Support Force System (国家应急医学救援力量体系).<sup>152</sup>

### *United Nations Peacekeeping Operations*

According to the 2012 *Defense White Paper*, the PLA first became involved in United Nations Peacekeeping Operations (UNPKO) in 1990, when it sent five military observers to the UN Truce Supervision Organization (UNTSO).<sup>153</sup> By the end of September 2014, China was the largest contributor of peacekeepers among the five permanent members of the UN Security Council (UNSC) and had deployed more than 27,000 military personnel around the globe to 23 UN peacekeeping missions (联合国维和行动).<sup>154</sup> For example, in May 2016, five key medical personnel from the PLAAF 463rd Hospital in Shenyang went to Mali (马里) for a peacekeeping mission (维和任务) as part of the PLA's fourth group of Mali peacekeeping medical team members (医疗队员).<sup>155</sup> One female was an ear, nose, and throat (ENT) specialist with a PhD in

otorhinolaryngology (耳鼻喉科女博士), while another female was an oral medicine doctor (口腔科医生).

### *Retirement Homes*

Historically, PLAAF female medical personnel have worked in veterans retirement homes (干休所), which were located in just about every city near a military facility; however, as the older veterans age, the cost of maintaining the homes has risen dramatically. The PLA has continued to have force reductions, and the PRC created the State Council's Ministry of Veterans Affairs in March 2018, which has taken over most of the responsibility for veterans, meaning those home are disappearing from under the PLAAF's management.<sup>156</sup> The PLAAF's newspaper previously had one page per month dedicated to articles about the homes and their veterans, but those articles have now all but disappeared.

## **Airborne Corps Personnel**

### *Airborne Force Branch/Arm aka the Airborne Corps*<sup>157</sup>

The Airborne Force has been a branch/arm since the first units were created under the PLAAF in 1950.<sup>158</sup> This section discusses females involved in Airborne Force academics and training and examples of females serving in the Airborne Force, including as part of the *Leishen* Commando Unit.

### *Airborne Force Academics and Training*

Females appear to have been involved in several aspects of Airborne Force academics and training. At least one female, Jian Jie (简洁), served as an instructor (教员) and professor (教授) for over 30 years in the PLAAF Airborne Troop College's Foundations Department's (基础系) Military Ideology Teaching and Research Office (军事死刑教研室).<sup>159</sup>

Every October, more than 1,000 new two-year enlisted personnel are sent to an Airborne unit for parachute training (伞降训练) that lasts three to four months.<sup>160</sup> During new-soldier parachute training in 2017, there was at least one female guidance team (女子引导队, whose leader (队长) had already completed 337 jumps.

### *Female Airborne Troops*

It is not clear when the first females became part of the Airborne Force; however, there is some information from various PLAAF sources about their current status. It does appear that, like communications personnel, there are few mixed male-female organizations. Females were found in the following Airborne components:

In 2011, the PLAAF created its first female reconnaissance and guidance team, which is composed of squads (女子侦察引导队班) and is considered a combat team (战斗队).<sup>i,161</sup> Its predecessor was a female parachute performance team (女子跳伞表演队). Their current airdrop guidance missions (空降引导任务) include being responsible for dropping cargo from aircraft via parachutes (投放). In recent years, this team had taken part in more than 20 major military exercises and military operations other than war (MOOTW). It has supported tens of thousands of sorties (数万架次) and guidance and command of hundreds of thousands of air drops (对空引导指挥), as well as trial missions using new types of parachutes (新型伞具的研制试跳).

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<sup>i</sup> A team (队) is most likely a platoon-level element.

New enlisted female personnel apparently receive their basic training and initial skills training in one or more airborne brigades.<sup>162</sup> According to one article, female enlisted recruits tend to have high education levels, but they have a weak understanding of Party history, military history, and unit traditions. Many have been influenced by what they see in movies and TV, and have problems when the reality does not meet what they imagined. Efforts are thus made to emphasize ideological education and heroic stories. In October 2019, at least one all-female company of new Airborne Force enlisted members receiving initial training.<sup>163</sup>

The Airborne Corps HQ also has its own communications regiment (空降兵某通信团), which is also responsible for training females assigned to the regiment.<sup>164</sup> On 1 December 2016, new female soldier trainees (新训女兵) from the regiment participated in a 30-kilometer field mobilization (野营拉练), which included randomly launched anti-air raids, passing through open areas, rapidly traversing poisonous areas, marching, and other training-subject training.<sup>165</sup>

In 2016 before the Airborne Force shifted to a brigade structure in 2017, four female medical service specialists (卫勤专业) were identified as belonging to a support element (保障分队) of an airborne division's hospital.<sup>166</sup> Also in 2016, a female political instructor (教导员) for a 3rd Battalion (三营) subordinate to an Airborne mechanized regiment (空降兵某机械化团) was identified.<sup>167</sup> This indicates that the battalion was an all-female battalion.

The Airborne Corps also has some female civilian personnel (文职人员). For example, in 2019, the Airborne Training Base had at least three non-active duty (非现役) civilian personnel.<sup>168</sup> One of them was a parachute folder (叠伞员). She was recruited in 2008 and moved three times, and each time had to relearn a specialty from scratch. She began as a communications specialist, then became a welding instructor, then was transferred to another location, and became a parachute material repair specialist. At her third location, she was responsible for cultivation and training (培训) of new aviation rescue supplier specialists (航空救生装具员专业的新兵). She became an expert in over ten types of parachutes within four major categories.

### *The “Leishen” Commando Unit*

In September 2011, the Airborne Force created what it calls the “Leishen” or “Thor”<sup>169</sup> Commando Unit (“雷神”突击队).<sup>170</sup> It carries out training with four types of aircraft, eight types of parachutes and 15 parachuting methods to prepare soldiers for a wide range of battle and reconnaissance scenarios.<sup>171</sup> At some point, it included an all-female component of 22 females, which is most likely a squad.<sup>172</sup> In the fall of 2011, 21 “Leishen” paratroopers traveled to Venezuela for the first joint counter-terrorism exercise between the two countries.<sup>173</sup> In July 2011 and November 2012, the Airborne troops participated in “Divine Eagle” (神鹰), which has also been identified as “Condor” and “Swift Eagle” with Belarussian Airborne forces in Belarus and China, respectively.<sup>174</sup> The Airborne forces visited Indonesia for the “Sharp Knife” (利刃) drills in November 2013,<sup>175</sup> and hosted Indonesia's Airborne forces for the “Sharp Knife Airborne-2014” anti-terrorism drill in October 2014.<sup>176</sup> In May 2014, Russian Airborne troops visited the PLAAF's Airborne Troop



<sup>i</sup> Although most official PLA articles have translated “leishen” as “Thor,” it has also been translated as “Thunderers”.

College to exchange views and become familiar with the college's training and facilities.<sup>177</sup> Although these exercises are often billed as “anti-terrorism” drills, the content of the exercises often suggests that the units involved are practicing skills closer to combat activities, and this is how they are coded in the data presented in this study. It is not clear if any females participated in any of the overseas exercises, but they most likely participated in the events held in China.

**Figure 3: Leishen Commando Unit Female Team<sup>178</sup>**



## **Radar Personnel**

### *Females in Radar Units*

Only a few articles were found concerning females assigned to radar units. It appears, however, that most of them are communications personnel assigned to a radar unit. For example, a Central TCAF radar brigade has an all-female platoon, where at least some females are identified as order dispatchers (指令员).<sup>179</sup> Possibly the same brigade has a female communications staff officer (通信参谋) assigned to one of its radar stations.<sup>180</sup>

The PLAAF has had a well-known radar station located in Ganbala, Tibet, for decades, which is five hours from Lhasa.<sup>181</sup> The station is over 4,500 meters above sea level, the average temperature is 10 degrees Celsius, and windspeeds are severe. It is subordinate to a Western TCAF radar brigade. Altitude sickness and humped shoulders are common, and no families are there. The barracks are at the bottom of the mountain, so sometimes personnel cannot get to the radar site. Most personnel are in this unit their entire career. In November 2007, the first female was assigned to the site and spent the night at the station.<sup>182</sup> It is not clear whether her billet was radar-related or communications-related.

A photo in November 2017 showed several female officers and enlisted personnel assigned to a Northern TCAF radar brigade welcoming personnel who were returning from its mobility radar element after a deployment.<sup>183</sup>

One female, Colonel Gu Min (谷敏), pictured at right, was identified in 2019 as a senior engineer (高级工程师) in a Northern TCAF radar brigade. Interestingly however, she is also a lawyer and spends most of her time providing legal advice to personnel in the unit.<sup>184</sup> It is not clear what her role as a senior engineer is.

## Ground-to-Air Missile Unit Personnel

### *Females in the Ground-to-Air Missile Branch*

Only one article was found with reference to any females associated with the ground-to-air missile branch. The May 2019 article was about a surface-to-air missile (SAM) brigade in the Western TCAF (西部战区空军地导某旅).<sup>185</sup> The article mentioned Captain Liang Ruijie (梁睿婕), who is shown in the photo at the right wearing her dress (formal) uniform. According to the article, her responsibility was to “obey orders given from the top and facilitate the reforms” (服从大局促改革). She has a master’s degree from the Air Force Engineering University and previously served as a Staff Officer in a Central TCAF AAA Regiment’s Political Work Division’s Propaganda Branch (中部战区空军高炮某团宣传股干事).<sup>186</sup> Given her previous billet and responsibilities at the time of the article in 2019, she most likely was a staff officer in the SAM brigade’s Political Work Department’s Propaganda Office (政治工作部宣传科). No other females were mentioned in the article.



## Logistics Personnel

Historically, the PLAAF’s logistics system consisted of the Logistics Department in the PLAAF HQ, as well as separate Logistics Departments from the MRAF HQ down to the regiment level. In addition, each Airfield Station (场站) at an aviation airfield served as the logistics component. This changed starting in 2016, when the Logistics Department and Equipment began to merge together as the Support Department starting at the TCAF level. The logistics system consists primarily of transportation, finances, materials and supplies, POL (petroleum, oil, and lubricant), as well as medical care.<sup>187</sup>

The key components of the logistics structure where females have been identified include hospitals and clinics, which is discussed in the “Medical Personnel” section, as well as one female Uyghur officer who served as the squadron commander in a Western TCAF warehouse squadron.<sup>188</sup> In addition, one article from October 2020 discussed a speech contest that was held at one of the Shijiazhuang Flight Academy’s Airfield Stations (空军石家庄飞行学院某场站) in which one speaker was 2nd Lieutenant Zhong Mengyue (钟梦月), pictured at right, who was only identified as a new cadre (officer) in a Quartermaster Division (军需股).



## Academic and Research Institute Students and Personnel

As of June 2017, the PLAAF had consolidated its academic institutions into 10 institutions. As noted in the “Communications Personnel” section, the Air Force Engineering University has two academic specialties for females (Communications and Engineering; Command Information System Engineering).<sup>189</sup> In addition, as noted in “Pilots” section, the PLAAF has female cadets who begin their pilot training at the Air Force Aviation University and then attend one of the Flight Academies, depending on the type of aircraft they will fly (transport or combat). Although no specific information was found concerning female cadets at the Air Force Early Warning College, a photo from 2017 showed six female cadets standing with some male cadets.<sup>190</sup> In addition, as

noted in the “Medical Personnel” section, the Air Force Medical University has female cadets and graduate students studying in each of its schools and departments.

Although there are clearly female professors, associate professors, assistant professors, instructors, staff members, graduate student advisors, and researchers in the various academic institutions, the only specific example cited was Jian Jie (简洁), a female who served as an instructor (教员) and professor (教授) for over 30 years in the Air Force Airborne Troop College’s Foundations Department’s (基础系) Military Ideology Teaching and Research Office (军事死刑教研室).<sup>191</sup>

Unfortunately, no information was found concerning any females in various research organizations, such as the Air Force Research Academy (空军研究院) or any of its subordinate research institutes (研究所); however, they most likely exist.

### Political Officers

Political officers are key leaders alongside commanders in all PLA units at the company level and above.<sup>i</sup> As noted throughout the report, there are multiple all-female Companies and a few all-female battalions in the PLAAF. Each all-female battalion has a female commander (营长) and political instructor (教导员), and each all-female company has a commander (连长) and Political director (指导员). No information was found concerning a female commander or political officer for an otherwise all-male battalion, company, platoon, or squad. In addition, no females were found serving as a political commissar (政治委员/政委) for a regiment, brigade, or division. However, five female political staff officers (干事) were found in various regiments and brigades. The following bullets provide information about a few female political officers who were found in battalions and companies, as well as various staff officer billets:

- Battalion political instructors
  - In 2016, Li Zhongzhu (李中柱) was a political instructor for an Airborne Force Mechanized Regiment’s 3rd Battalion (空降兵某机械化团三营)<sup>192</sup>
  - In 2018, Zhang Yali (张亚莉) was a deputy political instructor (副教导员) for Northern TCAF air brigade’s battalion-level flight group.<sup>193</sup> This article provided good insight into how a female political officer engaged with her flying unit. In this article, Zhang Yali discussed frustrations with conducting effective political work while working her limited knowledge of flying and flight training. She was especially pained by one incident that took place in the spring of 2018, when the female pilots in her flight group were preparing for the Air Force Penetration and Attack Competition Assessment (空军突防突击竞赛考核). One pilot came up with a new attack method, but after the group tried it out, they exceeded the time limit by 11 seconds. While the pilots were engaged in heated discussions about the results, Zhang Yali chimed in and said, “The distance is constant, so isn’t it an easy fix to just make up the time by speeding up?” The whole room fell silent. Later pilot Zhang Yu explained to her some

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<sup>i</sup> While escorting the PLAAF’s Political Commissar, General Zhu Guang, around the United States in 1988, he explained the role of a political officer by saying that “Every family has a father and a mother. In the PLA, the commander serves as the father and the political officer serves as the mother.” In addition, a great article from 1999 noted that political officers have to deal with personnel in their unit “with the heart of a mother, and the mouth of a mother-in-law.”

flying basics and why that would not work. Zhang Yu also told her that, “While they were able to accept her reminders and supervision about training and safety issues, her comment about flying made it seem like a group of racing drivers taking orders from a person who has never driven a car before.”

- Company political directors
  - In 2014, the PLAAF began to create a New-Soldier Training Brigade (新兵训练旅) that included all-female New-Soldier Training Companies (新兵训练连) that consisted of directly recruited female NCOs (直招女士官).<sup>194</sup> While the brigade had a male commander and political commissar, each all-female company had a female commander and political director.
  - In February 2016, a Western TCAF communications regiment had an all-female 5th Communications Company with a female commander and political director.<sup>195</sup>
  - In 2016, a Northern TCAF regiment’s all-female 2nd Battalion’s 1st Company (二营一连) had a female political director.<sup>196</sup>
  - Tao Sirui (陶思睿), an enlisted telephone operator who was selected to become an officer, eventually serving as a political staff officer and as of 2017 was a political director in a Communications Company. See the “Communications Personnel” section for more information.
  - In November 2019, a Western TCAF all-female telephone operator company had a female political director.<sup>197</sup>
- Political Staff Officers<sup>198</sup>
  - 1st Lieutenant Zhang Haijing (张海晶) shown at the right is a Propaganda and Security Staff Officer (宣传保卫干事) in a Western TCAF Air Regiment’s Political Work Division (西部战区空军航空兵某团政治工作处) who is responsible for news reporting.
  - 1st Lieutenant Gao Lingyun (高凌云) is a Cultural Staff Officer (文化干事) in a Northern TCAF electronic countermeasures brigade (北部战区空军电抗某旅)
  - 2nd Lieutenant Zheng Keren (郑可人) is a Cultural Staff Officer in one of the Air Force Shijiazhuang Flight Academy’s flight training brigades (空军石家庄飞行学院某旅)
  - 1st Lieutenant Xiao Ying (肖瑛) is a Power Engineer (电源工程师) and concurrently a News Staff Officer (新闻干事) in Western TCAF communications brigade (西部战区空军通信某旅)
  - 1st Lieutenant Pan Mengting (潘梦婷) is a Propaganda Staff Officer (宣传干事) in an Eastern TCAF communications brigade (东部战区空军通信某旅).



### Special Recruitment of Wives as Officers

Unlike the U.S. military that allows all married personnel regardless of their rank (officer and enlisted) to live with their families, whether on or off-base, the PLA has strict guidance concerning base housing.<sup>199</sup> The PLA generally upholds the principle of encouraging its personnel to marry



late. Males must be at least 25 years old and females 23.<sup>i200</sup> Even after getting married, most PLA personnel have been faced with immediate separations from their families for several reasons.<sup>201</sup> Generally speaking, the PLA does not allow its new officers and NCOs to live together with their new wives and families until they meet a general minimum time-in-service ranging from 10-12 years.<sup>202</sup> The primary reason for this is a lack of base housing and the huge gap of standards of living at different locations in China. For example, very few personnel who are assigned to remote areas such as Tibet or Xinjiang have their families accompany them (家属随军) and only get to see them maybe once per year, but even that is affected by each unit's training cycle.

One of the exceptions to this has been PLAAF male pilots, who are allowed to have their families live with them almost immediately after they get married; however, some wives do not want to move to remote areas where getting a job and schooling for children is difficult. To help alleviate this problem, the PLAAF has directly recruited pilots' wives who already have college-level education as an officer. They are identified as "specially recruited crew family (特招空勤家属)".<sup>203</sup> Once they have received their commission as an officer, the wives have assumed billets in the same unit as weather officers, logistics officers, and administrative personnel in the Headquarters.

### **Song and Dance Troupe**

The PLAAF's Song and Dance Troup (空军文工团)<sup>ii</sup> was created in March 1950 and deactivated in September 2018 based on orders from the CMC Chairman, Xi Jinping.<sup>iii,204</sup> It had always been directly subordinate to the PLAAF's Political Department/Political Work Department and had been a division leader-grade (正师级) organization located in Beijing's Haidian District. It consisted of male and female dancers, singers, musicians, and actors and had the responsibility of performing at propaganda events under the Party's leadership.<sup>205</sup>

#### *Key Females*

Since the PLA created the civilian cadre system in 1988, almost all troupe personnel served as civilian cadre and have worn civilian cadre insignia and ribbons, as shown in Figure 4 below.<sup>206</sup>

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<sup>i</sup> Of note, the PLA conducts matchmaking events for unmarried males who are 30 years old; however, it does not do this for unmarried females.

<sup>ii</sup> The term *wengong tuan* (文工团) is short for *wenyi gongzuo tuan* (文艺工作团), whose literal translation is arts and culture work troupe.

<sup>iii</sup> According to the PLA Spokesperson, "According to the agenda of the defense and military reform, the CMC has decided to optimize the institutional structure of the military's cultural force by emphasizing its nature as a cultural combat force and a cultural cavalier. The CMC has decided to re-establish the PLA's Song and Dance Troupe, keep the Song and Dance Troupes in the Xinjiang Military Region and Xizang Military Region, and cut those under the services and the Armed Police Force."

**Figure 4: Song and Dance Troupe Civilian Cadre**



Adding further complexity, members of the Song and Dance Troupe appeared to wear special uniforms with unique shoulder insignia as shown in Figure 5 below.<sup>207</sup>



A 2012 photo of a PLAAF female in Figure 6 has a blue Air Force service patch on her left arm with the characters for People's Liberation Army (人民解放军) at the top and the characters for Song and Dance Troupe (文工团) in the middle.<sup>208</sup>

**Figure 6: PLAAF Song and Dance Troupe Uniforms and Insignia**



Whereas regular members of the Song and Dance Troupe were all civilian cadre, all of the leaders, including the commanders (团长), political commissars (政委), and deputy commanders (副团长), were special technical officers and wore their appropriate ranks since ranks were reinstated in 1988.<sup>209</sup> The only senior female leader identified was Han Hong (韩红), who was born in 1971, and is a special case. In September 2009, she was recruited directly (特招入伍) into the PLAAF as one of the deputy commanders (副团长) and served as a special technical officer (技术军官) with the rank of Senior Colonel (大校) as shown in Figure 7 below.<sup>210</sup> Based on limited information, it appears that no female was ever the commander of the Song and Dance Troupe (团长). Figure 7 below shows Han Hong wearing the special uniform and collar insignia and her uniform on the right shows her special technical officer rank and the ribbons show her grade as division leader.

**Figure 7: Han Hong Uniforms and Insignia**



### *Visit to the U.S. in 1986*

In September 1986, a 50-member component of the Song and Dance Troupe visited the United States, including performances in Washington, DC, and various USAF units (Air Combat Command HQ, Air Force Academy, Lackland Air Force Base, Military Airlift Command HQ, and Pacific Air Forces HQ). They flew directly from Beijing to Andrews Air Force Base on a USAF KC-10 aerial tanker and were escorted by several USAF personnel, including the author of this report. A USAF transport aircraft then flew them to every other location and then back home from



Hawaii. The PLAAF highlighted the visit in a separate news article again in 2020.<sup>211</sup>

### **Marriage, Family, Housing, and Benefits**

The PLA and PLAAF are continuing to improve their marriage, family, housing, and benefits policies in order to attract and retain qualified personnel. In order to understand the PLA and PLAAF personnel as a whole, it is important to understand key issues concerning marriage, family, housing, and benefits in the PLA. As such, Dr. Marcus Clay wrote *Understanding the “People” of the People’s Liberation Army: A Study of Marriage, Family, Housing, and Benefits* for CASI in 2019.<sup>212</sup> For greater details, please see the publication.

During the 2000s, the PLA as a whole had to adjust its regulations by significantly increasing the amount of payment provided for off-base housing for married personnel in order to be able to retain qualified personnel, who were not permitted to live on base with their family until they had about 12 years in the service. This program will most likely continue through the 2020s by providing more benefits for families and will pull more money out of the operating budget. In addition, the PLA had to deal with a growing amount of mental health issues during the 2010s. This situation will most likely increase during the 2020s due to more intense training under more difficult requirements, COVID-19-related issues, and family issues.

Of note, no information was found concerning guidance and policies for PLAAF females having children, such as maternity leave or if they want to stay on active duty.<sup>213</sup> For example, in 2017, the USAF implemented a new policy that gives mothers 12 months to decide if they want to stay in uniform.

### **Minorities**

Based on information in May 2021 from the National Bureau of Statistics of China, China has a total of 56 ethnic groups of which 1.28 billion (91.11 percent) were of the Han ethnic group and 125.5 million (8.89 percent) composed the remaining 55 ethnic minorities.<sup>214</sup> Unfortunately, the PLA and PLAAF do not provide information about the total number of non-Han ethnic people conscripted or recruited each year. Available information does indicate that they are highly vetted during the conscription/recruitment process before entering service. Although the number of ethnic minorities appears to be very small, a few good examples were found for PLAAF female officers.

One of the most notable ethnic minority officers is Zhou Shuai (周帅), who is a Hui minority (回族),<sup>i</sup> grew up in Nanjing, Jiangsu Province, and was one of 16 females who graduated in the

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<sup>i</sup> The Hui people are an East Asian ethnoreligious group predominantly composed of Chinese-speaking adherents of Islam distributed throughout China. The Hui people are more concentrated in Northwestern

8th group of female pilots (2005-2009).<sup>215</sup> She was also one of four female pilots who flew a K-8 trainer aircraft over Tiananmen Square as part of the PRC's 60th Anniversary Parade in October 2009.

Another good example is 1st Lieutenant Mihelunsha Abdu (米合伦沙·阿不都), who is a Uyghur and was a PLAAF Representative at the International Working Women's Day (三八妇女节) in March 2016.<sup>216</sup> It is not clear what her position was at that time, but, while serving as a squadron commander in the Air Force's Lanzhou Communications Equipment Warehouse's Urumqi Branch Storage Warehouse she was a Representative during the 13th NPC Conference in 2013. In 2009, she began donating part of her salary to girls who were facing dropout and poor families.



Concerning the enlisted force, as noted in the “Communications Personnel” section, the PLAAF has recruited multiple ethnic minority females to serve in their home province or autonomous region so that they can communicate with people in their native tongue. This is unique because, as a general rule, the PLA as a whole ceased allowing personnel to serve in their home province, autonomous region, or municipality after the June 1989 Tiananmen crisis. However, the PLAAF clearly needs native speakers in certain areas in order to enhance communications.

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China (Ningxia, Gansu, Qinghai, Xinjiang), but communities exist across the country, e.g. Manchuria, Beijing, Xi'an, Inner Mongolia, Hebei, Hainan and Yunnan.

### Appendix A: Female Flag Officers

As noted earlier, the PLA had an officer rank system from 1955 until ranks were abolished in 1965 and reinstated a new rank system in 1988. Starting in 1988, the PLAAF began having one rank promotion ceremony per year for major generals (1-star / 少将) and lieutenant generals (2-star / 中将). Separate ceremonies are held by the Central Military Commission for 3-star general promotions. As shown in Table B-1 below for 1995-2019, typically, there has been only one ceremony per year in July, but some years starting in 2013 have had two ceremonies – July and December.<sup>217</sup> Promotion to major general includes Senior Colonels who become major generals (由空军大校军衔晋升为空军少将军衔), technical officers who become special technical major generals (晋升为专业技术少将军衔), and a major general from a different service (usually the Army) who switches to the PLAAF and receives the rank of PLAAF major general (授予空军少将军衔).

As shown in Table B-1 below, a total of 500 officers received a promotion to major general from 1995-2019. However, of particular importance for this report, the PLAAF did not promote its first female to major general until 2001. Since then, it has promoted only five females to the rank of major general.<sup>218</sup> To date, no PLAAF females have been promoted to lieutenant general (2-star / 中将) or general (3-star / 上将).<sup>i</sup>

**Table A-1: PLAAF Flag Officer Promotions – 1995-2019**

Year	Major General (1 star)	Lieutenant General (2 stars)	General (3 Stars)
1995	19 (Jul)	Unknown	0
1996	19 (Jul)	Unknown	2 (Jan)
1997	17 (Jul)	Unknown	0
1998	18 (Jul)	Unknown	0
1999	23 (Jul)	Unknown	0
2000	33 (Jul)	Unknown	1 (Jun)
2001	24 (Jul)	Unknown	0
2002	26 (Jul)	Unknown	1 (Jun)
2003	25 (Jul)	Unknown	0
2004	17 (Jul)	2 (Jul)	1 (Jun)
2005	15 (Jul)	Unknown	0
2006	11 (Jul)	1 (Jul)	1 (Jun)
2007	7 (Jul)	Unknown	1 (Jul)
2008	17 (Jul)	1 (Jul)	0
2009	28 (Jul)	2 (Jul)	1 (Jul)
2010	20 (Jul)	2 (Jul)	0
2011	3 (Jul)	1 (Aug)	0
2012	22 (Jul)	3 (Jul)	0
2013	15 (Jul)	5 (Jul)	0

<sup>i</sup> The only 3-star General billets that PLAAF officers have filled are the PLAAF Commander and Political Commissar, the Commandant of the PLA Academy of Military Science and National Defense University, Deputy Chief of the General/Joint Staff, and the Political Commissar of the CMC Logistic Support Department.

	9 (Dec)		
2014	16 (Jul) 9 (Dec)	10 (Jul)	0
2015	23 (Jul)	1 (Jul)	0
2016	10 (Jul)	10 (Jul)	1 (Jul)
2017	11 (Jan) 8 (Jul)	0	1 (Jul)
2018	7 (Jul)	3 (Jul)	0
2019	10 (Jun) 38 (Dec)	3 (Jun) 5 (Dec)	1 (Jul)

The following bullets provide their names and the date that the five females were promoted to major general. Of note the rank of major general can be held by officers in four different grades – division leader, corps deputy leader and leader, and Military Region/Theater Command deputy leader.

- Liu Miqun (刘弥群): July 2001
- Yue Xicui (岳喜翠): July 2003
- Liu Xiaolian (刘晓连): July 2004
- Cheng Xiaojian (程晓健): May 2016
- Liu Wenli (刘文力): December 2019.

The following bullets provide key information about the five PLAAF major generals:

- The first female to receive a rank promotion to major general was in 2001.
- Only one of them appears to have had a famous father who served in the military.
- Four of them began their careers as pilots and flew only transport aircraft, while one of them specialized in surface-to-air missiles.
- Each of the pilots exceeded their peers as they moved up their career ladder, including the billets they held, the number of hours they flew, becoming a formation lead pilot, and becoming a special-grade pilot.
- As pilots, three of them spent their entire flying career in the 13th Transport Air Division in the Guangzhou MRAF.
- One of them became the first ever female Air Division deputy commander when the 4th Transport Air Division was created, later becoming the first ever Air Division commander in the same division.
- Only one of them served in the PLAAF HQ as the Director of a 2nd-level Department.
- Only two of them served in the MRAF/TCAF HQ as a deputy chief of staff.
- Only one of them served in an MR/TC HQ.
- Two of them served as a deputy commandant of the Air Force Command College in Beijing.
- Three of them served as a deputy Director and/or Director in the Political Department and/or as a deputy political commissar at the division and above levels. [Note: This is unique because most political officers move to the political track at the company level.]
- None of them began their career as an enlisted member.
- Only one of them received a master's degree.
- No females have been promoted to lieutenant general or general.

- Four of them have been Representatives at the PRC's National People's Congress.
- All of them have been involved in high-level female organizations, such as the National Women's Congress.

Of note, in 1986, the PLAAF established age limits for its pilots.<sup>219</sup> When a pilot is no longer allowed to fly, due to age, incompetency, or ill health, he or she is grounded (停飞). The age limit for male transport pilots was set at 55, but it was set at age 48 for females.

#### *Female Flag Officers in the U.S. Air Force*

For comparison purposes, Jeanne Holm became the first USAF brigadier general in 1971.<sup>220</sup> After enlisting during World War II as a truck driver in the Women's Army Auxiliary Corps, she graduated from Officer Candidate School and, after the war, received a regular commission in the newly formed United States Air Force. There she held a variety of positions in the United States and overseas, including landmark work with the North Atlantic Treaty Organization (NATO). From 1965 to 1973, as Director of Women in the Air Force, she worked tenaciously to enhance the status and expand the roles and opportunities for women in the armed services. She led efforts to remove outdated laws and policies that discriminated against women in the military. She advocated opening the Reserve Officers' Training Corps (ROTC) to women and admitting women to flying programs. In 1973, she became the first woman in all the armed forces to achieve the rank of major general. The following bullets show the number of USAF female flag officers by rank since 1971:<sup>221</sup>

- Brigadier general (1-star): 76
- Major general (2-star): 52
- Lieutenant general (3-star): 11
- General (4-star): 4.

#### *Profiles of Female PLAAF Major Generals*

The following paragraphs provide a short profile for each of the five PLAAF female major generals. Unfortunately, detailed background material is not available for all of them.

**Liu Miqun (刘弥群)**:<sup>222</sup> Born in 1944 in Kaifeng, Sichuan Province. Her father was Marshal Liu Bocheng (刘伯承).<sup>i</sup> In 1968, she graduated with a degree in missiles from the Beijing Institute of Aeronautics (北京航空学院), which was renamed the Beijing University of Aeronautics and Astronautics (北京航空航天大学) in 1988. In March 1975, she joined the PLAAF and became a researcher on surface-to-air missiles (SAMs) in a Research Institute (实验室) under the PLAAF HQ's Headquarters Department (空军司令部). In May 1989, she became a deputy Director of an unidentified 2nd-level Department (副部长) under the Headquarters Department.<sup>ii</sup> In December 1994, she became the Director of the Department (部长) and received the rank of senior colonel. In 1998, she became



<sup>i</sup> In 1950, Liu Bocheng became the President and Political Commissar of the PLA's Military Academy in Nanjing, but this was considered a demotion. In 1955, he was one of ten officers who received the rank of marshal (元帅) in 1955 when ranks were introduced. By the end of the 1950s, he had lost the trust of Mao Zedong and was sidelined.

<sup>ii</sup> This was most likely the Ground-based Air Defense Troops Department (地面防空兵部).



one of the deputy commandants of the Air Force Command College (空军指挥学院副院长) in Beijing. In July 2001, she became the first PLAAF female to receive the rank of major general. Of note, no photo was found with her wearing a Type 07 Air Force blue uniform that includes ribbons and ranks, nor was any information found about when she retired. However, it does appear that she retired in 2006 or 2007 before the Type 07 uniforms were instituted.

**Yue Xicui (岳喜翠):** Born in December 1948 in Tai'an, Shandong Province.<sup>223</sup> At age 16, she joined the PLAAF as part of the 3rd group of female pilots (1965-1967) and became a transport pilot. At age 23 (1971), she became a lead pilot (机长). In 1991, she moved up her career ladder from being an ordinary pilot to become a deputy Director of the Political Department at the 13th Transport Air Division in the Guangzhou MRAF. In August 1994, she was promoted as a division deputy commander and became the first female pilot in the PLAAF to hold that position. Although, as noted earlier, in 1986 the PLAAF set a mandatory stop flying age for females at age 48, in 1999 the PLAAF made an exception and allowed her to continue flying until she was 53 (2001). In 2005, she moved to the Guangzhou MRAF HQ as a deputy chief of staff in the Headquarters Department. As of 2003, she had flown five types of military transports for a total of 2 million kms and 6,100 hours, which was the most hours flown by any female pilot. As a special grade pilot (特级飞行员), she successfully completed more than 100 major tasks, such as military exercises and scientific research flight tests, and carried out the first large-area artificial snowfall and artificial rain seeding with an aircraft. In July 2003, she was promoted as the second PLAAF female to the rank of major general and the first female pilot to receive that rank. It is not clear what year she retired, but she was still a Guangzhou MRAF deputy chief of staff in August 2012.<sup>224</sup> In 1995, she topped the list of “China's Top Ten Females” and was honorably elected as a representative to various National People’s Congresses.



**Liu Xiaolian (刘晓连):**<sup>225</sup> Born in November 1949 in Dalian, Liaoning Province. In July 1965, she joined the PLAAF as part of the 3rd group of female pilots (1965-1967) and became a transport pilot. From 1965-1966, she received her basic flight education and training at the Air Force 2nd Aviation Preparatory School (空军第二航空预备学校), and then, from 1966-1967, she attended the Air Force 1st Aviation School (第一航空学校). Her career path from that time on is shown below:



- 1967-1969: Pilot, 13th Transport Air Division (空军第 13 运输航空兵师飞行员)
- 1969: Lead pilot (机长), 13th Transport Air Division
- 1969-1983: Staff Officer (参谋), 38th Regiment (38 团), 13th Transport Air Division

- July 1971: Became a member of the Chinese Communist Party (加入中国共产党)
- 1983-1987: Deputy chief of staff (Headquarters Department) (副参谋长) and deputy commander (副团长), 38th Regiment, 13th Transport Air Division
  - 1986: Student, Air Force Command College
  - 1986: One of the PLAAF's first group of special grade pilots. In 1986, the PLAAF began awarding one of four aeronautical ratings to all aircraft crew members including pilots, navigators, communications personnel, gunnery personnel, and instructor pilots.<sup>226</sup> The four ratings are special grade (特级), 1st grade (一级), 2nd grade (二级), and 3rd grade (三级).
- 1987-1996: Deputy Director, Political Department (政治部副主任) and deputy political commissar (副政委), 13th Transport Air Division
- 1996-1999: Deputy Political Commissar, Air Force Wuhan Base (空军武汉基地)
- 1999-2002: Deputy director, Political Department and deputy commandant (副院长), Air Force Command College
- 2003-2007: Deputy commandant, Air Force Command College.

In July 2004, she received a promotion from senior colonel to major general, but is not clear when she retired. In August 2003, she became a Vice Chairman, All-China Women's Federation (全国妇联副主席). In May 2006, she became the honorary leader of the National Women's Basketball Team. She also served as a Representative in various National People's Congresses, Representative and Executive Member of the 5th and 9th National Women's Congress, and Representative of the 8th and 9th Hubei Provincial People's Congress.

**Cheng Xiaojian (程晓健):**<sup>227</sup> Born in November 1963 in Jinan, Shandong Province. Joined the PLAAF in 1981 as a member of the 5th group of female pilots (1981-1984) and began her flight education and training. After graduating from her aviation school as an outstanding cadet, she remained there as an administrator (航校区队长). However, she asked to be assigned to a unit in the remote area of northwestern Hubei Province. At some point early in her career, she was assigned to an unidentified transport air unit. In 2001, she became a deputy chief of staff for an unidentified [probably the 13th] Air Division and then, in 2004, she became a deputy commander of an unidentified [probably the 13th] Transport Air Division (运输航空兵师). In 2008, she moved



to Chengdu, Sichuan Province, and became a deputy commander of the 4th Transport Air Division, which was created in 2004. In April 2009, she became the 4th Transport Air Division Commander. She was not only the first and only PLAAF female to be a division commander, but the first overall PLA female to become a division commander. In June 2015, she became a deputy chief of staff of the Chengdu MRAF, which became the Western TCAF in January 2016. In May 2016, she became the fourth PLAAF female to be promoted to the rank of major general. Sometime before July 2020, she became a deputy director of the Eastern TC's Political Work Department (东部政治工作部) and is apparently still in that position in May 2021.<sup>228</sup> In October 2019, she led a marching formation of females during the 70th Anniversary of the PRC.<sup>229</sup> As a pilot, she flew more than 3,240 hours in six different aircraft, including Il-76s. Since 1993, she has been a Representative in various National People's Congresses.

**Liu Wenli (刘文力):**<sup>230</sup> Born in November 1971 in Tai'an, Shandong Province. She joined the PLAAF in 1989 as a member of the 6th group of female pilots (1989-1993) and later became a Communist Party Member. After graduating from her pilot training in July 1993, as one of the first groups of female pilots to receive a bachelor's degree,<sup>231</sup> she was assigned to the 13th Transport Air Division in the Guangzhou MRAF, where she moved up her career ladder as a flight squadron commander (飞行中队长), and, in 2004, she became a flight group commander (飞行大队长) of the 3rd Flight Group, which has historically been known as the "Female Flight Group". Shortly after assuming her billet, she was diagnosed with breast cancer and received the necessary treatment that allowed her to return to flying five months later in February 2005. She was selected as a young representative at the 4th Plenum of the PLAAF's 10th Party Congress. A photo shows her as a lieutenant colonel. 1st-grade pilot. She was the first one in her class of female pilots to become a lead pilot and the unit's youngest person ever in her unit to become qualified as a flight commander (飞行指挥员).<sup>232</sup> At that time, she was a 1st-grade pilot and had flown four different models of aircraft, including the IL-76MD, for 1,864 hours. By the time she met her mandatory stop flying age of 48, she had flown 3,500 hours.<sup>233</sup> At one point, she served as the PLA's only Air Regiment commander (飞行团长) at that time. In December 2014, she became the chief of staff in a corps-level Command Post, which no longer exists. She is currently a deputy chief of staff in the Southern TCAF HQ. At some point, she received a master's degree in Military Command from the Air Force Command College and, in 2017, began studying at the PLA's National Defense University, where she focused on researching combat methods (战法). She was a Representative at the 12th National People's Congress in 2013. She was also a Representative at the 19th Party Congress in October 2017. In December 2019, she was the fifth PLAAF female to be promoted to the rank of major general. She has won multiple awards.



## ENDNOTES

- <sup>1</sup> “Pilot” (飞行员), AMS All-Army Military Terminology Management Committee, *People’s Liberation Army Military Terminology* (中国人民解放军军语), Second Edition, (Beijing: Academy of Military Science Press, December 2011), 960. “Pilot” (飞行员), Zhu Rongchang, ed., *Air Force Dictionary* (空军大辞典), (Shanghai: Shanghai Dictionary Press, September 1996), 168.
- <sup>2</sup> “Aviator, pilot” (飞行员), Pan Xiangting, ed. *A New English-Chinese Chinese-English Dictionary of Military Terms* (新编英汉汉英军事词典), (Beijing: National Defense Industry Press, October 1999), 302.
- <sup>3</sup> “Flying personnel” (飞行人员), AMS All-Army Military Terminology Management Committee, *People’s Liberation Army Military Terminology* (中国人民解放军军语), Second Edition, (Beijing: Academy of Military Science Press, December 2011), 959. “Flying personnel” Zhu Rongchang, ed., *Air Force Dictionary* (空军大辞典), (Shanghai: Shanghai Dictionary Press, September 1996), 168. “Flying personnel” include pilots (飞行员), Airborne navigators (空中领航员), Airborne communicators (空中同心圆), Airborne gunners (空中射击员), and Airborne maintenance personnel (空中机械师).
- <sup>4</sup> The *2004 Defense White Paper* uses female and women. Lu Xiaoping, ed., *The PLA Air Force*, (Beijing: China Intercontinental Press, 2012), 157-176, which is the English version of the same book in Chinese. The title for Chapter 7 is “A Special Group: Women Pilots”, but the chapter uses women, woman, and female.
- <sup>5</sup> “Compulsory Serviceman” (义务兵), AMS All-Army Military Terminology Management Committee, *People’s Liberation Army Military Terminology* (中国人民解放军军语), Second Edition, (Beijing: Academy of Military Science Press, December 2011), 242. “Conscripts” (义务兵) in *2004 Defense White Paper*.
- <sup>6</sup> *2004 Defense White Paper* and *2010 Defense White Paper*.
- <sup>7</sup> [http://kj.81.cn/content/2016-03/23/content\\_6972965.htm](http://kj.81.cn/content/2016-03/23/content_6972965.htm)
- <sup>8</sup> Liu Xiaolian and Wang Qingliang, eds., *People’s Liberation Army Air Force Female Aviators*, (中国人民解放军空军女飞行员), (Beijing: Lantian Press, September 2012), 032-042.
- <sup>9</sup> “Active Duty Enlisted Force Service Regulations” (现役士兵服役条例), accessed at [http://www.gov.cn/zwqk/2010-07/28/content\\_1665547.htm](http://www.gov.cn/zwqk/2010-07/28/content_1665547.htm).
- <sup>10</sup> [http://kj.81.cn/content/2020-05/11/content\\_9810731.htm](http://kj.81.cn/content/2020-05/11/content_9810731.htm).
- <sup>11</sup> Niu Ruili, “Them [Females], in Combat Billets” (她们,在战位!), kj.81.cn, 11 March 2019, accessed at [http://kj.81.cn/content/2019-03/11/content\\_9446482.htm](http://kj.81.cn/content/2019-03/11/content_9446482.htm).
- <sup>12</sup> [https://mil.sina.cn/2019-03-16/detail-ihrfqzkc4469612.d.html?vt=4\\_](https://mil.sina.cn/2019-03-16/detail-ihrfqzkc4469612.d.html?vt=4_)
- <sup>13</sup> Zhu Rongchang, ed., *Air Force Dictionary* (空军大辞典), (Shanghai: Shanghai Dictionary Press, September 1996).
- <sup>14</sup> Discussion in June 2020 with Henry Boyd from IISS. *The Military Balance 2010* and *2011* (London: IISS, February 2010 and 2011).
- <sup>15</sup> *2012 Defense White Paper*.
- <sup>16</sup> Kenneth W. Allen, Dennis J. Blasko, John F. Corbett, Jr., “The PLA’s New Organizational Structure: What is Known, Unknown and Speculation,” (Washington, D.C.: Jamestown Foundation *China Brief*, Part 1 (Volume 16, Issue 3) 4 February 2016); and Part 2 (Volume 16, Issue 4) 23 February 2016).
- <sup>17</sup> Choi Chi-yuk and Catherine Wong Jun Mai, “China to Appoint New Air Force Commander, Sources Say,” *South China Morning Post*, 23 August 2017, available at: [www.scmp.com/news/china/diplomacy-defence/article/2108010/china-appoint-new-air-force-Commander-sources-say](http://www.scmp.com/news/china/diplomacy-defence/article/2108010/china-appoint-new-air-force-Commander-sources-say).
- <sup>18</sup> Discussion in June 2020 with Henry Boyd from IISS. *The Military Balance 2020*, (London: IISS, February 2020), 264, and *The Military Balance 2021*, February 2021, 254.
- <sup>19</sup> Information on these career tracks and terminology were accessed at <http://qiming0130.blog.163.com/blog/static/7975228120119279109428/> on 5 March 2012. See also “System of Cadre Grades,” in *China Military Encyclopedia* (Second Edition), December 2006, *Military Cadre Work* (军队干部工作) Volume 39, 48-50. “Military officer” (军事军官), “Political Officer” (政治军官), “Logistics officer” (后勤军官), “Equipment officer” (装备军官), and “Professional and technical officer” (专业技术军官), Xu Yaoyuan, Lin Xianghai, and Mu Song, eds. *Military Cadre Work* (军队干部工作), Second Edition, Volume 39, (Beijing: Encyclopedia of China Publishing House, 2006), 85, 340.
- <sup>20</sup> Xu Ping, ed., *New China Implements Military Rank System Record* (新中国实行军衔制纪实), (Beijing: Gold Wall Press, June 2010), 305.

- <sup>21</sup> Xu Ping, ed., *New China Implements Military Rank System Record* (新中国实行军衔制纪实), (Beijing: Gold Wall Press, June 2010), 324. Xu Ping, “The Evolution of our Army’s Cadre Ranks after the Founding of New China” (新中国成立后我军干部级别的沿革), *Chinamil.com* (中国军网), 31 March 2020, accessed at [http://www.mod.gov.cn/education/2020-03/31/content\\_4862889.htm](http://www.mod.gov.cn/education/2020-03/31/content_4862889.htm).
- <sup>22</sup> *World Military Yearbook 1999* (世界军事年鉴 1999), (Beijing, PLA Press), 103. Xu Yaoyuan, Lin Xianghai, and Mu Song, eds. *Military Cadre Work* (军队干部工作), Second Edition, Volume 39, (Beijing: Encyclopedia of China Publishing House, 2006), 85. *2004 PRC Defense White Paper*.
- <sup>23</sup> Joel Wuthnow and Phillip C. Saunders, “A New Step Forward in PLA Professionalization,” Jamestown Foundation *China Brief*, Volume 21, Issue 5, 15 March 2021.
- <sup>24</sup> Kenneth W. Allen and Cristina L. Garafola, *70 Years of the PLA Air Force*, Chapter 5, (Maxwell AFB, AL: China Aerospace Studies Institute, 4 May 2021). Kenneth W. Allen and Mingzhi Chen, *The People’s Liberation Army’s 37 Academic Institutions*, (Montgomery, AL: China Aerospace Studies Institute, 2020).
- <sup>25</sup> See Xiong Liping et al., “Tribological Study of N-Containing Borate Derivatives and Their Synergistic Antioxidation Effects with T531,” *Friction* 7, Number 5 (2019), 417–431, accessed at <http://d.scholar.cnki.net/DETAIL/REFDETAIL?FILENAME=SSJD46EDC9F404489B1970C7B263738EF412&DBCODE=ssjd>. Hereafter referred to as Xiong et al., “Tribological Study.” in addition, an entry for Air Force Duty College was found in the PLA’s [*Dictionary of Modern Military Education*], but this does not appear to be correct. Dong Huiyu and Mou Xianming, eds., “Air Force Duty College” [空军勤务学院] in Dong and Mou, eds., *Dictionary of Modern Military Education (sic)*, 480.
- <sup>26</sup> Feng Danqing et al., “ERP: An Elastic Resource Provisioning Approach for Cloud Applications,” *PLoS One* 14, No. 4 (26 April 2019), accessed at <https://www.ncbi.nlm.nih.gov/pubmed/31026264>. A photo with the official English name on a building was found at “Air Force Communication NCO Academy,” accessed at <https://www.weibo.com/ttarticle/p/show?id=2309351000774080801477171249>.
- <sup>27</sup> “2018 Air Force Command College postgraduate admissions guide” (2018 年空军指挥学院考研招生简章), *Kaoyan*, 30 September 2017, <http://yz.kaoyan.com/kjzh/jianzhang/59cf67fe4f960.html>.
- <sup>28</sup> “Air Force Organizes First Group of Preparatory Master Chief Training” (空军组织首批预任士官长培训), *Air Force News*, 23 April 2015, 1. The August 2015 issue of *China Air Force* (中国空军) magazine, which is all in Chinese, had 22 pages of articles concerning the test case program for the PLAAF’s Master Chief program under the overall title “Air Force Master Chief” (空军士官长). One article noted that this was the first time a senior NCO had ever had his own office. The final 4-page article gave an overview similar programs in five countries – United States, Russia, Japan, France, and Germany.
- <sup>29</sup> See Kenneth W. Allen and Mingzhi Chen, *The People’s Liberation Army’s 37 Academic Institutions*, (Montgomery, AL: China Aerospace Studies Institute, 2020) for a list of the 15 academic institutions.
- <sup>30</sup> Kenneth W. Allen and Cristina L. Garafola, *70 Years of the PLA Air Force*, Chapter 6, (Maxwell AFB, AL: China Aerospace Studies Institute, 4 May 2021).
- <sup>31</sup> For information concerning an overview of females in the PLA see “Holding Up Half the Sky?—The Evolution of Women’s Roles in the PLA” (Part 1) by Elsa Kania, and (Part 2) by Elsa Kania and Ken Allen, Jamestown Foundation’s *China Brief*, Volume 16 Issue 15 (4 October 2016) and Issue 16 (26 October 2016).
- <sup>32</sup> Elsa Kania and Ken Allen, “Holding Up Half the Sky?—The Evolution of Women’s Roles in the PLA” (Part 2), (Jamestown Foundation’s *China Brief*, Volume 16 Issue 16 (26 October 2016)).
- <sup>33</sup> *PRC Military Service Law – 1984* (中华人民共和国兵役法 (1984 年)), accessed at [http://www.npc.gov.cn/wxzl/wxzl/2000-12/17/content\\_4446.htm](http://www.npc.gov.cn/wxzl/wxzl/2000-12/17/content_4446.htm). *PRC Military Service Law – Amended 2021* (中华人民共和国兵役法 – 2021 年 8 月 20 日第十三届全国人民代表大会常务委员第三十次会议修订), accessed at [http://www.gov.cn/xinwen/2021-08/21/content\\_5632513.htm](http://www.gov.cn/xinwen/2021-08/21/content_5632513.htm). *2010 Defense White Paper*.
- <sup>34</sup> For information concerning an overview of females in the PLA see “Holding Up Half the Sky?—The Evolution of Women’s Roles in the PLA” (Part 1) by Elsa Kania, and (Part 2) by Elsa Kania and Ken Allen, Jamestown Foundation’s *China Brief*, Volume 16 Issue 15 (4 October 2016) and Issue 16 (26 October 2016).
- <sup>35</sup> The data for this section was collected based on keyword searches for 女青年 and 女兵 within the available sources.
- <sup>36</sup> The majority of the data for this section was taken for the website: 大学生征兵网 ([www.0730hao.cn](http://www.0730hao.cn)).
- <sup>37</sup> [http://career.eol.cn/kuai\\_xun\\_8411/20140722/t20140722\\_1153037.shtml](http://career.eol.cn/kuai_xun_8411/20140722/t20140722_1153037.shtml).
- <sup>38</sup> 2003 was the earliest year reference to these standards found: <http://www.qh.gov.cn/zbw/system/2012/10/23/000138619.shtml>.

- <sup>39</sup> The primary source for this information is: [www.0730hao.cn/](http://www.0730hao.cn/). In addition, there is further information available in the following source, which was noted but not used: 网上报名网址: [www.gfbzb.gov.cn/nvbing/](http://www.gfbzb.gov.cn/nvbing/).
- <sup>40</sup> <http://www.0730hao.cn/Article/zbd/27816.html>.
- <sup>41</sup> [www.0730hao.cn/Article/zbd/27230.html](http://www.0730hao.cn/Article/zbd/27230.html).
- <sup>42</sup> However, for some provinces, there seems to be a slight relaxation of the age limit to 23.
- <sup>43</sup> <http://www.gfbzb.gov.cn/zbbm/zcfg/byfg/201403/20140313/817823157.html>.
- <sup>44</sup> [http://www.81.cn/jmywyl/2014-06/14/content\\_5960176.htm](http://www.81.cn/jmywyl/2014-06/14/content_5960176.htm).
- <sup>45</sup> [http://www.ah.xinhuanet.com/2014-07/20/c\\_1111700220.htm](http://www.ah.xinhuanet.com/2014-07/20/c_1111700220.htm).
- <sup>46</sup> [http://www.81.cn/jmywyl/2014-06/14/content\\_5960176.htm](http://www.81.cn/jmywyl/2014-06/14/content_5960176.htm).
- <sup>47</sup> [www.0730hao.cn/Article/zbd/27616.html](http://www.0730hao.cn/Article/zbd/27616.html).
- <sup>48</sup> [www.0730hao.cn/Article/zbd/24176.html](http://www.0730hao.cn/Article/zbd/24176.html).
- <sup>49</sup> [www.0730hao.cn/Article/zbd/35560.html](http://www.0730hao.cn/Article/zbd/35560.html). [www.0730hao.cn/Article/zbd/34264.html](http://www.0730hao.cn/Article/zbd/34264.html).
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<sup>163</sup> *Air Force News*, 16 October 2019, 2.

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<sup>165</sup> *Air Force News*, 14 December 2016, 4.

<sup>166</sup> *Air Force News*, 4 January 2016, 3.

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<sup>172</sup> <https://s.weibo.com/weibo?q=%23雷神突击队特战女兵训练%23&Refer=hotmore>.

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<sup>174</sup> “Chinese, Belarusian Airborne troops hold joint exercise in China,” *Xinhua*, 27 November 2012, found at <http://english.peopledaily.com.cn/90786/8035739.html>. “China-Belarus “Condor 2012” joint anti-terrorism training wrapped up,” 6 December 2012, found at [http://eng.chinamil.com.cn/special-reports/2007zgjdjtm/2012-12/06/content\\_5140507.htm](http://eng.chinamil.com.cn/special-reports/2007zgjdjtm/2012-12/06/content_5140507.htm). “China-Belarus ‘Condor 2012’ joint anti-terrorism training wrapped up,” Chinamil.com, 6 December 2012, found at [http://eng.chinamil.com.cn/special-reports/2007zgjdjtm/2012-12/06/content\\_5140507.htm](http://eng.chinamil.com.cn/special-reports/2007zgjdjtm/2012-12/06/content_5140507.htm). Zhang Xuefeng, “The Thunderers” (“雷神”突击队), *China Armed Forces*, No. 15, Volume 3, 2012, 42-47.

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and training in ground force colleges; however, in 1999 the Guilin Air Force College took over those responsibilities. In 2001, the college changed its name to the Air Force Airborne Troop College.

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<sup>198</sup> Niu Ruili, "'Them [Females], in Combat Billets" (她们,在战位!), kj.81.cn, 11 March 2019, accessed at [http://kj.81.cn/content/2019-03/11/content\\_9446482.htm](http://kj.81.cn/content/2019-03/11/content_9446482.htm).

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<sup>229</sup> Liu Chuan, Zhu Jianghai, and Yu Hongchun, “The Airborne component of the PRC’s 70th Anniversary parade,” *Air Force News*, 2 October 2019, 6.

<sup>230</sup> “Liu Wenli” (刘文力), accessed at <https://baike.baidu.com/item/刘文力/7249263>. *Air Force News*, 25 June 2005, 1.

<sup>231</sup> The PLAAF did not begin bachelor’s degree programs for non-aviation cadets until 1982. The first PLAAF pilots to receive a bachelor’s degree was in 1987. Chen Daojin and Liu Yuan, “Flight Academic Institutions Leap Ahead in Developing the Strategic Position and High Quality of Educating and Training Aviation Cadets” (飞行学院跨越式发展的战略定位与高素质飞行学员培养) in *Research on New Century New Period Air Force Academic Institution Transformation Building and Personnel Education and Culture* (新世纪阶段空军院校转型建设与人才培养研究), First Edition, Volume 1, (Beijing: Lantian Press, 2009), 55-66. “Air Force College Pilots Graduate ‘With Flying Colors,’” *Xinhua* (English), 24 November 1987.

<sup>232</sup> *Air Force News*, 8 August 2006, 3.

<sup>233</sup> *Air Force News*, 13 October 2017, 1.